

2012 ASLO AQUATIC SCIENCES MEETING

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Voyages of
Discovery

JULY 8-13

LAKE BIWA, SHIGA, JAPAN

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Association for the Sciences of Limnology and Oceanography

Meeting
Program



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Welcome!

Welcome to the 2012 ASLO Aquatic Sciences Meeting!

The 2012 Aquatic Sciences Meeting is sponsored by ASLO, the Association for the Sciences of Limnology and Oceanography. ASLO is the leading professional organization for researchers and educators in the field of aquatic sciences, fostering a diverse, international scientific community that creates, integrates and communicates knowledge across the full spectrum of aquatic science.

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Opening Remarks and Plenary Presentations

Opening reception will immediately follow.

SUNDAY, 8 JULY 2012

17:00 to 18:30, Biwako Hall – Main Theatre

DR. JOHN DOWNING, ASLO PRESIDENT

Regent's Excellence Professor of Ecology, Evolution, and Organismal Biology and Chair of the Environmental Science Graduate Program, Iowa State University

Biographical Information: John Downing is president of the Association for the Sciences of Limnology and Oceanography, a Board member of the Council of Scientific Society Presidents, and a member of the Consortium of Aquatic Science Societies. He is a Regent's Excellence Professor of Ecology, Evolution, and Organismal Biology, and the Department of Agricultural and Biosystems Engineering at Iowa State University. He is Chair of the Environmental Science Graduate Program. He is also an adjunct professor at Itasca Community College where he is helping create a water quality technology program to provide employment opportunities to students in an economically depressed region. His research interests include limnology, aquatic ecology, terrestrial ecology, microbial ecology, biogeochemistry, population conservation, and whole ecosystem restoration and management. He has advised many policy-makers and citizens groups concerning water quality management, and is a frequent consultant to firms and boards regionally, nationally, and internationally. He was recently awarded ASLO's Ruth Patrick award for his work in understanding and mitigating eutrophication in agricultural regions. He was formerly a professor at McGill University and the University of Montreal where he was Director of the Laurentian Biological Station.

NANCY B. GRIMM

Professor and Senior Sustainability Scientist, Arizona State University; Program Director, Ecosystem Science Program, National Science Foundation; and Senior Scientist, National Climate Assessment, U.S. Global Climate Research Program

Biographical Information: Nancy Grimm is a Professor of Ecology in the School of Life Sciences and Senior Sustainability Scientist at Arizona State University, USA. She is currently on a two-year assignment at the U.S. National Science Foundation, where she is a program director for the Ecosystem Science program, an interdisciplinary program liaison working extensively with the Science, Engineering, and Education for Sustainability portfolio, and a senior scientist for the National Climate Assessment (on half-time detail to the U.S. Global Climate Research Program). Her research addresses how human-environment interactions and climate variability influence ecosystem processes and services in both riverine and urban ecosystems, collaborating with hydrologists, engineers, geologists, chemists, sociologists, geographers, and anthropologists. She was the founding director of the Central Arizona–Phoenix Long-Term Ecological Research program, an interdisciplinary study of the Phoenix urban socio-ecological ecosystem, from 1997–2010. Grimm earned her BA in ecology (1978) from Hampshire College in Massachusetts and M.S. (1980) and Ph.D. (1985) in zoology from Arizona State University, and has held research scientist and faculty positions

at the latter institution since 1990. She has been president of the Ecological Society of America and the North American Benthological Society and is a Fellow of the American Association for the Advancement of Science. Grimm chaired or served on several national and international advisory and editorial boards, is author or co-author of over 140 scientific publications, and is currently a lead author for the National Climate Assessment.

Presentation: Global Environmental Change and the Water Challenges of Cities

This talk will begin at the global scale with the challenges of provisioning clean water for >3 billion urban inhabitants, then will focus down to climate-change challenges for aquatic ecosystems and the services they provide at the continental to regional scale. Dr. Grimm will examine a case study of the water-related challenges in an arid urban environment (Phoenix, Arizona). Water is examined through the lenses of ecosystem services and resilience, examining whether designed/engineered urban aquatic systems can be resilient and adaptable.

MONDAY, 9 JULY 2012

11:00 to 12:00, Biwako Hall – Main Theatre

CAROLYN OLDHAM

Winthrop Professor, School of Environmental Systems Engineering, The University of Western Australia

Biographical Information: Carolyn Oldham is Winthrop Professor at the University of Western Australia in the School of Environmental Systems Engineering. She earned a BSc with Honors in Chemistry and a PhD in Environmental Engineering for an investigation into the effects of turbulence on oxygen patchiness in a lake. Since 1994, Carolyn has worked to integrate her cross-disciplinary research interests in transport processes, environmental chemistry and spatial and temporal patchiness. This focus on cross-disciplinary integration, i.e. trans-disciplinary research, has led Carolyn to collaborate with hydrologists, oceanographers, estuarine and groundwater scientists. She has led a diverse range of research projects on arsenic contamination of wetlands, rivers and ground waters, fate and transport of decomposing seagrass wrack in coastal waters, groundwater nitrogen plumes into coastal waters, prediction of contaminant dynamics after mine closure, and acidification dynamics in surface and ground waters. While the context of Carolyn's research has been, and remains, extremely diverse, she has worked to integrate approaches and frameworks across multiple disciplines and has maintained her core interest in the interactions between transport and biogeochemical transformation processes, with a focus on patchiness and connectivity dynamics at system, local and micro scales.

Carolyn brings the same trans-disciplinary approach to her teaching and in 2010, received a national Australian Learning and Teaching Council Award for an "outstanding and sustained commitment to increasing the diversity of student learning experiences in engineering." From 2003 – 2008, she served as Associate Dean (Teaching and Learning), and Dean in the Faculty of Engineering, Computing and Mathematics at UWA. She remains one of the few women promoted to Professor of Engineering in Australian research intensive universities, she is an active mentor for junior academic women, currently chairs the UWA Leadership Development for Women Planning Group and initiated an Australian study on optimizing the per-

formance of women academics in engineering. Carolyn has also led research projects in a number of developing countries, sits on the Board of Engineers Without Borders Australia, and for the last 6 years has been working in East Timor to build capacity in their Universities to train East Timorese engineers.

Presentation: Scales and Balances: The use of dimensionless numbers to characterize transport, reaction and ecohydraulic connectivity.

Assessing the potential for transfer or export of biogeochemicals or pollutants from aquatic systems is of primary importance under changing land use and climatic conditions. Over the past decade the connectivity/disconnectivity dynamics of aquatic systems and catchments have been related to their potential to export material, however we continue to use multiple definitions of connectivity, and most have focused strongly on physical (hydrological or hydraulic) connectivity. In this presentation we define *eco-hydraulic connectivity* as the ability of matter and organisms to transfer within and between elements of the hydrological cycle while undergoing biogeochemical transformation. The connectivity/disconnectivity dynamic must take into account the opportunity for a given reaction to occur during transport and/or isolation. Using this definition, we propose three distinct regimes: I) which is ecohydraulically connected and diffusion dominated; II) which is ecohydraulically connected and advection dominated and III) which is both hydraulically and ecohydraulically disconnected. Within each regime we propose the use of a new non-dimensional number, N_E , to compare exposure timescales with reactions timescales. N_E is reaction-specific and allows the estimation of relevant spatial scales over which the reactions of interest are taking place. Case studies provide examples of how N_E can be used to gain insight into the biogeochemical processes that are significant under the specified conditions. Finally, we explore the implications of this framework for improved water management, for our understanding of biodiversity, resilience and biogeochemical competitiveness under specified conditions.

GEORGE SUGIHARA

Professor, Scripps Institution of Oceanography, University of California, San Diego

Biographical Information: George Sugihara is the McQuown Chair and Distinguished Professor of Natural History, at Scripps Institution of Oceanography. He holds degrees from the University of Michigan and Princeton University. He is a theoretical biologist who has worked across a wide variety of fields, including landscape ecology, algebraic topology, algal physiology and paleoecology, neurobiology, atmospheric science, fisheries science, and quantitative finance. He is the inaugural holder of the McQuown Chair in Natural Science at the Scripps Institution of Oceanography. Most of his early work was motivated exclusively by pure science, and the later work more by pragmatic utility and environmental concerns. Nearly all of it is based on extracting information from observational data (turning data into information). His initial work on fisheries as complex, chaotic systems led to work on financial networks and prediction of chaotic systems. He is one of 18 members of the National Academies Board on Mathematical Sciences and their Applications, and was a Managing Director at Deutsche Bank. He helped found Prediction Company (sold to UBS) and Quantitative Advisors LLC. He has been a consultant to the Bank of England, the Federal Reserve Bank of New York, and

to The Federal Reserve System on questions of international security: systemic risk in the financial sector. Other notable research relates some of his early work on topology and assembly in ecological systems to recent work on social systems and work on generic early warning signs of critical transitions that apply across many apparently different classes of systems.

Presentation: Prediction, Coupling and Causation

Although correlation is neither necessary nor sufficient to establish causation, it remains deeply ingrained in our heuristic thinking. With increasing recognition that nonlinear dynamics are ubiquitous, and that relationships among variables will depend on system state, the use of correlation to infer causation becomes more difficult. Here we examine a criterion that identifies time series variables as causally related if they interact as part of the same dynamic system. Rather than using diet overlap as a proxy for the network of interactions, we directly deduce the operative network of realized dynamic linkages from information embedded in time series. Our approach, based on nonlinear state space reconstruction, addresses Berkeley's 301-year correlation vs. causation dilemma and identifies basic problems when the current solution, Granger causality, is applied to nonlinear ecosystems. This criterion applies even in highly nonlinear cases and provides a conceptual framework for studying coupling and catastrophic change in nature. As a speaker in SS23: Ecosystem Change and Predictability of Aquatic Ecosystems on Wednesday, 11 July, Dr. Sugihara will discuss further details of the method.

TUESDAY, 10 JULY 2012

11:00 to 12:00, Biwako Hall – Main Theatre

JULIE LAROCHE

Professor for Biological Oceanography, Leibniz Institute of Marine Sciences (IFM-GEOMAR) Marine Biogeochemistry, Kiel, Germany

Biographical Information: Julie LaRoche obtained her Ph.D. in biology from Dalhousie University, Nova Scotia, Canada. She has worked as a biological oceanographer at Brookhaven National Laboratory, Upton, New York, USA, for 11 years before moving to Institute for Marine Research in Kiel, Germany. After spending the last 14 years in Germany working in the area of marine biogeochemistry, LaRoche has been awarded a Canada Research Chair tier 1 in marine biogeochemistry and microbial genomics in the Department of Biology at Dalhousie University. There she will continue and expand her work on marine phytoplankton, nitrogen fixation and the nitrogen cycle, combining marine genomics and stable isotope tracer studies.

Presentation: Future Aspects of Research on Marine Dinitrogen Fixation

Although the filamentous N₂ fixing *Trichodesmium* has long been established as an important marine microorganism capable of fixing N₂ gas, the last 15 years of research on marine N₂ fixation have led to the realization that marine diazotrophs are a highly diverse group of microorganisms. Recent research has also established that the most widely applied method to measure N₂ fixation in oceanic waters may have underestimated the true N₂ fixation rates by a factor of 2 or more. Taken together the findings call for a standardization of rate measurement methodologies and a revaluation of the role of oceanic N₂ fixation in the marine nitrogen cycle on a global scale.

WEDNESDAY, 11 JULY 2012

11:00 to 12:00, Biwako Hall – Main Theatre

MINHAN DAI

Cheung Kong Chair Professor of Marine Biogeochemistry and Director, State Key Lab of Marine Environmental Science, Xiamen University, China

Biographical Information: In addition to being a Cheung Kong Chair Professor of Marine Biogeochemistry at Xiamen University, Minham Dai currently serves as the Director of the State Key Laboratory of Marine Environmental Science and is the Dean of the College of the Ocean and Earth Sciences. His research interests include carbon and trace metal biogeochemistry in marginal and estuarine systems, and the geochemistry of radioactive elements in surface and ground water. He has published more than 80 papers in leading international journals and is a leading PI of a "973" program on "carbon cycling in China Seas - budget, controls and ocean acidification." He has served on many national and international committees. He is currently a member of advisory committee for the Earth Science Division of NSF-China, a SSC member of SOLAS, and the Secretary General of Asia Oceania Geosciences Society (AOGS).

Presentation: Coastal Ocean Carbon Cycling – Current Understanding and Challenges

Coastal ocean carbon cycling is an important component of the Earth's climate system yet very complex because multiple-scale processes occurred to the coastal ocean where atmosphere, ocean and land interplay, which makes their inclusion in any realistic prognostic climate simulation an immense challenge. While global estimates of coastal air-sea CO₂ fluxes have dramatically improved during the past several years as a result of the rapid growing of regional studies on carbon flux measurements, we still lack a mechanistic understanding on why some of the coastal ocean systems act as sinks for atmospheric CO₂ while others are sources. The temporal and spatial variability of these CO₂ fluxes both at the global and regional scales also present challenges. Adding to that are multiple stressors such as anthropogenic pressures which has likely led to the rapid changes seen in many of the world's coastal ocean carbon systems. For example, ocean acidification in the coastal ecosystem is not only driven by the perturbation of anthropogenic CO₂ but also impacted by coastal eutrophication and likely hypoxia as well.

This presentation will start with our current understanding of carbon fluxes and their controls in the global coastal ocean. We emphasize that physical settings such as the basin/mesoscale circulation including their interactions with open ocean basins in many coastal systems determines the carbon fluxes to a large extent. We will then look at the South China Sea as an example of the variability of coastal carbon fluxes at various temporal and spatial scales, spanning from diurnal changes to decadal changes, and in different physical-biogeochemical domains such as river plumes, upwellings, and meso-scale eddies. Emphasis will be given to the carbon connection between riverine input, its response on the shelf system and exchange with the open ocean interior. Also examined in this presentation are the interactions between carbon cycling and other biogenic elements such as nitrogen and silicate in the coastal ocean. This presentation will end with comments on the potential future changes of coastal ocean carbon biogeochemistry under the influence of both climate change and various anthropogenic effects.

THURSDAY, 12 JULY 2012

11:00 to 12:00, Biwako Hall – Main Theatre

ISABEL RECHE

Department of Ecology, Faculty of Science, University of Granada

Biographical Information: Dr. Isabel Reche is an Associate Professor of Ecology and Associate Scientist of the Instituto del Agua at the University of Granada (Spain). She received her doctor degree from this university in 1995 and was a postdoctoral fellow at the Institute of Ecosystems Studies (Millbrook, NY, USA) until 1998. Since then she is at the University of Granada. She has been involved in several projects in remote environments as boreal, and alpine lakes or in the Southern Ocean. Her specific scientific interests are dissolved and particulate organic carbon dynamics in aquatic ecosystems and bacterioplankton activity and structure.

Presentation: Dusty Skies and Pristine Lakes

Desertification and land use changes are promoting an increase of dust in the atmosphere. The Sahara-Sahel region is the main source of atmospheric dust accounting for approx. 50% of the dust production in the Earth surface, but other deserts as Gobi and Takla Makan in Asia are also relevant. African dust is mostly exported toward the Atlantic Ocean and the Mediterranean region mobilizing particles, inorganic and organic nutrients, pollutants, and also microorganisms. Remote lakes are usually unaffected by direct human influence and, consequently, are considered as pristine and reference sites very responsive to environmental changes. However, these remote, alpine lakes are also submitted to dust deposition that influences their pool of mineral nutrients, dissolved organic matter, optical properties, and planktonic assemblages.

We have been studying the effects of dust deposition on lake biogeochemistry and microbial biogeography patterns. At the regional scale, in Sierra Nevada (Spain), atmospheric deposition of particulate matter, calcium, total phosphorus, and chromophoric dissolved organic matter is mainly associated to dryfall and shows seasonal patterns similar to Saharan dust exports. These dust inputs are an important source of phosphorous and organic carbon affecting lake stoichiometry and boosting phytoplankton and bacterioplankton. We have quantified bacterial loadings linked to dust deposition and identified viable long-distance airborne bacteria as immigrants in alpine lakes. At the global scale, we have reported significant latitudinal trends in alpine lakes in dissolved organic matter quantity and quality influenced by dust deposition. Our results suggest the current increase in dust export from land may affect the optical quality of dissolved organic matter in clear, alpine lakes and, consequently, their value as pristine reference sites.

FRIDAY, 13 JULY 2012

11:00 to 12:30, Biwako Hall – Main Theatre

NELSON G. HAIRSTON, JR.

Frank H. T. Rhodes Professor of Environmental Science and Associate Chair, Department of Ecology and Evolutionary Biology, Cornell University

Biographical Information: Nelson G. Hairston, Jr. is Frank H. T. Rhodes Professor of Environmental Science at Cornell University in Ithaca, New York, USA. He studies ecological and evolutionary responses of freshwater organisms to environmen-

tal change. His study systems range from close to home (Cayuga Lake, Onondaga Lake & Oneida Lake, NY) to more distant (Lake Constance, Swiss Alps) and from large (Lake Ontario) to small (laboratory microcosms). Research in his laboratory and with colleagues has shown that populations can adapt evolve over very short time periods to changing environments. Algae adapt genetically to high grazing intensity altering consumer-resource cycles, consumers evolve resistance to elevated cyanobacteria, copepods evolve life histories that protect them from seasonal fish predation, and so on. In addition, he has discovered that the dormant eggs of zooplankton can survive for decades or even centuries in lake sediments and then hatch: a phenomenon that not only influences how organisms and lake ecosystems respond to environmental changes such as nutrient pollution and introductions of non-native fishes, but also provides limnologists with a tool to study adaptive evolution using living animals from a sequence of times in the past. He has been a member of ASLO since 1972. Hairston received his BS degree (1971) in Zoology from the University of Michigan and his Ph.D. (1977) in Zoology from the University of Washington where he studied with renowned limnologist W.T. Edmondson. He served as a faculty member at the University of Rhode Island (1977–1985) and has been on the faculty at Cornell since 1985. He is former Chair of the Department of Ecology and Evolutionary Biology, and is currently Senior Associate Dean in the College of Arts and Sciences and a member of the Cornell University Board of Trustees.

Presentation: Hutchinson's "Ecological Theater" As Improv: Eco-Evolutionary Responses To Environmental Change

Aquatic life is continually challenged by environmental change. Excellent research has been dedicated to understanding how marine and freshwater organisms respond as the world to which they are adapted is altered by species introductions, pollution, and changing climate. Hutchinson's famous 1965 essays "The Ecological Theater and the Evolutionary Play" framed the idea that adaption matters: the environment defines the available niches to which organisms have evolved as efficient users. Evidence has mounted recently, however, for a more immediate interaction between ecology and evolution in which genetic adaptations of populations change at essentially the same rate as population abundance. Both occur on the time scale of generations. Adaptations can become the basis for further environmental change creating a feedback loop in which adaptation alters environment, which alters selection driving further adaptation, and so on: Hutchinson's theater and play turn out to be improvisational. I explore evidence for these eco-evolutionary dynamics in aquatic systems, ask under what conditions they are important, and suggest ways to determine how important rapid evolution is for understanding the response of aquatic systems to environmental change.

TAMAKI URA

Professor, Director of Engineering, Underwater Technology Research Center, Institute of Industrial Science, The University of Tokyo

Biographical Information: Tamaki Ura is Director and Professor of Underwater Technology Research Center at the Institute of Industrial Science (IIS) of the University of Tokyo, and Director of the Tokyo University Ocean Alliance, since its establishment in 2007. He is one of the top-leaders of development of Autonomous Underwater Vehicle in the world.

He has developed not only Autonomous Underwater Vehicles (AUVs) but also various related application technologies including navigation methods, a new sensing method using a chemical sensor, precise seafloor mapping methods, a precise seabed positioning system with a resolution of a few centimeters, a new sensing system of the thickness of cobalt-rich crust, etc. Finally, he exemplified using these technologies that AUVs are practicable and valuable tools for deep-sea exploration.

Not only for the academic fields but also for the public, he has been contributing to the Ocean related themes. He was a Commissioned Judge of the High Marine Accidents Inquiry Agency from 1984 to 2008, and he was the chairman of the Ocean Technology Committee of the Society of Naval Architects of Japan from 1998 to 2000 as well. Based on these activities, he has received many awards. Most recently, he has been recognized with the IEEE Oceanic Engineering Society Distinguished Technical Achievement Award (USA) (2010); Nominated as IEEE Fellow, for contributions to autonomous underwater vehicle technologies. (USA) (2007), and the Distinguished Service Award from IEEE Japan Chapter (Japan) (2006).

Presentation: Observation of Deep Seafloors by Autonomous Underwater Vehicles

The AUV (Autonomous Underwater Vehicle) is a dynamically stable platform that can be used for automatic, high-resolution visual and/or acoustic observation of deep seafloors. The following three examples illustrate the advantages of observation using AUVs and give some idea of the scope of applications. The AUV "Tri-Dog 1" has annually visited the tube worm fields in Kagoshima bay since 2006, and has taken pictures of colonies of shallow water (about 100m depth) tube worms (*Lamellibrachia satsuma*). A mosaic based on these pictures was superimposed on a detailed 3D configuration of the seafloor. The second example is based on dives by the AUV "Tuna-Sand" in July 2010. The AUV performed twelve dives over gas-hydrate fields in Toyama bay and took about 7,000 pictures from an altitude of 2.2 meters above the floor at a depth of 1,000 meters. One of the mosaics shows 3,500 snow crabs (*Chionoecetes japonicas*) in a 40 meters by 20 meters area. The third example is exploration of the Izena caldron carried out by the AUV "r2D4" in November 2008. The AUV succeeded in taking side scan SONAR (SSS) images, which show several small hydro-thermal mounds and chimneys at the base of the Izena caldron at a depth of 1,600 meters. Based on the SSS images and bathymetry map measured by the interferometry SONAR, JOGMEC (Japan Oil, Gas and Metals National Corporation) selected suitable locations to perform drilling in order to survey the amount of mineral deposits at the site.

Closing Ceremony

Friday, 13 July 2012

12:30 to 13:00, Biwako Hall – Main Theatre

Following the plenary talks and award presentations on Friday, ASLO President John Downing will provide closing remarks. The organizing committee has plans for a special closing session lottery game and drawing afterward. You will not want to miss this! Make plans to stay for the outstanding sessions, plenary talks, award presentations, and closing ceremonies that are scheduled on Friday so that you can take part in this.

ASLO Award Presentations

2012 ASLO awards presentations will take place during the plenary sessions on Sunday, Tuesday, Wednesday, Thursday, and Friday.

Biographical information on the awardees and award citations were included in the May 2012 issue of the *L&O: Bulletin*. (http://aslo.org/bulletin/issues/12_v21_i2.pdf)

SUNDAY, 8 JULY 2012

2012 A.C. Redfield Lifetime Achievement Award to Z. Maciej Gliwicz, University of Warsaw, and Winfried Lampert, Max Planck Institute for Evolutionary Biology

The Lifetime Achievement Award was first presented in 1994 to recognize and honor major, long-term achievements in the fields of limnology and oceanography, including research, education and service to the community and society. In 2004, the ASLO Board renamed the Lifetime Achievement Award in honor of Alfred C. Redfield. Redfield's biography was compiled by Dr. Peter Williams, who received the Redfield Award in 2009, and published in the December 2006 issue of the *Limnology and Oceanography Bulletin*. Emphasis in selection is given to established aquatic scientists whose work is recognized for its importance and long-term influence.

TUESDAY, 10 JULY 2012

2012 Ruth Patrick Award to Penny Chisholm, Massachusetts Institute of Technology (M.I.T.) and John Cullen, Dalhousie University

In 1998, the ASLO board initiated the Ruth Patrick Award to honor outstanding research by a scientist in the application of basic aquatic science principles to the identification, analysis and/or solution of important environmental problems. When selecting recipients, emphasis is given to aquatic scientists who have made either sustained contributions or a single but critical contribution towards solving an environmental problem.

WEDNESDAY, 11 JULY 2012

2012 G. Evelyn Hutchinson Award to James J. Elser, Arizona State University

The G. Evelyn Hutchinson Award has been presented annually since 1982 to recognize excellence in any aspect of limnology or oceanography. The award is intended to symbolize the quality and innovations toward which the society strives and to remind its members of these goals. In lending his name to the award, Hutchinson asked that recipients be scientists who had made considerable contributions to knowledge, and whose future work promised a continuing legacy of scientific excellence. This award is given to mid-career scientists for work accomplished during the preceding five to 10 years.

THURSDAY, 12 JULY 2012

2012 Margalef Excellence In Education Award to John P. Smol, Queen's University

In 2008, the ASLO board initiated a new award for Excellence in Education to recognize excellence in teaching and mentoring in the fields of limnology and oceanography. This award is

targeted toward ASLO members at any stage in their careers and is presented to the ASLO member who best exemplifies the highest standards of excellence in education. The Ramón Margalef Award for Excellence in Education was first presented in 2009 and is presented annually.

FRIDAY, 13 JULY 2012

**2012 John Martin Award to Rik Wanninkhof,
NOAA/AOML for:**

Wanninkhof, R., 1992. Relationship between gas exchange and wind speed over the ocean. J. Geophys. Res. 97, 7373-7381.

The John Martin Award, established in 2005, recognizes a paper in aquatic sciences that is judged to have had a high impact on subsequent research in the field. This award is given to at most one paper per year. Unlike the Lindeman Award, which recognizes very recent papers (within two years) by young investigators, the Martin Award is for papers at least 10 years old, but no more than 30 years old. It must be published in English and can be from any area of aquatic sciences. The spirit of the award is such that papers leading to fundamental shifts in research focus or interpretation of a large body of previous observations will be favored.

**2012 Raymond L. Lindeman Award to Stuart Jones,
University of Notre Dame for the work discussed in his paper:**

Jones, S.E. and Lennon, J.T. (2010) Dormancy contributes to the maintenance of microbial diversity. Proceedings of the National Academy of Sciences of the United States of America 107: 5881-5886

This annual award in honor of Raymond L. Lindeman (1915-1942) was first presented in 1987 to recognize an outstanding paper written by a young aquatic scientist. The initial gift to create a fund for the Lindeman award was made in 1986 by Lindeman's colleague in graduate school, Charles B. Reif of Wilkes College, Pennsylvania, and a subsequent gift from Reif continues to support the award. Lindeman received his Ph.D. in March 1941 from the University of Minnesota, and he began postdoctoral work with G. Evelyn Hutchinson at Yale that September. His career was cut short by his death in April, 1942; he was only 27. This annual award recognizes an outstanding paper dealing with the aquatic sciences. Nominated papers must be written in English by an author who is no older than 35 years during the publication year. The paper must be published in a peer-reviewed journal two years before the award year (e.g., 2002 award will be presented for work published in 2000). The nominee must be first author if there is more than one author.

Poster Sessions and Receptions

Tuesday, 10 July, and Thursday, 12 July, 2012
18:00 to 20:00, Biwako Hall – Foyer

Posters will be organized by session. Poster presentations will take place during two evening sessions. Posters numbered 1 through 148 will be presented on Tuesday, and posters numbered 149 through 276 will be presented on Thursday. Posters in each session will be available for viewing approximately 1 ½ days. Those who are presenting their research will do so during the receptions on these evenings. Light reception foods will be served.

About the Venues

The meeting will take place in three different venues—Biwako Hall, Piazza Omi (Piazza Hotel), and Collabo Shiga. All facilities are located within a short distance of each other. Please see the inside back cover of this program for a map showing the various venues.

At the Meeting

CONFERENCE REGISTRATION AND CHECK-IN

The conference registration desk is located in Biwako Hall in the Theatre Foyer. Meeting materials and name badges can be picked up beginning Sunday from 13:00 to 17:00. The registration desk will be open Monday through Thursday from 07:00 to 18:00, and on Friday from 07:00 to 14:00.

In order to facilitate easier check in at the meeting, it is very important that you bring your confirmation with you to the meeting registration desk! Providing a copy of your registration receipt or confirmation when you arrive at the conference registration desk will help us locate your badge and registration materials quickly and efficiently.

Please note that your name badge should be worn at all times throughout the meeting.

MESSAGE BOARDS

There will be a message board located in the exhibit area where you may post or check for messages throughout the conference.

SPECIAL NEEDS

If you have a disability or limitation that may require special consideration in order to ensure your full participation in this meeting, please see a staff person at the conference registration desk.

COFFEE BREAKS

Coffee breaks are planned immediately prior to the plenary and award presentation sessions from 10:30 to 11:00 and in the afternoon from 15:30 to 16:00. Complimentary coffee, tea, and orange juice will be served. Water will be provided in coolers throughout all venues and attendees are encouraged to bring their own water bottles. Morning breaks will be set in the Main Theatre Foyer of Biwako Hall. Afternoon breaks will be located in various locations at the other meeting venues where the concurrent sessions are taking place.

LUNCH TIME DURING THE MEETING

12:00 to 13:30 Monday through Thursday

Meeting participants will have an hour and half for lunch Monday through Thursday. The meeting will end on Friday. Following the conclusion of the plenary talks and award presentations at 12:30, an exciting closing session is planned that ends at 13:00.

EMAIL/INTERNET ACCESS

An Internet lounge will be available in Piazza Omi – Room 204

LOST AND FOUND

A lost and found will be located at the conference registration desk located in Biwako Hall – Theatre Foyer.

Special Opportunities and Information for Students

OUTSTANDING STUDENT PRESENTATION AWARDS

Recognition awards will be provided to the most outstanding posters and talks presented by students at the 2012 Aquatic Sciences Meeting. Presentations will be judged on the basis of innovation/scientific insight, quality of experimental design/methods, and clarity/effectiveness of presentation. There is no need to apply; all student presentations will be judged and eligible presentations will be evaluated in consideration for the awards. Award winners will receive notification via email, and a certificate will be mailed.

CAREER CENTER

There will be a Career Bulletin Board in Piazza Omi – Main Hall where prospective employers are invited to post job announcements and students and early career professionals are invited to post a one-page CV.

STUDENT SOCIAL MIXER

Monday, 9 July, 19:00 to 21:00, Biwako Hall, Main Theatre Foyer

An informal student social mixer will be held on Monday evening following the scientific sessions. Senior scientists will be invited to attend and meet with students on an informal basis. Beverages and sandwiches will be available. All students are invited to attend.

STUDENT FORUMS

Student forums (career development workshops) will be held over lunch on Tuesday and Thursday during the meeting. A range of topics will be covered to address different career paths in the aquatic sciences, skills or expertise important for these careers, and strategies for successfully competing for jobs, grants, or fellowships. A limited number of lunches (Bento Boxes) will be provided. All students are invited to participate. Descriptions are as follows:

SCIENTIFIC SPEED DATING: NETWORKING FOR THE 21ST CENTURY - TWO CONCURRENT SESSIONS

Tuesday, 10 July, 12:00 to 13:30, Collabo Shiga - Meeting Rooms 1 and 2

Panelists: Advanced scientists from a variety of aquatic science fields

Description: It can be daunting to try to introduce yourself to someone at a large scientific meeting, but given the right opportunity, a quality exchange can have a lasting impression. Scientific speed dating is a twist on the popular singles speed dating phenomenon. The goal here is to foster an interactive environment between small groups of advanced scientists and graduate students in hopes of creating some short, high impact exchanges. It's amazing what can be accomplished in five minutes! Join us for this workshop to start building new connections.

GLEON-PRAGMA JOINT WORKSHOP – MULTIDISCIPLINARY NETWORK SCIENCE USING CUTTING EDGE TECHNOLOGIES

Thursday, 12 July, 12:00 to 13:30
Piazza Omi – Room 305

This workshop will provide an opportunity to learn about emerging multidisciplinary collaborative science first hand, from a panel of leading scientists in the field. Cutting-edge technologies and methods (such as high frequency monitoring technologies, automated fish detection by image processing etc.) are briefly introduced by the panel, and there will be opportunities to engage with a diverse group of multidisciplinary scientists who specialize in network science and global collaborations.

Panelists include Peter Arzberger, Executive Director, National Biomedical Computation Resource, The University of California San Diego, USA (Chair, PRAGMA Steering Committee), David Hamilton, Professor, Lake Ecosystem Restoration New Zealand, Environmental Research Institute, The University of Waikato, New Zealand (GLEON Steering Committee Member), and Shinji Shimojo, Professor, Applied Information Systems Division, Cyber Media Center, Osaka University, Japan (PRAGMA Steering Committee Member)

APECS/ASLO STUDENT WORKSHOP - LESSONS FROM THE FIELD: CAREERS IN POLAR SCIENCE

Thursday, 12 July, 12:00 to 13:30, Piazza Omi – Room 207

“Lessons from the Field” will provide a forum for discussing practical career strategies. Learn how to apply the skills developed during graduate studies to careers in and outside of academia. Participants will have the opportunity to engage in discussions and ask questions from the panel. The panel speakers will share their advice and perspectives on the early stages of developing a career. Together they will be able to provide information on how different skills and paths can lead to a variety of jobs in science. This lunch hour session offers an intimate, informal environment that aims to encourage thoughtful insight on career development among international and interdisciplinary researchers and students alike.

Confirmed panelists include Dr. Nikolaus Gantner, University of Victoria, Canada, and Dr. Kazuhisa Chikita, Hokkaido University, Japan

Early Career Events

EARLY CAREER MEET AND MIX

Monday, 9 July, 19:00 to 21:00, Biwako Hall - Lobby

A “meet and mix” reception is planned and organized by members of the ASLO early career committee to give early career members an opportunity to provide feedback on various topics relevant to them, including any concerns or expectations as an early career member. This is a social gathering for early career members to get to know each other and to network. Reception-style food and bar will be available. All early career professionals are invited to attend.

EARLY CAREER WORKSHOP

Wednesday, 11 July, 12:00 to 13:30, Piazza Omi - Room 305

Continued on Page 12.

Meeting Schedule

SUNDAY, 08 JULY

| | | | | | |
|-------------|---|---------------------------|-------------|---------------------------|--------------------------------|
| 12:00–20:00 | Presentation Center (PC) | Piazza Omi–Room 203 | 13:00–16:00 | Optional Flower Arranging | Piazza Omi–Room 205 |
| 13:00–17:00 | Registration | Biwako Hall–Theatre Foyer | 13:30–15:30 | Concurrent Sessions | Various |
| 13:00–15:30 | Public Symposium–Global Warming | Biwako Hall–Theatre | 14:00–17:00 | Exhibits Set-up | Piazza Omi–Main Hall |
| 15:30–17:00 | Music and Movie: Akira Sakata | Biwako Hall–Theatre | 15:30–16:00 | Coffee Break | Various Venues |
| 17:00–18:30 | Opening and Plenary Session Welcome: Governor, Mayor, John Downing, ASLO President, and Brian Moss, SIL President Plenary Address: Nancy Grimm, Arizona State University and National Science Foundation Award Presentation: Redfield Lifetime Achievement Award | Biwako Hall–Main Theatre | 16:00–18:00 | Concurrent Sessions | Various |
| | | | 18:00–19:00 | ASLO Business Meeting | Biwako Hall–Theatre |
| | | | 19:00–21:00 | ASLO Early Career Mixer | Biwako Hall–Lobby |
| | | | 19:00–21:00 | ASLO Student Mixer | Biwako Hall–Main Theatre Foyer |
| 18:30–21:00 | Opening Reception | Biwako Hall–Foyer | | | |

MONDAY, 09 JULY

| | | | | | |
|-------------|--|--------------------------------|-------------|--|-----------------------------------|
| 07:00–18:00 | Registration | Biwako Hall–Theatre Foyer | 08:00–18:00 | Internet Lounge | Piazza Omi–Room 204 |
| 08:00–18:00 | Speaker Ready Room | Piazza Omi–Room 202 | 09:00–10:30 | Concurrent Sessions | Various |
| 08:00–18:00 | Internet Lounge | Piazza Omi–Room 204 | 09:00–18:00 | Exhibits Open | Piazza Omi–Main Hall |
| 09:00–10:30 | Concurrent Sessions | Various | 09:00–18:00 | Posters Available for Viewing | Biwako Hall–Lobby |
| 09:00–12:00 | Poster Set Up for Tuesday Poster Session | Biwako Hall–Lobby | 10:30–11:00 | Coffee Break | Biwako Hall–Main Theatre Foyer |
| 10:30–11:00 | Coffee Break | Biwako Hall–Main Theatre Foyer | 11:00–12:00 | Plenary Address: Julie LaRoche, Marine Biogeochemistry, IFM–GeoMar Award Presentation: Ruth Patrick Award | Biwako Hall–Main Theatre |
| 11:00–12:00 | Plenary Address: Carolyn Oldham, School of Environmental Systems Engineering, The University of Western Ontario Plenary Address: George Sugihara, Scripps Institution of Oceanography, UCSD | Biwako Hall–Main Theatre | 12:00–13:30 | Lunch | On Your Own |
| 12:00–13:30 | Lunch | On Your Own | 12:00–13:30 | Eddy Correlation Measurement Workshop | Collabo Shiga–Main Room 1 |
| 12:00–18:00 | Posters Available for Viewing | Biwako Hall–Lobby | 12:00–13:30 | Student Forum–Scientific Speed Dating | Collabo Shiga–Meeting Rooms 1 & 2 |
| 12:00–13:30 | L&O e-Lectures Town Hall Meeting | Collabo Shiga–Main Room 3 | 13:30–15:30 | Concurrent Sessions | Various |
| 12:00–13:30 | Future of Ecosystems Science Workshop | Collabo Shiga–Main Room 1 | 15:30–16:00 | Coffee Break | Various Venues |
| 13:00–16:00 | Optional Tea Ceremony | Piazza Omi–Japanese Style Room | 16:00–18:00 | Concurrent Sessions | Various |
| | | | 18:00–20:00 | Poster Session | Biwako Hall–Lobby |
| | | | 18:30–19:00 | Entertainment: Taiko Drums | Biwako Hall–Theatre |
| | | | 20:00–21:00 | Tuesday Poster Removal | Biwako Hall–Lobby |

WEDNESDAY, 11 JULY

| | | | | | |
|-------------|--|--------------------------------|------------------------|--|--------------------------------|
| 07:00–18:00 | Registration | Biwako Hall–Theatre Foyer | 10:30–11:00 | Coffee Break | Biwako Hall–Main Theatre Foyer |
| 08:00–18:00 | Speaker Ready Room | Piazza Omi–Room 202 | 11:00–12:00 | Plenary Address: Isabel Reche, University of Granada Award Presentation: Margalef Award | Biwako Hall–Main Theatre |
| 08:00–18:00 | Internet Lounge | Piazza Omi–Room 204 | 12:00–13:30 | Lunch | On Your Own |
| 09:00–10:30 | Concurrent Sessions | Various | 12:00–13:30 | Student Forums | Piazza Omi–Rooms 305 & 207 |
| 09:00–12:00 | Poster Set Up for Thursday Poster Session | Biwako Hall–Lobby | 12:00–13:30 | L&O e-Lectures Editorial Board Meeting | Biwako Hall–Seminar Room |
| 09:00–18:00 | Exhibits Open | Piazza Omi–Main Hall | 13:30–15:30 | Concurrent Sessions | Various |
| 10:30–11:00 | Coffee Break | Biwako Hall–Main Theatre Foyer | 15:30–16:00 | Coffee Break | Various Venues |
| 11:00–12:00 | Plenary Address: Minhan Dai, Marine Environmental Lab, Xiamen University Award Presentation: G. Evelyn Hutchinson Award | Biwako Hall–Main Theatre | 16:00–18:00 | Concurrent Sessions | Various |
| 12:00–13:30 | Lunch | On Your Own | 18:00–20:00 | Poster Session | Biwako Hall–Lobby |
| 12:00–13:30 | Early Career Workshop | Piazza Omi - Room 305 | 18:00–20:00 | Exhibitor Teardown | Piazza Omi–Main Hall |
| 13:00–16:00 | Optional Tea Ceremony | Piazza Omi–Japanese Style Room | 18:30–19:00 | Entertainment: Biwa Guitar | Biwako Hall–Theatre |
| 13:00–16:00 | Optional Flower Arranging | Piazza Omi–Room 205 | 20:00–21:00 | Thursday Poster Removal | Biwako Hall–Lobby |
| 13:30–15:30 | Concurrent Sessions | Various | FRIDAY, 13 JULY | | |
| 15:30–16:00 | Coffee Break | Various Venues | 07:00–14:00 | Registration | Biwako Hall–Theatre Foyer |
| 16:00–18:00 | Concurrent Sessions | Various | 09:00–10:30 | Concurrent Sessions | Various |
| 18:30–19:00 | Entertainment: Koto Harp | Biwako Hall–Theatre | 10:30–11:00 | Coffee Break | Biwako Hall–Main Theatre Foyer |
| 19:00–21:00 | Optional Boat Cruising with Dinner | | 11:00–12:30 | Plenary Address: Nelson Hairston, Department of Ecology and Evolutionary Biology, Cornell University | Biwako Hall–Main Theatre |

THURSDAY, 12 JULY

| | | | | | |
|-------------|-------------------------------|---------------------------|---|---|--------------------------|
| 07:00–18:00 | Registration | Biwako Hall–Theatre Foyer | Award Presentations: John Martin Award and Raymond L. Lindeman Award | | |
| 08:00–18:00 | Speaker Ready Room | Piazza Omi–Room 202 | 12:30–13:00 | Closing Ceremony | |
| 08:00–18:00 | Internet Lounge | Piazza Omi–Room 204 | TBD | Field Trips (Optional) | |
| 09:00–10:30 | Concurrent Sessions | Various | SATURDAY, 14 JULY | | |
| 09:00–18:00 | Exhibits Open | Piazza Omi–Main Hall | 08:30–17:00 | Emerging Issues Workshop: Causes & Consequences of Biodiversity Loss (By Invitation Only) | Prince Hotel - Room 102B |
| 09:00–18:00 | Posters Available for Viewing | Biwako Hall–Lobby | | | |

Continued from Page 9.

Conference Events

PUBLIC SYMPOSIUM ON GLOBAL WARMING

Sunday, 8 July, 13:00 to 15:30, Biwako Hall - Theatre

This will be a collaboration of artists, scientists and politicians.

OPENING WELCOME RECEPTION

Sunday, 8 July, 18:30 to 21:00, Biwako Hall Foyer

A welcome mixer reception will be held on Sunday evening following the opening plenary session at Biwako Hall. This reception is sponsored by the Shiga Prefectural Government. Conference registration will not be open during the reception.

ASLO MEMBERSHIP BUSINESS MEETING

Monday, 9 July, 18:00 to 19:00, Biwako Hall - Theatre

The annual ASLO membership business meeting will take place following the conclusion of the oral sessions on Monday evening. Come hear all about ASLO's activities, future projects, and meeting plans. Join us for light refreshments and drinks. This meeting is open to all members and non-members. Students are encouraged to attend.

POSTER SESSIONS AND RECEPITIONS

Tuesday, 10 July, and Thursday, 12 July, 18:00 to 20:00
Biwako Hall Lobby

Posters will be on display and available for viewing Tuesday and Thursday in the Biwako Hall Lobby. Poster presentations will take place during evening sessions. Those who are presenting their research will do so during the receptions on these evenings. Light reception foods will be served and a cash bar will be available.

Workshops and Town Hall Meetings

L&O E-LECTURES TOWN HALL MEETING: A HIGH IMPACT OPTION FOR ADDRESSING "BROADER IMPACTS"

Monday, 9 July, 12:00 to 13:30, Collabo Shiga - Main Room 3

Organizer: Jennifer Cherrier, Florida A&M University and Editor-in-Chief L&O e-Lectures, lolectures-editor@aslo.org

Several funding agencies now require proposals to not only provide justification for the intellectual merit of their work, but they must also include a plan for activities demonstrating the 'broader impact' on society. For many the task is arduous and elusive; with outcomes difficult to assess. ASLO's newest publication series 'L&O e-Lectures' offers a new and effective alternative for addressing societal benefit requirements by providing a high impact venue for publication in a post-secondary lecture format. Over the past year, the L&O e-Lectures website has received over 40,000 hits and this number is growing exponentially. If just 1% of these hits results in L&O e-Lecture downloads then that would mean that approximately 400 instructors would be using these e-Lectures to teach their courses.

As university class size ranges from anywhere between 20 to 150 students this translates to reaching 8000 to 60,000 students. The net outcome of publishing in L&O e-Lectures is win-win: a researcher submits his or her findings for publication in *L&O*, *L&O Methods*, or *L&O Fluids* in the Environment, and can also submit a companion publication in L&O e-Lectures. This Town Hall will introduce ASLO's newest peer-reviewed publication, 'L&O e-Lectures,' and provide a forum to discuss opportunities for publishing with L&O e-Lectures. For more information about L&O e-Lectures visit <http://www.aslo.org/lectures/>

A limited number of lunches (Bento boxes) will be available.

WORKSHOP: THE FUTURE OF ECOSYSTEMS SCIENCE

Monday, 9 July, 12:00 to 13:30, Collabo Shiga - Main Room 1

Organizer: Nancy Grimm, National Science Foundation, ngrimm@nsf.gov

Ecosystem science has a long history as a core program at the National Science Foundation (NSF), and although topics of research have fluctuated over the years as in any program, it retains a clear identity and continues to attract exciting proposals. As science is becoming more interdisciplinary, particularly the science of global environmental change, ecosystem scientists often find themselves in positions of intellectual and organizational leadership because of their experience working across disciplines. Now is an appropriate time to energize and bring together the discipline in pursuit of a research agenda for the future. The NSF funded a series of workshops (Peter Groffman and Kathleen Weathers, Cary Institute of Ecosystem Studies, are PIs) to accomplish this. The workshops and discussion groups will be held at multiple scientific-society meetings over the next two years, culminating in a Frontiers of Ecosystem Science Symposium. Relevant target societies in addition to ASLO include AGU, ASM, ERF, ESA, SFS (formerly NABS), ISME, IALE, AAG and SSSA. In this workshop, attendees will be asked to give us their ideas about the future of ecosystem science and will have the opportunity to listen and react to a series of very brief and provocative "soapbox" statements about the most important questions in ecosystem science from ~10 creative and diverse ecosystem scientists. Results from surveys and the ensuing group discussion will serve as input for a final symposium that will involve approximately 50 participants and will produce a "white paper" that would serve as an evaluation and direction for ecosystem science that could be used at NSF and elsewhere.

A limited number of lunches (Bento boxes) will be available.

WORKSHOP: EDDY CORRELATION MEASUREMENT

Tuesday, 10 July, 12:00 to 13:30, Collabo Shiga - Main Room 1

Hosted by Rockland Scientific Inc., the Eddy Correlation Measurement Workshop builds on the Instrumentation Workshop held during the AGU Ocean Sciences meeting in Salt Lake City in February. Topics include available instrument capabilities and limitation, response time and signal resolution requirements, temperature and oxygen sensor characteristics, and sampling methodologies and results.

In response to questions from the previous workshop, RSI will also be presenting the findings of a recent report testing the stirring response the new AMT Galvanic Micro-Oxygen Sensor.

Plenty of time will be available for a group discussion on the topics covered and questions asked by the audience. There is limited space available so attendance will be by registration and on a first-come, first-serve basis. Lunch (Bento boxes) will be provided. Please contact Jeremy Hancyk, Director of Business Development at Rockland Scientific, to register or for more information: Email: jeremy@rocklandsscientific.com or by phone 1.250.370.1688.

EMERGING ISSUES WORKSHOP: CAUSES AND CONSEQUENCES OF BIODIVERSITY LOSS ACROSS GLOBAL ECOSYSTEMS

Saturday, 14 July, 08:30 to 17:00, Prince Hotel – Room 102B

This ASLO Emerging Issues Workshop will take place on the weekend after the ASLO summer meeting in Lake Biwa, Japan. It is facilitated to encourage communication across disciplines, geographical barriers, or conceptual approaches.

This is an invitation-only workshop organized in association with Session: SS62: Biodiversity-Ecosystem Functioning Relationships Across Trophic Levels and Gradients in the Context of Global Change

Seminar description: Societal well-being is both directly and indirectly related to biodiversity (Millennium Ecosystem Assessment 2005), which is projected to become increasingly threatened by climate change (Intergovernmental Panel on Climate Change 2007) and other drivers. Human activities impact ecosystem functioning directly by altering physical and chemical processes, and indirectly by reducing the diversity of species, which maintain ecosystem processes and stability. Global-scale drivers like climate change, population growth and resource consumption, land use changes, and invasive species should reduce diversity by similar mechanisms among systems, although these drivers may be modulated (dampened or enhanced) by ecosystem properties that differ among or within aquatic and terrestrial systems. Several recently-published meta-analyses have addressed questions related to consequences of biodiversity loss, roles of top-down and bottom-up controls on primary production and diversity, and impacts of various environmental drivers on biodiversity loss. We see intriguing opportunities for higher-level syntheses that explore more complex causal relationships and hypotheses by integrating multiple effect size estimates from these studies. In this workshop, we will explore the feasibility of a “meta-synthesis” approach to address multi-level questions concerning causes and consequences of biodiversity loss and direct effects of global change on ecosystem function across freshwater, marine, and terrestrial ecosystems. We aim to identify consistent patterns where systems are impacted by similar drivers of diversity loss and where losses of diversity have similar consequences for ecosystem function, and to identify varying degrees by which causal factors differ both within and between freshwater, marine, and terrestrial ecosystems.

Organizers: W. Stanley Harpole, Iowa State University, harpole@iastate.edu; Christopher T. Filstrup, Iowa State University, filstrup@iastate.edu; Adam J. Heathcote, Iowa State University, aheathco@iastate.edu; Jonathan Shurin, UC San Diego, jshurin@ucsd.edu.

Evening Entertainment

MUSIC AND MOVIE (AKIRA SAKATA)

Sunday, 8 July, 15:30 to 17:00, Biwako Hall - Theatre

A musical performance by the famous Daphnia-Jazz musician, Akira Sakata, will immediately follow the public symposium.

ENTERTAINMENT BY TAIKO DRUMS

Tuesday, 10 July, 18:30 to 19:00, Biwako Hall - Theatre

A musical performance featuring Koto harp music will take place on Tuesday evening.

ENTERTAINMENT BY KOTO HARP

Wednesday, 11 July, 18:30 to 19:00, Biwako Hall - Theatre

A musical performance featuring Biwa guitar music will take place on Wednesday evening.

ENTERTAINMENT BY BIWA GUITAR

Thursday, 12 July, 18:30 to 19:00, Biwako Hall - Theatre

A musical performance featuring Taiko Drums will take place on Thursday evening.

Optional Activities

TEA CEREMONY

Monday, 9 July, and Wednesday, 11 July, 13:00 to 16:00

Piazza Omi – Japanese Style Room

Attendees and guests will be able to sign up at the meeting.

FLOWER ARRANGING

Monday, 9 July, and Wednesday, 11 July, 13:00 to 16:00

Piazza Omi – Room 205

Attendees and guests will be able to sign up at the meeting.

BOAT CRUISING WITH DINNER

Wednesday, 11 July, 19:00 to 21:00

An optional night-time dinner cruise offered by the Biwako Kisen Steamship Co. Ltd. will take place on Wednesday evening. This is an optional event and advance registration was required.

ASLO Membership

Membership in ASLO is strongly encouraged. We welcome the non-ASLO members in attendance, and we hope you will join the society while you are at the conference. If you are an ASLO member already, you may renew your membership at the registration desk.

Registration Information

The full registration fee includes admission to all sessions, exhibits, town hall meetings and workshops (unless otherwise specified), Sunday welcome reception, poster session receptions, coffee breaks, and the program book. Optional events such as any special organized activities are not included.

Guest/Spouse is \$75.00 USD prior to the meeting and \$95.00 USD on site at the meeting. Spouse and guest fees cover only the conference social events such as the Sunday welcome reception, coffee services, and the poster receptions. Optional events are not included. Spouses and guests are encouraged to register for any optional events such as those listed on page 13. More information on optional activities will be available at the meeting.

Additional Participant & Attendee Information

RECEIPTS

Your confirmation receipt that was emailed to you prior to the meeting will serve as your payment receipt. In keeping with our conservation efforts, we will not provide printed receipts to attendees on site at the meeting. If you have misplaced your original receipt and need another copy, you may print your own receipt by going to: <https://www.sgmeet.com/aslo/japan2012/userlogon.asp>

Your username is your email address, and your password is your registration ID number which is printed on your conference name badge.

LETTERS OF PARTICIPATION

Letters of participation only will be provided upon request and to those who are registered for the meeting. If you need a letter of participation, please go to the conference registration desk any time during the meeting and provide your name, affiliation, and email address. A letter will be prepared for you and sent as a PDF file to the email address you provide.

CHILD CARE INFORMATION

Piazza Omi – Room 201

Pre-arranged child care services will be available during the meeting from 08:00 to 17:00, Monday, 9 July, through Friday, 13 July. Only children ages 4 years old and up will be able to sign up for day care. There are a limited number of child care spots available. It may be possible to accommodate requests for childcare on-site, but there is no guarantee that they will be able to accept children unless they are pre-registered. The childcare providers will accommodate your child or children based on availability, as long as staffing ratios are maintained. If they have already received the maximum number of reservations for a certain day/time, their ability to accept "drop-ins" would be limited. The meeting organizers assume no responsibility or liability for services rendered.

Instructions for Poster Presenters

POSTER PRESENTATIONS

Posters will be on display in the Biwako Hall Lobby (BH). Posters will be presented depending upon the poster session to which you are assigned, either Tuesday, 10 July, or Thursday, 12 July. You will be expected to be available to present your poster during your designated poster session. Poster presenters are asked to adhere to designated set-up and tear-down instructions and times.

BECAUSE OF LIMITED SPACE, YOU MAY NOT PUT UP YOUR POSTER EARLY NOR MAY YOU PRESENT ON A DAY OTHER THAN THE DAY TO WHICH YOU ARE ASSIGNED.

Poster spaces will be numbered. The poster panel and push pins will be provided. Please do not use tape or anything that is not provided by the organizers to mount your poster.

POSTER PRESENTATION SCHEDULE

Poster presenters are asked to place their posters at the designated space according to the schedule below.

POSTER MOUNTING TIMES

For Tuesday, Poster Session I – Poster #s 1-148:

Monday, 9 July, from 09:00 to 12:00 or Tuesday, 10 July, from 09:00 to 12:00

For Thursday, Poster Session II – Poster #s 149-276:

Wednesday, 11 July, from 09:00 to 12:00 or Thursday, 12 July, from 09:00 to 12:00

POSTER DISMANTLING/REMOVAL TIMES

If you are scheduled to present your poster on Tuesday, you must dismantle your poster on Tuesday, 10 July, at 20:00, immediately following the conclusion of the poster session on that day. If you are scheduled to present your poster on Thursday, you must dismantle your poster on Thursday, 12 July, at 20:00, immediately following the conclusion of the poster session on that day. Posters that are not taken down by their presenters on time will be discarded.

Please be aware that your poster must be no larger than 1200 mm high by 1200 mm wide (47.24 inches high by 47.24 inches wide). This size must be exact to fit on the poster display board.

Information for Oral Presenters

Please arrive in time to download and preview your presentation at the Presentation Center (PC Center) (Piazza Omi – Room 203) at least 30 minutes prior to the start of your session.

PC CENTER (PRESENTATION ROOM)

The PC Center is located in Room 203 at Piazza Omi and is available only for the speakers to download and preview their presentations.

PC CENTER HOURS:

| | |
|-------------------------|-------------|
| Monday, 9 July | 08:00-17:30 |
| Tuesday, 10 July | 08:00-17:30 |
| Wednesday, 11 July..... | 08:00-17:30 |
| Thursday, 12 July | 08:00-17:30 |
| Friday, 13 July | 08:00-10:30 |

A remote presentation system is available in each session room. There will be a TFT monitor, mouse, and keyboard on the podium to operate the presentation.

Should speakers wish to update the data for presentation at the last minute, they should bring the data to the PC Center on either a USB flash memory or CD-R. If your presentation data is linked to other files, those linked files also should be saved in the same folder and checked for operability beforehand.

Windows is the only operating system available for the presentations. If you have prepared presentation data on a Macintosh, you are advised to bring your own computer. Likewise, if your presentation data has audio/video images, please bring your own computer for presentation.

If you use your own computer in the session room:

- PC Center technicians will prepare a Mini D-sub 15 pin PC cable connector. If your computer is not compatible with this type of connector, please bring your own an adapter to connect your computer to the Mini D-sub 15 pin PC cable connector.
- Following the conclusion of your session, we will return your computer at the operations desk in the session room. Please come to the operations desk promptly to collect it.

SPEAKER READY ROOM

A speaker preparation room is available throughout the meeting in Piazza Omi – Room 202. This room will be set so that presenters can practice their talks.

Abstracts Presented at the Meeting

Abstracts of papers presented during the ASLO 2012 Aquatic Sciences Meeting will be published in a PDF format. The URL will be posted on the Web site prior to the start of the meeting.

Exhibitors

Exhibits will be open in Piazza Omi – Main Hall, and open throughout the week. Attendees will enjoy being able to visit with vendors during conference hours (09:00 to 18:00) Tuesday through Thursday.

EXHIBITOR ROSTER

Following is a list of exhibitors as of 12 June 2012:

ASSOCIATION FOR THE SCIENCES OF LIMNOLOGY AND OCEANOGRAPHY
5400 Bosque Boulevard, Suite 680
Waco, TX 79710-4446
Contact: Helen Schneider Lemay
Phone: 254-776-3550, Fax: 254-776-3767
Email: business@aslo.org
Website: www.aslo.org

ASL ENVIRONMENTAL SCIENCES, INC.
#1-6703 Rajpur Place
Victoria, British Columbia V8M 1Z5
Canada
Contact: Colleen McQuade
Phone: +1-250-656-0177, Fax: +1-250-656-2162
Email: cmcquade@aslenv.com

AQUA ENVIRONMENTAL MONITORING, LLP

FLUID IMAGING TECHNOLOGIES
65 Forest Falls Dr
Yarmouth, ME 04096
Contact: Harry Nelson
Phone: 207-846-6100, Fax: 207-846-6110
Email: faith@fluidimaging.com

HYDRO SYSTEMS DEVELOPMENT, INC.

INTERNATIONAL LAKE ENVIRONMENTAL COMMITTEE

INTERNATIONAL SOCIETY OF LIMNOLOGY
302 ABNR Building
Columbia, MO 65211
Contact: Jack Jones
Phone: 573-882-3543, Fax: 573-884-5070
Email: jonesj@missouri.edu

JFE ADVANTECH CO., LTD.

JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY
Kochi Institute for Core Sample Research
200 Monobe-otsu
Nankoku, Kochi 783-8502
Japan
Contact: Lallan Gupta
Phone: +81-88-878-2241, Fax: +81-88-878-2192
Email: gupta@jamstec.go.jp

JAPAN AGENCY FOR MARINE-EARTH SCIENCE AND TECHNOLOGY (JAMSTEC)

NIPPON KAIYO CO., LTD.

PTT CO. LTD. / UNISENSE A/S
32-3 Kita-shinagawa 2-chome
Shinagawa-ku
Tokyo 140-0001
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Contact: Sakiko Miyamoto
Phone: +81-3-5781-5169, Fax: +81-3-5781-5131
Email: miyamoto.sakiko@pttco.co.jp

OCC CORPORATION

TAYLOR & FRANCIS
4 Park Square
Milton Park
Abingdon, England OX14 4RN
United Kingdom
Contact: Victoria Bale
Phone: +44(0) 207-017-6297
Email: victoria.bale@tandf.co.uk

TORAY INDUSTRIES, INC.

TURNER DESIGNS, INC.
845 W. Maude Avenue
Sunnyvale, CA 94085
Contact: Jenifer Sluga
Phone: 408-749-0994, Fax: 408-749-0998
Email: marketing@turnerdesigns.com

YSI NANOTECH

Mitsui Pareru 13F
Higashida-cho 8
Kawasaki ku 210-0005
Japan
Contact: Damian Roach
Phone: 044-222-0009, Fax: 044-222-1102
Email: droach@ysi.com

Monday At A Glance

| Time | Theatre (BH) | Ensemble Hall (BH) | Rehearsal Room (BH) | Piazza Hall (PO) |
|-------------|---|--|---|--|
| 09:00-10:30 | SS 07: Hyper-Eutrophication of Lake Taihu: A "looking glass" for large aquatic ecosystems worldwide impacted by human activities and climate change | SS 67: Responses of Lake Ecosystems to Global Changes: planktonic organisms as indicator | | SS 17: Microbial Diversity and Functions |
| 10:30-11:00 | Coffee Break | | | |
| 11:00-12:00 | Plenary Session | | | |
| 12:00-13:30 | Lunch | | | |
| | L&O e-Lectures Town Hall Meeting | | | |
| | Future of Ecosystems Science Workshop | | | |
| 13:30-15:30 | SS 07: Hyper-Eutrophication of Lake Taihu: A "looking glass" for large aquatic ecosystems worldwide impacted by human activities and climate change | SS 67: Responses of Lake Ecosystems to Global Changes: planktonic organisms as indicator | SS 34: Modeling Biogeochemical and Ecological Functions in Aquatic Ecosystems | SS 17: Microbial Diversity and Functions |
| 15:30-16:00 | Coffee Break | | | |
| 16:00-18:00 | SS 07: Hyper-Eutrophication of Lake Taihu: A "looking glass" for large aquatic ecosystems worldwide impacted by human activities and climate change | SS 40: Lakes and Their Climatic and Environmental Sediment Records | SS 34: Modeling Biogeochemical and Ecological Functions in Aquatic Ecosystems | SS 17: Microbial Diversity and Functions |
| 18:00-19:00 | ASLO Business Meeting | | | |
| 19:00-21:00 | Student Mixer | | | |
| | Early Career Mixer | | | |

BH= Biwako Hall, PO= Piazza Omi (Piazza Hotel), CS= Collabo Shiga

| Room 207 (PO) | Room 305 (PO) | Room 1 (CS) | Room 2 (CS) | Room 3 (CS) | Time |
|--|---|--------------------------------------|--|---|-------------|
| SS 52: Ecology and Management of Dams and Their Watersheds | SS 54: The Multifaceted Functions of Natural Biochemicals in Aquatic Ecosystems | | SS 31: Light, Transport and Mixing in Lakes: 100 Years after Forel | SS 24: Lake Process Monitoring by Automated Technologies and High-frequency Sensors | 09:00-10:30 |
| Biwako Hall-Main Theatre Foyer | | | | | 10:30-11:00 |
| Biwako Hall-Main Theatre | | | | | 11:00-12:00 |
| (Please see program for details on events scheduled during lunch.) | | | | | 12:00-13:30 |
| Collabo Shiga-Main Room 3 | | | | | |
| Collabo Shiga-Main Room 1 | | | | | 13:30-15:30 |
| SS 52: Ecology and Management of Dams and Their Watersheds | SS 03: Groundwater-Surface Water Interactions in Freshwater and Marine Environments | GS 02: Nearshore and Coastal Regions | SS 31: Light, Transport and Mixing in Lakes: 100 Years after Forel | SS 24: Lake Process Monitoring by Automated Technologies and High-frequency Sensors | |
| Various Venues | | | | | 15:30-16:00 |
| SS 27: Acoustic Tomography and Environmental Modeling in Coastal Seas, Estuaries, Rivers and Lakes | SS 26: International Student Symposium: The World Water Crisis | GS 02: Nearshore and Coastal Regions | GS 04: Physical Oceanography and Limnology | | 16:00-18:00 |
| Biwako Hall-Theatre | | | | | 18:00-19:00 |
| Biwako Hall-Main Theatre Foyer | | | | | 19:00-21:00 |
| Biwako Hall-Lobby | | | | | |

Tuesday At A Glance

| Time | Theatre (BH) | Ensemble Hall (BH) | Rehearsal Room (BH) | Piazza Hall (PO) |
|-------------|---|---|--|--|
| 09:00-10:30 | SS 07: Hyper-Eutrophication of Lake Taihu: A "looking glass" for large aquatic ecosystems worldwide impacted by human activities and climate change | SS 61: The Global Ocean Ecosystem: Patterns, Drivers and Change | SS 32: High Latitude and Altitude Aquatic Ecosystems in a Changing Environment | SS 02: Analyses of Long-term Data in Marine Ecosystems |
| 10:30-11:00 | Coffee Break | | | |
| 11:00-12:00 | Plenary Session | | | |
| 12:00-13:30 | Lunch | | | |
| | Eddy Correlation Measurement Workshop | | | |
| | Student Forum-Scientific Speed Dating | | | |
| 13:30-15:30 | SS 07: Hyper-Eutrophication of Lake Taihu: A "looking glass" for large aquatic ecosystems worldwide impacted by human activities and climate change | SS 61: The Global Ocean Ecosystem: Patterns, Drivers and Change | SS 32: High Latitude and Altitude Aquatic Ecosystems in a Changing Environment | GS 06: Plankton Biology and Ecology |
| 15:30-16:00 | Coffee Break | | | |
| 16:00-18:00 | SS 47: Vertical Structure of Aquatic Ecosystems: Observations, Experiments, and Theories. | SS 61: The Global Ocean Ecosystem: Patterns, Drivers and Change | SS 63: Lake Biwa Story: Past, Present and Future | GS 06: Plankton Biology and Ecology |
| 18:00-20:00 | Poster Session #1 (Poster #'s 1-148) | | | |
| 18:30-19:00 | Entertainment: Taiko Drums | | | |

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| Room 207 (PO) | Room 305 (PO) | Room 1 (CS) | Room 2 (CS) | Room 3 (CS) | Time |
|---|---|---|---|---|-------------|
| SS62 Biodiversity-Ecosystem Functioning Relationships Across Trophic Levels and Gradients in the Context Of Global Change | SS 54: The Multifaceted Functions of Natural Biochemicals in Aquatic Ecosystems | SS 36: Carbon and Nitrogen Stable Isotope Studies in Aquatic Ecosystems | | | 09:00-10:30 |
| Biwako Hall-Main Theatre Foyer | | | | | 10:30-11:00 |
| Biwako Hall-Main Theatre | | | | | 11:00-12:00 |
| (Please see program for details on events scheduled during lunch.) | | | | | 12:00-13:30 |
| Collabo Shiga-Main Room 1 | | | | | |
| Collabo Shiga-Meeting Rooms 1 & 2 | | | | | 13:30-15:30 |
| SS 28: Mixotrophy in Aquatic Systems: From Physiology to Ecological Impact | SS 26: International Student Symposium: The World Water Crisis | SS 36: Carbon and Nitrogen Stable Isotope Studies in Aquatic Ecosystems | SS 03: Groundwater-Surface Water Interactions in Freshwater and Marine Environments | SS 59: Dynamics of Habitat Structure and Aquatic Assemblages | |
| Various Venues | | | | | 15:30-16:00 |
| SS 14: Parasitism in Aquatic Microbial Ecology | SS 26: International Student Symposium: The World Water Crisis | SS 36: Carbon and Nitrogen Stable Isotope Studies in Aquatic Ecosystems | SS 03: Groundwater-Surface Water Interactions in Freshwater and Marine Environments | SS 57: The Temperature Dependence of the Carbon Cycle in Aquatic Ecosystems | 16:00-18:00 |
| Biwako Hall-Lobby | | | | | 18:00-20:00 |
| Biwako Hall-Theatre | | | | | 18:30-19:00 |

Wednesday At A Glance

| Time | Theatre (BH) | Ensemble Hall (BH) | Rehearsal Room (BH) | Piazza Hall (PO) |
|-------------|--|--------------------------------------|---|---|
| 09:00-10:30 | SS 60: Influence of Climatic and Environmental Change on Inland Water Bodies | | SS 19: Food Web: Its Structure, Dynamics and Ecosystem Consequences | SS 10: River Systems – Ecological Situation and Human Dimension |
| 10:30-11:00 | Coffee Break | | | |
| 11:00-12:00 | Plenary Session | | | |
| 12:00-13:30 | Lunch | | | |
| | Early Career Workshop | | | |
| 13:30-15:30 | SS 23: Ecosystem Change and Predictability of Aquatic Ecosystems | GS 01: Rivers, Wetland and Estuaries | SS 19: Food Web: Its Structure, Dynamics and Ecosystem Consequences | GS 06: Plankton Biology and Ecology |
| 15:30-16:00 | Coffee Break | | | |
| 16:00-18:00 | SS 23: Ecosystem Change and Predictability of Aquatic Ecosystems | GS 01: Rivers, Wetland and Estuaries | SS 13: Consequences of Cross-Ecosystem Resource Subsidies for Freshwater Foodwebs | GS 06: Plankton Biology and Ecology |
| 18:30-19:00 | Entertainment: Koto Harp | | | |
| 19:00-21:00 | Dinner Boat Cruising | | | |

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| Room 207 (PO) | Room 305 (PO) | Room 1 (CS) | Room 2 (CS) | Room 3 (CS) | Time |
|---|---|---|---|---|-------------|
| SS 20: Active Fluorescence Measures of Photosynthetic Physiology and Primary Production | SS 21: Long-Term Ecosystem and Biodiversity Dynamics: Time-Series and Paleoecological Studies | SS 42: New Frontiers of Isotope Tools for Biogeochemistry, Ecology and Environmental Sciences | SS 45: DOM Dynamics and Transport from Land to the Ocean, through Rivers, Lakes and Ground Waters | SS 73: Coastal Processes and Mixing | 09:00-10:30 |
| Biwako Hall-Main Theatre Foyer | | | | | 10:30-11:00 |
| Biwako Hall-Main Theatre | | | | | 11:00-12:00 |
| (Please see program for details on events scheduled during lunch.) | | | | | 12:00-13:30 |
| Piazza Omi-Room 305 | | | | | |
| SS 20: Active Fluorescence Measures of Photosynthetic Physiology and Primary Production | SS 21: Long-Term Ecosystem and Biodiversity Dynamics: Time-Series and Paleoecological Studies | SS 42: New Frontiers of Isotope Tools for Biogeochemistry, Ecology and Environmental Sciences | SS 45: DOM Dynamics and Transport from Land to the Ocean, through Rivers, Lakes and Ground Waters | SS 73: Coastal Processes and Mixing | 13:30-15:30 |
| Various Venues | | | | | 15:30-16:00 |
| SS 49: Recent Advances in Phytoplankton Pigment Studies in Oceanography | SS 56: Dietary Biomarkers in Aquatic Food Webs – Trophic transfer and stability | SS 42: New Frontiers of Isotope Tools for Biogeochemistry, Ecology and Environmental Sciences | SS 48: Trace Element Biogeochemistry | SS 09: Biogeochemical and Microbial Processes of Large Lakes of the World | 16:00-18:00 |
| Biwako Hall-Theatre | | | | | 18:00-19:00 |
| (Optional Event) | | | | | 19:00-21:00 |

Thursday At A Glance

| Time | Theatre (BH) | Ensemble Hall (BH) | Rehearsal Room (BH) | Piazza Hall (PO) |
|-------------|--|--|---|--|
| 09:00-10:30 | SS46: Climate and Global Environmental Changes in Aquatic Ecosystems | SS 30: The Impacts of Tsunami and The Fukushima Dai-Ichi Nuclear Power Plants on Oceans and Coastal Environments | SS 04: Food-Web Effects on Ocean Biogeochemical Processes: Environmental Control and Interactions | SS 10: River Systems – Ecological Situation and Human Dimension |
| 10:30-11:00 | Coffee Break | | | |
| 11:00-12:00 | Plenary Session | | | |
| 12:00-13:30 | Lunch | | | |
| | Student Forums | | | |
| | L&O e-Lectures Editorial Board Meeting | | | |
| 13:30-15:30 | SS46: Climate and Global Environmental Changes in Aquatic Ecosystems | SS 30: The Impacts of Tsunami and The Fukushima Dai-Ichi Nuclear Power Plants on Oceans and Coastal Environments | SS 04: Food-Web Effects on Ocean Biogeochemical Processes: Environmental Control and Interactions | SS 33: Freshwater Biodiversity: Monitoring, Forecasting, and Management Strategies |
| 15:30-16:00 | Coffee Break | | | |
| 16:00-18:00 | SS 60: Influence of Climatic and Environmental Change on Inland Water Bodies | SS 30: The Impacts of Tsunami and The Fukushima Dai-Ichi Nuclear Power Plants on Oceans and Coastal Environments | GS 08: Community Processes and Food Web | SS 33: Freshwater Biodiversity: Monitoring, Forecasting, and Management Strategies |
| 18:00-20:00 | Poster Session #2 (Poster #'s 149-276) | | | |
| 18:30-19:00 | Entertainment: Biwa Guitar | | | |

BH= Biwako Hall, PO= Piazza Omi (Piazza Hotel), CS= Collabo Shiga

| Room 207 (PO) | Room 305 (PO) | Room 1 (CS) | Room 2 (CS) | Room 3 (CS) | Time |
|--|---|--|--|--|-------------|
| | SS 69:Underwater Imaging and Sensing with Innovative Technologies | SS 64: Changes in the Biogeochemistry and Primary Productivity of the Western Arctic and Subarctic Seas: Regional Processes and Large-Scale Connectivity | SS 06: Interaction of Physical, Chemical and Biological Processes in Aquatic Ecosystems: Past, Present, and Future | | 09:00-10:30 |
| Biwako Hall-Main Theatre Foyer | | | | | 10:30-11:00 |
| Biwako Hall-Main Theatre | | | | | 11:00-12:00 |
| (Please see program for details on events scheduled during lunch.) | | | | | 12:00-13:30 |
| Piazza Omi-Rooms 305 & 207 | | | | | |
| Biwako Hall-Seminar Room | | | | | 13:30-15:30 |
| SS 51: Nitrogen Limitation in Freshwater- Is Nitrogen Reduction Ecologically Meaningful and Economically Feasible? | GS 07: Benthos Biology and Ecology | SS 64: Changes in the Biogeochemistry and Primary Productivity of the Western Arctic and Subarctic Seas: Regional Processes and Large-Scale Connectivity | SS 06: Interaction of Physical, Chemical and Biological Processes in Aquatic Ecosystems: Past, Present, and Future | SS 37: Terrestrial Subsidies and the Resilience of Aquatic Ecosystems | |
| Various Venues | | | | | 15:30-16:00 |
| SS 58: Nitrogen Biogeochemistry and Perturbation in Terrestrial-Freshwater Systems | GS 07: Benthos Biology and Ecology | SS 05: Carbon Storage and Evasion in Natural Wetlands and Freshwater Reservoirs | SS 55: Linking Organisms' Small-Scale Processes and Their Environments to Global Effects | SS 11: Biogeochemical and Ecological Impacts of Expanding Oxygen Minimum Zones | 16:00-18:00 |
| Biwako Hall-Lobby | | | | | 18:00-20:00 |
| Biwako Hall-Theatre | | | | | 18:30-19:00 |

Friday At A Glance

| Time | Theatre (BH) | Ensemble Hall (BH) | Rehearsal Room (BH) | Piazza Hall (PO) |
|-------------|--|--|--|--|
| 09:00-10:30 | SS 60: Influence of Climatic and Environmental Change on Inland Water Bodies | SS 44: Research Frontiers in Harmful Algal Bloom Prediction, Mitigation and Prevention | SS 35: Frontiers in Organic and Inorganic Matter Flux Across Ecosystems: Consequences to Terrestrial | SS 41: Mixing and Internal Motions in Lakes, Reservoirs and Oceans |
| 10:30-11:00 | Coffee Break | | | |
| 11:00-12:30 | Plenary Session | | | |
| 12:30-13:00 | Closing Ceremony | | | |

BH= Biwako Hall, PO= Piazza Omi (Piazza Hotel), CS= Collabo Shiga

| Room 207 (PO) | Room 305 (PO) | Room 1 (CS) | Room 2 (CS) | Room 3 (CS) | Time |
|---|---|---|---------------------------------------|---|-------------|
| SS 29: Heterospecific Mating Interactions | SS 69: Underwater Imaging and Sensing with Innovative Technologies | SS 66: Lake Pollution and Restoration | GS 07: Benthos Biology and Ecology | GS 05: Chemical Processes in Aquatic Ecosystems | 09:00-10:30 |
| Biwako Hall-Main Theatre Foyer | | | | | 10:30-11:00 |
| Biwako Hall-Main Theatre | | | | | 11:00-12:30 |
| Biwako Hall-Main Theatre | | | | | 12:30-13:00 |

Monday Oral Talks

GS02 NEARSHORE AND COASTAL REGIONS

Chair(s): Satoshi Nakada, snakada@kugi.kyoto-u.ac.jp
Naoki Yoshie, yoshie.naoki.mm@ehime-u.ac.jp

Location: Room 1-Collabo Shiga

- 13:30 Yoshie, N.; Fujii, N.; Guo, X.; Komorita, T.; Yokokawa, T.; Isobe, A.: ECOSYSTEM RESPONSES TO THE OCEANIC WATER INTRUSIONS FROM THE KUROSHIO IN THE BUNGO CHANNEL, JAPAN
- 13:45 Kimura, M.; Hayashi, M.; Tarutani, K.: OBSERVATION OF THE SHORT TIME VARIATIONS OF PHYTOPLANKTON CONCENTRATION AND DOMINANT SPICES IN THE YODO RIVER ESTUARY IN JAPAN
- 14:00 Ikeya, T.; Itoh, S.; Komatsu, K.; Yasuda, I.; Kawanobe, K.: DISTRIBUTION OF SURFACE CHLOROPHYLL AND PHYTOPLANKTON ASSEMBLAGES AROUND THE KUROSHIO FRONT AND CONFLUENCE TOWARD THE KUROSHIO EXTENSION.
- 14:30 Corzo, A.; García-Robledo, E.; Papaspyrou, S.; Jiménez-Arias, J. L.; Bohórquez, J.; Villahermosa, D.: BIOGEOCHEMICAL EFFECTS OF MACROALGAE BLOOMS ON INTERTIDAL SEDIMENTS: FROM COMMUNITY METABOLISM TO COMMUNITY STRUCTURE
- 14:45 Komorita, T.; Yoshie, N.; Fujii, N.; Guo, X.; Yokokawa, T.; Hamaoka, H.; Isobe, A.: INFLUENCE OF KYUCHO (KUROSHIO FRONTAL WAVE) ON TRANSPORT AND TRANSFORMATION OF BIOPHILIC ELEMENTS IN THE BUNGO CHANNEL, SETO INLAND SEA, JAPAN
- 15:00 Yamamoto, T.; Kim, K. H.; Asaoka, S.; Yamamoto, H.: ESTIMATION OF PHOSPHORUS CONTENT IN THE SEA BOTTOM SEDIMENT OF HIROSHIMA BAY, JAPAN
- 15:15 Hou, L.: NITRATE REMOVAL IN THE INTERTIDAL ECOSYSTEM OF THE YANGTZE ESTUARY
- 16:00 Nakada, S.; Ishikawa, Y.; Awaji, T.; In, T.; Nakayama, T.; Shima, S.; Isada, T.; Saitoh, S.: THE MESO-SCALE OCEAN CIRCULATION INDUCED BY SNOWMELT RUNOFF INTO A REGION OF FRESHWATER INFLUENCE, FUNKA BAY.
- 16:15 Katz, S. L.: INCREASED WINDS IN THE SOUTHERN CALIFORNIA BIGHT OVER THE LAST HALF CENTURY WITH IMPLICATIONS FOR HUMAN IMPACTS
- 16:30 Kuriyama, T.; Uchiyama, Y.; Miyazawa, Y.: INTERACTION BETWEEN THE KUROSHIO INTRUSION AND INTRINSIC VARIABILITY IN SETO INLAND SEA, JAPAN
- 16:45 Lilover, M. J.; Pavelson, J.; Kōuts, T.: FACTORS INFLUENCING LOW-FREQUENCY CURRENTS OVER A SHALLOW AREA OF THE SOUTHERN COAST OF THE GULF OF FINLAND
- 17:00 Nozaki, S.; Kuwahara, V. S.; Taguchi, S.; Kikuchi, T.; Toda, T.: TIME-SERIES VARIABILITY OF ULTRAVIOLET RADIATION PENETRATION IN THE TEMPORAL COASTAL WATERS OF SAGAMI BAY, JAPAN

- 17:15 Raju, D. K.; Kankappan, S.; Vaidyanathan, B.; Teh Tiong Sa: COASTLINE CHANGES AND EROSION HAZARD ALONG EAST COAST PARK, SINGAPORE – A CASE STUDY USING GEOGRAPHIC INFORMATION SYSTEM (GIS)

GS04 PHYSICAL OCEANOGRAPHY AND LIMNOLOGY

Chair(s): Takeyoshi Nagai, tnagai@kaiyodai.ac.jp

Location: Room 2-Collabo Shiga

- 16:00 Guan, Y. P.; Shan, H. X.: RESPONSES OF NEAR-EQUATORIAL OCEANS TO RARE TYPHOON VAMEI
- 16:15 Itoh, S.; Yasuda, I.; Tsuda, A.; Komatsu, K.; Ikeya, T.: MIXED LAYER DEPTH AND CHLOROPHYLL CONCENTRATION IN WINTER
- 16:30 Nagai, T.; Tandon, A.; Kunze, E.; Mahadevan, A.; Yamazaki, H.: GENERATION OF NEAR-INERTIAL INTERNAL WAVES AND ASSOCIATED 3-D TURBULENCE IN THE KUROSHIO
- 16:45 Ishii, S.; Uchiyama, Y.; Miyazawa, Y.: A DOWNSCALING EXPERIMENT ON REPRODUCIBILITY OF THE KUROSHIO OFF JAPAN
- 17:00 Berlianty, D.; Yanagi, T.: A STUDY ON RESIDUAL FLOW IN THE BALI STRAIT, INDONESIA
- 17:15 Imhof, H. K.; Schmid, J.; Niessner, R.; Ivleva, N. P.; Laforsch, C.: A NEW, HIGHLY EFFICIENT METHOD FOR THE SEPARATION & QUANTIFICATION OF PLASTIC PARTICLES IN SEDIMENTS OF AQUATIC ECOSYSTEMS.
- 17:30 Nover, D. M.; Kumagai, M.; Schladow, S. G.: IN-SITU PARTICLE SIZE ANALYSIS IN LAKE BIWA: SEDIMENT DYNAMICS IN THE BENTHIC BOUNDARY LAYER
- 17:45 Piccolo, S.; Toffolon, M.: THE SUBTLE EQUILIBRIUM BETWEEN EXTERNAL FORCING, THERMOBARIC CONVECTION AND TURBULENT DIFFUSION IN DEEP LAKES

SS03 GROUNDWATER-SURFACE WATER INTERACTIONS IN FRESHWATER AND MARINE ENVIRONMENTS

Chair(s): Isaac Santos, isaac.santos@scu.edu.au
Makoto Taniguchi, makoto@chikyu.ac.jp
Meinhard B. Cardenas, Cardenas@jsg.utexas.edu
William Burnett, wburnett@fsu.edu

Location: Room 305-Piazzo Omi

- 13:30 Moore, W. S.: THE RECENT HISTORY AND FUTURE OF THE SUBTERRANEAN ESTUARY*
- 14:00 Cherrier, J.; Dorsett, A.; Cable, J. E.; Martin, J. B.; Druffel, E. R.: ASSESSING HYDROLOGIC AND BIOGEOCHEMICAL CONTROLS ON PORE-WATER DIC AND DOC CYCLING IN A SUBTERRANEAN ESTUARY: A DUAL ISOTOPE MASS BALANCE APPROACH
- 14:15 Kim, G.; Kwon, E.; Kim, T.; Kim, I.; Lee, S.: IMPORTANCE OF DISSOLVED ORGANIC NITROGEN FLUXES THROUGH SUBMARINE GROUNDWATER DISCHARGE
- 14:30 Ibáñez, S. P.; Rocha, C.: INORGANIC NITROGEN PROCESSING AT A NITRATE-RICH SUBTERRANEAN ESTUARY SEEPAGE FACE: MICROBIAL PROCESSES AND KINETICS

* represents Tutorial presentations

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| 14:45 | <u>Burnett, W. C.</u> ; Su, N.; MacIntyre, H. L.; Liefer, J. D.: RADON AND RADIUM ISOTOPIC EVIDENCE FOR GROUNDWATER CONTROLS ON PHYTOPLANKTON COMMUNITY STRUCTURE, LITTLE LAGOON, ALABAMA | 14:30 | <u>Feng, M.</u> ; Shang, L.; Fan, K.; Li, W.: THE IMPACT OF CYANOBACTERIAL BLOOM ON DRINKING WATER TREATMENT |
| 15:00 | <u>Saito, M.</u> ; Onodera, S.; Guo, X.; Onishi, K.; Yoshikawa, M.; Jin, G.; Shimizu, Y.; Tokumasu, M.; Takeoka, H.: SPATIAL AND TEMPORAL VARIATION OF SUBMARINE GROUNDWATER DISCHARGE (SGD) IN SEMI-ENCLOSED COASTAL SEA, WESTERN JAPAN | 14:45 | <u>Song, H. H.</u> ; Reichwaldt, E. S.; Ghadouani, A.: ROLE OF SEDIMENTS IN THE REMOVAL OF MICROCYSTIN-LR FROM THE WATER COLUMN |
| 15:15 | <u>Santos, I. R.</u> ; Maher, D.; Eyre, B. D.: COUPLING AUTOMATED RADON AND CARBON DIOXIDE MEASUREMENTS IN COASTAL WATERS | 15:00 | <u>Guo, L.</u> ; He, H.; Zhou, Z.; Mitra, K.: DYNAMICS OF ORGANIC CARBON AND NUTRIENTS IN LAKE PONTCHARTRAIN, SOUTHEAST LOUISIANA |
| SS07 HYPER-EUTROPHICATION OF LAKE TAIHU: A "LOOKING GLASS" FOR LARGE AQUATIC ECOSYSTEMS WORLDWIDE IMPACTED BY HUMAN ACTIVITIES AND CLIMATE CHANGE | | 16:00 | <u>Reichwaldt, E. S.</u> ; <u>Song, H.</u> ; Ghadouani, A.: TOXIC CYANOBACTERIAL BLOOMS AS DRIVERS FOR THE HETEROGENEOUS DISTRIBUTION OF ZOOPLANKTON IN A SHALLOW, EUTROPHIC LAKE |
| <i>Chair(s):</i> Boqiang Qin, qinbq@niglas.ac.cn Hans W. Paerl, hans_paelr@unc.edu Kumud Acharya, Kumud.Acharya@dri.edu Yiping Li, liyiping@hhu.edu.cn | | 16:15 | <u>Tang, X. M.</u> ; Gao, G.; Chao, J. Y.: ORGANIC-AGGREGATE-ATTACHED BACTERIA IN A LARGE SHALLOW LAKE ECOSYSTEMS: DIVERSITY, COMMUNITY DYNAMICS AND FUNCTION |
| <i>Location:</i> Theatre-Biwako Hall | | 16:30 | <u>Liau, S. M.</u> ; Reichwaldt, E. S.; Ghadouani, A.: TOLERANCE DEVELOPMENT IN DAPHNIA CARINATA AS A PHENOTYPIC PLASTICITY RESPONSE TO THE PRESENCE OF MICROCYSTIS AERUGINOSA |
| 09:00 | <u>Paerl, H. W.</u> ; Hall, N. S.; Xu, H.; Zhu, G.; Dong, L.; Peierls, B. L.; Qin, B.; Rossignol, K. L.: MANAGING EUTROPHICATION AND HARMFUL CYANOBACTERIAL BLOOMS IN SHALLOW-WATER ECOSYSTEMS EXPERIENCING HUMAN- AND CLIMATE-INDUCED ENVIRONMENTAL CHANGE | 16:45 | <u>Du, Y.</u> ; Zhao, L.: THE INTERACTION OF THE PHOTODEGRADATION OF HUMIC SUBSTANCE WITH THE PHOTOCHEMISTRY OF IRON |
| 09:15 | <u>Xu, H.</u> ; Qin, B.; Zhu, G.; Paerl, H. W.: NUTRIENTS CONTROL STRATEGY OF HARMFUL CYANOBACTERIAL BLOOMS IN EUTROPHIC LAKE TAIHU, CHINA | 17:00 | <u>Pan, G.</u> : IN SITU TECHNOLOGY FOR EUTROPHICATION CONTROL IN SHALLOW WATERS: REMOVING, CONVERTING AND RECYCLING NUTRIENTS FOR SUSTAINABLE FOOD WEB |
| 09:30 | <u>Duan, H.</u> : ALgal BLOOM FROM SATELLITE: TAIHU CASE | 17:15 | <u>Guan, B. H.</u> ; Wang, X.; Liu, Z. W.: MORPHOLOGICAL DIFFERENCES OF POTAMOGETON MALAIANUS IN RESPONDING TO ALGAE BLOOM IN LAKE TAIHU, CHINA |
| 09:45 | <u>Zhu, M. Y.</u> ; Zhu, G. W.; Li, W.; Zhao, L. L.; Gu, Z.: ESTIMATION THE ALGAL-AVAILABLE PHOSPHORUS POOL IN SEDIMENT OF LAKE TAIHU WITH SMT FRACTIONATION METHOD | 17:30 | <u>Zeng, Q. F.</u> ; Gu, X. H.: CRAB AQUACULTURE DEVELOPMENT AND THE ENVIRONMENTAL IMPACT ON WATER COLUMN AND SEDIMENT IN GUCHENGHU LAKE |
| 10:00 | <u>Yongjiu, C.</u> ; Zhijun, G.; Boqiang, Q.: BENTHIC MACROINVERTEBRATE COMMUNITY STRUCTURE IN LAKE TAIHU, CHINA: EFFECTS OF TROPHIC STATUS, WIND-INDUCED DISTURBANCE AND HABITAT COMPLEXITY | 17:45 | <u>Zhu, G. W.</u> ; Zhu, M. Y.; Li, H. P.; Zhao, L. L.; Chen, W. M.; Nie, X. F.; Zhou, S. P.; Gao, R. P.: THE SEASONAL NUTRIENT RUNOFF IN AGRICULTURAL REGION OF TAIHU CATCHMENT: TAKE SHAHE RESERVOIR FOR EXAMPLE |
| 10:15 | <u>Qin, B.</u> ; Zhu, G.; Song, Y.: LAKE TAIHU EUTROPHICATION RELATED TO ITS GEOGRAPHY | | |
| 13:30 | <u>Chen, F. Z.</u> ; Shu, T. T.; Jeppesen, E.; Chen, Y. W.; Liu, Z. W.: RESTORATION OF A SUBTROPICAL EUTROPHIC LAKE IN CHINA: RESPONSES IN NUTRIENTS AND BIOLOGICAL COMMUNITIES | | |
| 13:45 | <u>Acharya, K.</u> ; Li, Y.; Tang, C.; Yu, Z.: DO WE REALLY KNOW WHAT CONTROLS EUTROPHICATION IN LAKE TAIHU, CHINA? | | |
| 14:00 | <u>Shi, X. L.</u> ; Zhao, X. H.; Kong, F. X.: IMPACTS OF ELEVATED CO ₂ ON PHYTOPLANKTON COMMUNITY IN LAKE TAIHU | | |
| 14:15 | <u>Oliver, A. A.</u> ; Dahlgren, R. A.; Deas, M. L.: HYPEREUTROPHICATION AND RIVER REGULATION: A BIOGEOCHEMICAL RECIPE FOR N-CYLING IN AQUATIC ECOSYSTEMS | | |
| | | | SS17 MICROBIAL DIVERSITY AND FUNCTIONS |
| | | | <i>Chair(s):</i> Shin-ichi Nakano, nakano@ecology.kyoto-u.ac.jp Senjie Lin, senjie.lin@uconn.edu Taichi Yokokawa, taichi.yokokawa@ehime-u.ac.jp |
| | | | <i>Location:</i> Piazza Hall-Piazza Omi |
| 09:00 | | 09:00 | <u>Azam, F.</u> ; Malfatti, F.: MAJOR ROLE OF MICROBES IN ECOSYSTEM CONNECTIVITY IN OCEANS AND LAKES [*] |
| | | 09:30 | <u>Belkova, N. L.</u> ; Matyugina, E. B.; Dagurova, O. P.: BIODIVERSITY OF MICROBES FROM FRESHWATER COLD LAKES, SIBERIA, RUSSIA |
| | | 09:45 | <u>Yoshizawa, S.</u> ; Kawanabe, A.; Itou, H.; Kandori, H.; Kogure, K.: DIVERSITY AND FUNCTIONAL ANALYSIS OF PROTEORHODOPSIN IN MARINE FLAVOBACTERIA |

MONDAY

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| 10:00 | Inoue, K.; Kogure, K.: DIVERSITY AND CHARACTERIZATION OF HALOPHILIC ARCHAEA ISOLATED FROM MARINE ENVIRONMENTS | 17:30 | Siefert, J. S.; Souza, V.; Eguiarte, L.; Meadows, V.: WHAT COULD A 'WHOLE EARTH STROMATOLITE CATALOGUE' TELL US? |
| 10:15 | Santoro, A.; Bastviken, D.; Tranvik, L.; Enrich-Prast, A.: SIMULTANEOUS MEASUREMENTS OF NON-PHOTOSYNTHETIC CARBON FIXATION AND BACTERIAL PRODUCTION IN INTACT LAKE SEDIMENT CORES | 17:45 | Corman, J. R.; Souza, V. F.; Elser, J. J.; Elser, J. J.: NUTRIENT AVAILABILITY AND CALCIFICATION IN LITHIFYING FRESHWATER MICROBIALITES |
| 13:45 | Bertilsson, S.; Heinrich, F.; Eiler, A.; Stepanauskas, R.: ECOLOGY AND DIVERSITY OF FRESHWATER SAR11 | | |
| 14:00 | Comte, J.; Lindström, E. S.; Eiler, A.; Langenheder, S.: RECRUITMENT SOURCES OF FRESHWATER BACTERIOPLANKTON TAXA ALONG A MARINE GRADIENT | | |
| 14:15 | Fong, A. A.; Kemp, P. F.: IDENTIFYING COMMUNITY STRUCTURE OF PARTICLE-ASSOCIATED BACTERIA FROM THE NUTRIENT-RICH CHILEAN COAST TO THE ULTRA-OLIGOTROPHIC SOUTH PACIFIC SUBTROPICAL GYRE | | |
| 14:30 | Mohit, V. D.; Toupoint, N.; Solomon, L.; Tremblay, R.; Archambault, P.; Lovejoy, C.: TEMPORAL DIVERSITY OF FREE-LIVING AND PARTICLE-ATTACHED BACTERIA IN A TEMPERATE LAGOON | | |
| 14:45 | Pearson, G. A.; Cánovas, F.; Cox, C. J.; Lago-Leston, A.; Verret, F.; Agustí, S.; Duarte, C.; Serrao, E. A.: METATRANSCRIPTOMICS OF DIATOM-DOMINATED COMMUNITIES AROUND THE ANTARCTIC PENINSULA | | |
| 15:00 | Alonso Saez, L.; Waller, A.; Mende, D.; Estrada, M.; Pedros-Alio, C.; Tremblay, J. E.; Lovejoy, C.; Bork, P.; Bertilsson, S.: UNVEILING THE METABOLISM OF POLAR ARCHAEA THROUGH METAGENOMICS AND SINGLE-CELL APPROACHES | | |
| 15:15 | Lovejoy, C.; Comeau, A.: THE WHERE AND WITHIN OF SEA ICE PROTISTS | | |
| 16:00 | Wurzbacher, C.; Warthmann, N.; Attermeyer, K.; Allgaier, M.; Monaghan, M. T.; Grossart, H. P.: FUNGI - A KINGDOM WITHOUT A CROWN IN LIMNOLOGY | | |
| 16:15 | Martinez Martinez, J.; Swan, B. K.; Wilson, W. H.: GIANT VIRUSES ON THE PATAGONIAN SHELF, A GENETIC RESERVOIR REVEALED BY MINIMETAGENOMICS | | |
| 16:30 | Pitta, P.; Magiopoulos, I.; Giannakourou, A.: MICROBIAL FOOD WEB IN A DEEP OLIGOTROPHIC SEA: BALANCE BETWEEN GROWTH AND LOSS PROCESSES | | |
| 16:45 | Takasu, H.; Kunihiro, T.; Nakano, S.: CARBON CONTENT AND COMMUNITY STRUCTURE OF PLANKTONIC BACTERIA IN LARGE MESOTROPHIC LAKE BIWA USING RESPIRATORY QUINONE ANALYSIS | | |
| 17:00 | Robinson, C. T.; Freimann, R.; Bürgmann, H.; Findlay, S. E.: FUNCTIONING OF LOTIC BACTERIAL ASSEMBLAGES IN ALPINE FLOODPLAINS | | |
| 17:15 | Elser, J. J.; Corman, J. R.; Lee, Z.; Siefert, J. L.; Bastidas, M.; Cuassolo, F.; Laspoumaderes, C.; Souza, M. S.; Balseiro, E. G.; Modenutti, B. E.: LIFE ON FLOATING PUMICE | | |
| | | | SS24 LAKE PROCESS MONITORING BY AUTOMATED TECHNOLOGIES AND HIGH-FREQUENCY SENSORS |
| | | | <i>Chair(s):</i> Peter A. Stæhr, pst@dmu.dk David Hamilton, davidh@waikato.ac.nz Marie-Eve Garneau, me.garneau@gmail.com Stefan Bertilsson, steb@ebc.uu.se |
| | | | <i>Location:</i> Room 3-Collabo Shiga |
| 09:00 | Dunbabin, M. D.: AUTONOMOUS SENSOR NETWORKS FOR WATER QUALITY AND BIODIVERSITY ASSESSMENT* | | |
| 09:15 | Yajima, H.; Allan, M. G.: TIME-SPACE DISTRIBUTION OF TURBIDITY IN A SHALLOW LAKE BY DIFFERENT LOGGING MODE OF SENSORS, MODELLING AND REMOTE SENSING | | |
| 09:30 | Gibbes, B.; Grinham, A.; Dunbabin, M.; Bartkow, M.; Watkinson, A.: ANALYSIS OF LAKE TEMPERATURE DATA FROM A DISTRIBUTED WIRELESS SENSOR NETWORK | | |
| 09:45 | Muraoka, K.; Hamilton, D.; Verburg, P.; Read, J.; Bennett, L.; McBride, C.: COHERENCE OF LAKE THERMAL STABILITY AND NET SURFACE HEAT FLUXES SUPPORTED BY AN INTEGRATED ANALYSIS SOFTWARE | | |
| 10:00 | Hitz, G.; Pomerleau, F.; Garneau, M.; Pradalier, C.; Posch, T.; Pernthaler, J.; Siegwart, R. Y.: MAPPING THREE DIMENSIONAL BACTERIA DISTRIBUTIONS USING AN AUTONOMOUS SURFACE VESSEL (ASV) IN A SMALL MEROMICTIC LAKE | | |
| 10:15 | Garneau, M. E.; Posch, T.; Hitz, G.; Pomerleau, F.; Pradalier, C.; Siegwart, R. Y.; Pernthaler, J.: RAPID SPATIOTEMPORAL VARIATIONS IN THE DISTRIBUTION OF THE TOXIC CYANOBACTERIUM <i>PLANKTOTHRIX RUBESCENS</i> OBSERVED USING AN AUTONOMOUS SURFACE VESSEL | | |
| 13:30 | Richardson, D. C.; Klug, J. L.; Ewing, H. A.; Hargreaves, B. R.; Samal, N. R.; Vachon, D.; Pierson, D. C.; Lindsey, A. E.; O'Donnell, D.; Effler, S. W.; Weathers, K. C.: A REGIONAL ANALYSIS OF THE PHYSICAL AND BIOLOGICAL EFFECTS OF TROPICAL CYCLONE IRENE ON LAKE ECOSYSTEMS ACROSS NORTHEASTERN UNITED STATES AND EASTERN CANADA* | | |
| 13:45 | Heffernan, J. B.; Cohen, M. J.; Hensley, R.: HIGH-FREQUENCY NUTRIENT MEASUREMENTS FOR INFERENCE OF RIVERINE BIOGEOCHEMICAL PROCESSES | | |
| 14:00 | Hamilton, D.; McBride, C.; Özkan, D.; Muraoka, K.; Allan, M.; Wood, S.: HIGH-FREQUENCY PHYCOCYANIN MEASUREMENTS REVEAL INTER-DEPENDENCIES OF TEMPERATURE STRATIFICATION AND CYANOBACTERIA BLOOMS | | |

† represents Tutorial presentations

- 14:15 Artigas, L. F.; Lizon, F.; Prygiel, E.; Chicheportiche, J.; Houliez, E.; Arantes de Oliveira, E. C.; Bonnet, M. P.; Abril, G.; Billon, G.; Prygiel, J.: DISTRIBUTION AND DYNAMICS OF PHYTOPLANKTON SPECTRAL GROUPS, ASSESSED BY IN VIVO FLUORESCENCE RECORDING, IN DIFFERENT TROPICAL AND TEMPERATE AQUATIC SYSTEMS
- 14:30 Laas, A.; Nöges, P.; Köiv, T.; Nöges, T.: HIGH FREQUENCY METABOLISM STUDY IN A LARGE AND SHALLOW TEMPERATE LAKE REVEALS SEASONAL SWITCHING BETWEEN NET AUTOTROPHY AND NET HETEROTROPHY
- 14:45 Ojala, A.; Pumpanen, J.; Bäck, J.; Vesala, T.: HIGH PRECISION CONTINUOUS MEASUREMENTS OF GREENHOUSE GASES AND RELATED BIOLOGICAL PROCESSES IN A BOREAL LAKE AND ITS SURROUNDING CATCHMENT
- 15:00 Nelson, H.; Sieracki, C. K.; Duplisea, M.: THE EVOLUTION OF THE IMAGING PARTICLE INSTRUMENT FLOWCAM – 17 YEARS IN THE MAKING
- 15:15 Rahkola-Sorsa, M. E.; Voutilainen, A.; Viljanen, M.: OPTICAL PLANKTON COUNTERS (OPC, LOPC) AND ACOUSTIC CURRENT DOPPLER PROFILER (ADCP) IN ESTIMATING ZOOPLANKTON ABUNDANCE IN LARGE BOREAL LAKES
- SS26 INTERNATIONAL STUDENT SYMPOSIUM: THE WORLD WATER CRISIS**
- Chair(s):* Charles R. Goldman, crgoldman@ucdavis.edu
Geoff Schladow, gjschladow@ucdavis.edu
- Location:* Room 305-Piazzo Omi
- 16:15 Tang, C. H.; Wong, C. K.; Yung, Y. K.: SIZE STRUCTURE AND COMMUNITY COMPOSITION OF PHYTOPLANKTON IN THREE HYDROGRAPHICAL ZONES IN THE COASTAL WATERS OF HONG KONG
- 16:45 Przytulska-Bartosiewicz, A.: NORTHERN HIGH LATITUDE LAKES, CYANOBACTERIAL BLOOMS AND THE WORLD WATER CRISIS
- 17:00 Sorichetti, R. J.; Creed, I. F.; Trick, C. G.: IRON REGULATION OF CYANOBACTERIAL BLOOMS IN OLIGOTROPHIC LAKES
- 17:15 Sakihara, T. S.; Dudley, B. D.; Mackenzie, R. A.; Beets, J. P.; Nishimoto, R. T.: ALTERATIONS TO HAWAIIAN ANCHIALINE POOLS IMPACT ALGAL CONSTITUENTS
- 17:30 Wang, X.; Yoshimoto, H.; Imai, I.: UTILIZATION OF ALGICIDAL BACTERIA INHABITING IN REED BELTS AND WATER PLANT COMMUNITIES FOR CONTROLLING HARMFUL CYANOBACTERIAL BLOOMS IN EUTROPHIC WATERS
- 17:45 Hagiwara, T.; Ishii, K.; Matsuno, K.; Natsuike, M.; Imai, I.: SEASONAL VARIATION IN ABUNDANCE OF ALGICIDAL BACTERIA FOR *MICROCYSTIS AERUGINOSA* IN OHNUMA LAKE, HOKKAIDO

SS27 ACOUSTIC TOMOGRAPHY AND ENVIRONMENTAL MODELING IN COASTAL SEAS, ESTUARIES, RIVERS AND LAKES

Chair(s): Arata Kaneko, akaneko@hiroshima-u.ac.jp
Prof. Bruce M Howe, bhowe@hawaii.edu
Prof. Xiaohua Zhu, xhzhu@sio.org.cn
Prof. Xinyu Guo, guoxinyu@sci.ehime-u.ac.jp

Location: Room 207-Piazzo Omi

- 16:00 Howe, B. M.: ACOUSTIC TOMOGRAPHY WITHIN THE OCEAN ENVIRONMENTAL OBSERVING SYSTEM*
- 16:15 Zhu, X. H.; Kaneko, A.; Wu, Q.; Zhang, C.; Taniguchi, N.; Gohda, N.: MAPPING TIDAL CURRENTS, VORTICES AND DIVERGENCES USING COASTAL ACOUSTIC TOMOGRAPHY*
- 16:30 Taniguchi, N.; Kaneko, A.; Huang, C.; Liu, C.; Yang, Y.; Wang, Y.: ACOUSTIC TOMOGRAPHY EXPERIMENT IN THE KUROSHIO SOUTHEAST OF TAIWAN
- 16:45 Syamsudin, F.; Adityawarman, Y.; Kaneko, A.; Ando, K.: ON INTERNAL WAVE SIGNATURES IN LOMBOK STRAIT: A PROPOSED STUDY USING COASTAL ACOUSTIC TOMOGRAPHY SYSTEM
- 17:00 Wu, Q. S.; Zhu, X. H.; Zhang, C. Z.: DISCHARGE MEASUREMENT IN A TIDAL RIVER
- 17:15 Arai, A.: HINDCAST EXPERIMENTS OF THE PRESSURE-INDUCED SEICHES IN THE WEST COAST OF KYUSHU ON 24-25 FEBRUARY, 2009
- 17:30 Komai, K.; Sugawara, Y.; Kokubo, K.; Kato, J.; Maruya, Y.; Matsuda, W.; Kameda, S.; Ebe, R.; Nakayama, K.: INVESTIGATION OF THE DISTRIBUTION OF DISSOLVED ORGANIC MATTER IN AN ICE-COVERED BLACKISH LAKE BY USING EEMS
- 17:45 Zhang, Z. C.; Kaneko, A.; Takahashi, R.; Lin, J.; Taniguchi, N.; Gohda, N.: ANOMALOUS SEA LEVEL RISES IN THE CENTRAL PART OF THE SETO-INLAND SEA, JAPAN

SS31 LIGHT, TRANSPORT AND MIXING IN LAKES: 100 YEARS AFTER FOREL

Chair(s): Alfred Johny Wueest, Alfred.Wueest@eawag.ch
Sally MacIntyre, sally@icess.ucsb.edu
Warwick F. Vincent, warwick.vincent@bio.ulaval.ca

Location: Room 2-Collabo Shiga

- 09:00 Vincent, W. F.; Bertola, C.: FROM LAKE PHYSICS TO ECOSYSTEM SERVICES: FOREL'S LIMNOLOGY^T
- 09:30 Schladow, S. G.; Andrews, S. W.; Nover, D. M.; Reuter, J. E.: TOWARD AN UNDERSTANDING OF THE CAUSES OF CLARITY DECLINE IN LAKE TAHOE *
- 09:45 Watanabe, S.; Vincent, W. F.; Reuter, J. E.; Schladow, S. G.: QUANTIFYING THE BLUENESS OF LAKE TAHOE: SPATIAL AND LONG TERM VARIATIONS IN LAKE COLOR
- 10:00 Kobayashi, H.; Nakamura, K.; Tanaka, A.; Hamada, H.; Fukazawa, T.; Igarashi, S.; Minami, H.; Takeuchi, A.; Fujie, S.: EVALUATION OF OPTICAL FACTORS LIMITING TRANSPARENCY OF LAKE MASHU, ONE OF THE CLEAREST LAKES IN THE WORLD

TOPOGRAPHY

* represents Invited presentations

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| 10:15 | Frenette, J. L.; Massicotte, P.; Lapierre, J. F.: COLORFUL NICHES OF PHYTOPLANKTON SHAPED BY THE SPATIAL CONNECTIVITY IN A LARGE RIVER ECOSYSTEM: A RIVERSCAPE PERSPECTIVE | 14:30 | Rousseaux, C. S.; Gregg, W. W.: THE EFFECT OF CLIMATE VARIABILITY ON PHYTOPLANKTON COMPOSITION IN THE EQUATORIAL PACIFIC OCEAN USING A MODEL AND A SATELLITE-DERIVED APPROACH * |
| 13:30 | Massicotte, P. M.; Frenette, J. F.: MECHANISTIC MODELING OF DOC DYNAMIC: UNDERSTANDING INTERACTIONS BETWEEN KINETIC PROCESSES AND MASS TRANSPORT IN A LARGE FLUVIAL LAKE | 14:45 | Laufkötter, C.; Vogt, M.; Gruber, N.: IMPACT OF PFTS ON EXPORT PRODUCTION IN A CCSM-BEC HINDCAST* |
| 13:45 | Iwaki, M.; Kumagai, M.; Kitazawa, D.; Nishi, K.; Jiao, C.; Jiao, C.: THE SURFACE SEICHE OF LAKE BIWA, JAPAN | 15:00 | Masuda, Y.; Yamanaka, Y.; Sumata, H.: NEAR-FUTURE EFFECTS OF GLOBAL WARMING ON MARINE PLANKTON ESTIMATED BY AN EDDY-PERMITTING MARINE ECOSYSTEM MODEL* |
| 14:00 | Halder, J.; Decrouy, L.; Vennemann, T. W.: MIXING AND STRATIFICATION: A CHEMICAL APPROACH BASED ON STABLE O AND C ISOTOPE PROFILES | 15:15 | Hirata, T.; Saux-Picart, S.; Hashioka, T.; Aita-Noguchi, M.; Sumata, H.; Shigemitsu, M.; Allen, I.; Yamanaka, Y.: COMPARISON BETWEEN PHYTOPLANKTON COMMUNITY STRUCTURES DERIVED FROM A GLOBAL 3D ECOSYSTEM MODEL AND SATELLITE OBSERVATION* |
| 14:15 | Boehrer, B.; Fukuyama, R.; Golmen, L.; Løvik, J. E.; Rahn, K.; Chikita, K. A.; Klaveness, D.: THERMOBARIC STRATIFICATION OF NORWEGIAN FJORD LAKES AND JAPANESE CALDERA LAKES IN COMPARISON* | 16:00 | Smith, S. L.: AFFINITY: A CLEARLY SUPERIOR ALTERNATIVE TO THE OBSOLETE OBFUSCATION KNOWN AS THE HALF-SATURATION 'CONSTANT' * |
| 14:30 | Le , A. T.; De Pascalis , F.; Umgiesser, G.; Wildi, W.: APPLICATION OF FINITE-ELEMENT MODELING TO PREDICT THE THERMAL REGIMES AND CIRCULATION PATTERNS OF LAKE GENEVA AND THEIR RELATIONSHIP TO GEOMORPHOLOGY | 16:15 | Vichi, M.; Masina, S.; McKiver, W.; Lovato, T.; Patara, L.: INVESTIGATING GLOBAL BIOGEOCHEMICAL CHANGE WITH THE STOICHIOMETRIC BIOMASS-BASED BIOGEOCHEMICAL FLUX MODEL (BFM): LEARNING TO RUN?* |
| 14:45 | MacIntyre, S.: MIXING DYNAMICS IN LAKES: WILL CHANGES IN CLIMATE ALTER CONTEMPORARY PATTERNS? ^T | 16:30 | Justic, D.; Wang, L.; Rose, K.; Huang, H.: MODELING HYPOXIA IN THE NORTHERN GULF OF MEXICO: FROM PHYSICS TO FISH* |
| SS34 MODELING BIOGEOCHEMICAL AND ECOLOGICAL FUNCTIONS IN AQUATIC ECOSYSTEMS | | 16:45 | Kitazawa, D.: NUMERICAL PREDICTION OF FUTURE ECOSYSTEM IN LAKE BIWA* |
| <i>Chair(s): Meike Vogt, meike.vogt@env.ethz.ch Daisuke Kitazawa , dkitai@iis.u-tokyo.ac.jp Md. Nazrul Islam , islam009@iis.u-tokyo.ac.jp Taka Hirata , tahi@ees.hokudai.ac.jp</i> | | 17:00 | Islam, M. N.; Kitazawa, D.; Park, H. D.: MODELING PREDICTIVE ASSESSMENT OF CYANOBACTERIA TOXINS IN EUTROPHIC LAKE KASUMIGAURA IN JAPAN* |
| <i>Location: Rehearsal Room-Biwako Hall</i> | | 17:15 | Shan, K.; Li, L.; Wu, L. Y.; Song, Y. L.: COMPARATIVE ANALYSIS OF ECOSYSTEM STRUCTURE AND TROPHIC INTERACTIONS OF TWO SHALLOW EUTROPHIED LAKES IN CHINA OVER THREE DECADES* |
| 13:30 | Doney, S. C.; Lima, I.; Lindsay, K.; Moore, J. K.; Luo, Y. W.; Sailley, S.: THE CLIMATE RESPONSE OF PLANKTON COMMUNITY STRUCTURE IN THE NCAR CESM GLOBAL OCEAN BIOGEOCHEMICAL MODEL* | 17:30 | Sharip, Z.; Noordin, N.; Saman, J.; Suratman, S.; Shaaban, A. J. ; Majizat, A.: ADOPTING 3-D HYDRODYNAMIC-ECOSYSTEM MODEL FOR SPATIAL DYNAMICS OF WATER QUALITY IN LAKE PUTRAJAYA: MODEL DESCRIPTION |
| 13:45 | Vogt, M.; Hashioka, T.; Aita, M. N.; Alvain, S.; Bopp, L.; Buitenhuis, E. T.; Doney, S. C.; Lima, I.; Le Quéré, C.; Yamanaka, Y.: ECOLOGICAL NICHES OF PHYTOPLANKTON FUNCTIONAL TYPES IN MODELS AND OBSERVATIONS: RESULTS FROM THE MARINE ECOSYSTEM MODEL INTER-COMPARISON PROJECT (MAREMIP)* | 17:45 | Couture, R. M.; Van Cappellen, P.; Fisher, R.; Campisi, D.; Gobell, C.: REACTIVE-TRANSPORT MODELING OF THE SULFUR CYCLE IN LAKE SEDIMENTS: FIXING THE LEAKS* |
| 14:00 | Hashioka, T.; Vogt, M.; Yamanaka, Y.; Le Quéré, C.; Buitenhuis, E.; Aita, M. N.; Alvain, S.; Bopp, L.; Hirata, T.; Lima, I. D.; Doney, S. C.: PHYTOPLANKTON COMPETITION DURING THE SPRING BLOOM IN FOUR PLANKTON FUNCTIONAL TYPE MODELS: RESULTS FROM THE MARINE ECOSYSTEM MODEL INTER-COMPARISON PROJECT | SS40 LAKES AND THEIR CLIMATIC AND ENVIRONMENTAL SEDIMENT RECORDS | |
| 14:15 | Sailley, S. E.; Vogt, M.; Doney, S. C.; Aita, M. N.; Bopp, L.; Buitenhuis, E. T.; Hashioka, T.; Lima, I.; Le Quere, C.; Yamanaka, Y.: COMPARING FOOD-WEB STRUCTURE AND DYNAMICS ACROSS A SUITE OF GLOBAL MARINE ECOSYSTEM MODELS* | <i>Chair(s): Reinhard Pienitz, reinhard.pienitz@cen.ulaval.ca Kenji Kashiyawa, kashi@kenroku.kanazawa-u.ac.jp David T. Long, long@msu.edu Michio Kumagai, kumagai-m@lberi.jp</i> | |
| <i>Location: Ensemble Hall-Biwako Hall</i> | | 16:00 | Yang, W.; Matsushita, B.; Yoshimura, K.; Fukushima, T.: AN ENHANCED QUASI-ANALYTICAL ALGORITHM FOR RETRIEVING INHERENT OPTICAL PROPERTIES OF TURBID INLAND WATERS |

^T represents Tutorial presentations

- 16:15 Yamamoto, M.; Komuro, T.: RECONSTRUCTION OF SUBMERGED AQUATIC VEGETATION IN LAKE SHINJI
- 16:30 Brown, M. E.; Curtin, T. M.; Gallagher, C. J.; Halfman, J. D.: IMPACTS OF LONG-TERM NUTRIENT LOADING AND RECENT SPECIES INVASIONS ON THE WATER QUALITY AND ZOOPLANKTON DYNAMICS OF TWO HISTORICALLY OLIGOTROPHIC LAKES
- 16:45 Dietz, R. D.; Dettman, D. L.; Kurata, K.; Seto, K.: NITROGEN ISOTOPES IN MOLLUSK SHELLS RECORD MODERN AND HISTORICAL GRADIENTS IN ANTHROPOGENIC NUTRIENT LOADING TO AQUATIC ECOSYSTEMS
- 17:00 Long, D. T.; Vannier, R. G.; Pijanowski, B. C.; Parsons, M. J.: ASSESSING LANDSCAPE RESPONSE TO LAND-USE CHANGE USING SEDIMENT-CHEMICAL CHRONOLOGIES AND BACKCAST MODELING
- 17:15 Itai, T.; Kumagai, M.; Hyobu, Y.; Kuwae, M.; Tanabe, S.: CHANGE IN ENRICHMENTS OF MANGANE AND ARSENIC IN THE SURFACE OF SEDIMENT FROM 1976 TO 2009 IN LAKE BIWA, JAPAN
- 17:30 Kashiwaya, K.; Kudo, K.; Abe, H.; DDP team: LIMNO-GEOMORPHOLOGICAL CHANGES INFERRED FROM LACUSTRINE SEDIMENTS (DARHAD AND HVVSGOL) IN NORTHERN MONGOLIA
- 17:45 Itono, T.; Kashiwaya, K.: HISTORICAL HYDRO-ENVIRONMENTAL FLUCTUATIONS INFERRED FROM LACUSTRINE SEDIMENTS IN LAKE BIWA AND LAKE YOGO
- SS52 ECOLOGY AND MANAGEMENT OF DAMS AND THEIR WATERSHEDS**
- Chair(s):* Kunihiko Amano, amano-k92ta@nilim.go.jp
Takashi Asaeda, asaeda@mail.saitama-u.ac.jp
- Location:* Room 207-Piazzo Omi
- 09:00 Tanida, K.; Ezaki, Y.; Ichiyang, H.; Iwami, Y.: AN OVERVIEW OF THE RESEARCHES ON RESERVOIRS, DAMMED RIVERS AND THEIR WATERSHEDS IN JAPAN*
- 09:15 Thorp, J. H.: COMPLEX RELATIONSHIPS AMONG DAMS, RESERVOIRS, AND RIVER FOOD WEBS: UNDERSTANDING EFFECTS OVER MULTIPLE DECADES OF ALTERED HYDROLOGY AND GEOMORPHOLOGY^T
- 09:45 Amano, K.; Endou, M.: LONGITUDINAL CHANGE OF RIVERBED MATERIAL AND MACROINVERTEBRATES AT THE DOWNSTREAM OF 15 LARGE DAMS IN JAPAN
- 10:00 Yoshimura, C.; Masuyama, T.; Ito, J.; Otani, E.; Kodama, D.; Fujii, M.; Sekijima, T.: EFFECT OF RESERVOIR WATER LEVEL ON DISTRIBUTION AND TROPHIC STRUCTURE OF BENTHIC MACROINVERTEBRATES IN THE INFLOWING RIVER IN NORTHERN JAPAN
- 10:15 Katano, I.; Doi, H.; Negishi, J. N.; Minagawa, T.; Kayaba, Y.: THE ROLE OF A TRIBUTARY CONFLUENCE ON MACROINVERTEBRATE ASSEMBLAGES IN THE AREAS DOWNSTREAM OF DAM
- 13:30 Azami, K. A.; Asaeda, T.; Nakai, K.; Osugi, T.; Nakazawa, S.: ECOLOGICAL FUNCTION OF WILLOW COMMUNITIES DEVELOPING IN THE SEASONALLY SUBMERGED ZONE OF A RESERVOIR AS SPAWNING AND NURSERY HABITATS FOR NATIVE FISH
- 13:45 Osugi, T.; Nakai, K.; Okitsu, J.; Azami, K.; Iwami, Y.; Nakazawa, S.: DEVELOPMENT OF METHODS FOR CONTROLLING INVASIVE ALIEN FISHES IN A RESERVOIR, TAKING ADVANTAGE OF DRAWDOWN OF WATER LEVEL
- 14:00 Horii, T.; Umeda, M.; Kimura, F.: HYDRODYNAMIC STRUCTURE IN MIHARU RESERVOIR CAUSED BY DESTRATIFICATION SYSTEM
- 14:15 Shinohara, R.; Imai, A.; Kawasaki, N.; Komatsu, K.; Kohzu, A.; Miura, S.; Sato, T.; Tomioka, N.: PHOSPHORUS FORMS IN SUSPENDED PARTICLES AND SEDIMENT IN LAKE KASUMIGURA: A 31P NMR STUDY
- 14:30 Iseri, Y.; Kuba, T.; Hao, A.; Liu, Y.; Li, C.; Zhang, Z.: ECOSYSTEM ENGINEERING DAM
- 14:45 Maniruzzaman, M.; Asaeda, T.: EFFECT OF INORGANIC FORMS OF NITROGEN ON GROWTH AND NUTRIENTS UPTAKE OF TRAPA JAPONICA
- 15:00 Igura, T.; Asaeda, T.; Kotake, T.: THE EFFECT OF REDUCED WATER IN THE DOWNSTREAM OF A DAM ON THE GROWTH OF AQUATIC PLANTS
- 15:15 Senavirathna, H. J.; Asaeda, T.: EFFECTS ON CHLOROPHYLL FLUORESCENCE PARAMETERS OF DUCKWEED (LEMNA MINOR) BY 2 GHZ ELECTROMAGNETIC RADIATION

SS54 THE MULTIFACETED FUNCTIONS OF NATURAL BIOCHEMICALS IN AQUATIC ECOSYSTEMS

- Chair(s):* Alexander Wacker, wackera@uni-potsdam.de
Patrick Fink, patrick.fink@uni-koeln.de
- Location:* Room 305-Piazzo Omi
- 09:00 Pohnert, G.: CHEMICAL SIGNALS FROM MICROALGAE REGULATING PROLIFERATION AND CHEMICAL DEFENSE^T
- 09:30 Maibam, C.; Romano, G.; Fink, P.; Buia, M. C.; Gambi, M. C.; Scipione, B.; Patti, F.; Lorenti, M.; Zupo, V.: DUAL ROLE OF WOUND-ACTIVATED COMPOUNDS PRODUCED BY DIATOMS, AS BOTH ALLELOCHEMICALS AND INFOCHEMICALS FOR BENTHIC INVERTEBRATES
- 09:45 Grace, M. R.; Shaw, L.; Rosi-Marshall, E. J.; Royer, T. V.: PHARMACEUTICALS AND PERSONAL CARE PRODUCTS AFFECT RATES OF AQUATIC BIOFILM ACCRUAL, PRIMARY PRODUCTION AND COMMUNITY RESPIRATION.
- 10:00 Koussoroplis, A. M.; Nussbaumer, J.; Arts, M. T.; Guschina, I.; Kainz, M. J.: TEMPERATURE EFFECTS ON MEMBRANE AND STORAGE FATTY ACID DYNAMICS OF THE FRESHWATER COPEPOD EUDIAPTOMUS GRACILIS DURING FASTING
- 10:15 Wacker, A.; Martin-Creuzburg, D.: MULTIPLE RESOURCE LIMITATION OF CONSUMERS: EVIDENCE FROM ROTIFERS

* represents Invited presentations

SS67 RESPONSES OF LAKE ECOSYSTEMS TO GLOBAL CHANGES: PLANKTONIC ORGANISMS AS INDICATOR

Chair(s): Sami Souissi, sami.souissi@univ-lille1.fr
Syuhei Ban, ban@ses.usp.ac.jp

Location: Ensemble Hall-Biwako Hall

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| 09:00 | <u>Straile, D.</u> : CHANGES IN PLANKTON PHENOLOGY AS INDICATORS AND MEDIATORS OF ENVIRONMENTAL CHANGE ^T | 14:00 | Liu, X.; Beyrend-Dur, D.; Dur, G.; Ban, S.: EFFECT OF TEMPERATURE ON THE DEVELOPMENT OF <i>EODIAPTOMUS JAPONICUS</i> (COPEPODA: CALANOIDA) IN LAKE BIWA |
| 09:30 | <u>Souissi, S.</u> ; Chambord, S.; Souissi, A.; Anneville, O.; Lainé, L.; Molinero, J. C.: DIFFERENT RESPONSES OF CALANOIDES AND CYCLOPOIDS TO ANTHROPOGENIC AND CLIMATE CHANGES IN LAKE GENEVA* | 14:15 | Souissi, A.; Chambord, S.; Anneville, O.; Lainé, L.; Souissi, S.: SEASONAL AND INTER-ANNUAL PATTERNS OF THE REPRODUCTIVE STRATEGY OF A KEY CALANOID COPEPOD <i>EUDIAPTOMUS GRACILIS</i> IN LAKE GENEVA |
| 09:45 | <u>Dur, G. P.</u> ; Hsieh, C. H.; Ban, S.; Souissi, S.; Sugihara, G.: ZOOPLANKTON RESPONSES TO ENVIRONMENTAL FORCING IN LAKE BIWA* | 14:30 | Chambord, S.; Souissi, A.; Anneville, O.; Lainé, L.; Souissi, S.: DECadal POPULATION DYNAMICS AND MORPHOLOGICAL VARIATIONS OF A KEY CALANOID COPEPOD <i>EUDIAPTOMUS GRACILIS</i> FROM LAKE GENEVA |
| 10:00 | Tsai, C.; Chang, C.; Miki, T.; Ishikawa, K.; Ichise, S.; Kumagai, K.; Sugihara, G.; Hsieh, C.: TRUNCATED LEFT-TAIL OF SPECIES ABUNDANCE DISTRIBUTION DRIVEN BY ENVIRONMENTAL CHANGE* | 14:45 | Briones, J. A.; Tsai, C.; Nakazawa, T.; Sakai, Y.; Urabe, M.; Papa, R.; Hsieh, C.; Okuda, N.: LONG-TERM CHANGES IN THE DIET AND INTESTINAL PARASITOFAUNA OF <i>GFGYMNNOGOBIUS ISAZA</i> FROM LAKE BIWA, JAPAN: EFFECTS OF BODY SIZE AND PREY AVAILABILITY |
| 10:15 | <u>Schmitt, F. G.</u> : PLANKTON DYNAMICS ; CHARACTERIZING EXTREMES AND ANALYZING MULTISCALE DYNAMICS USING EMPIRICAL MODE DECOMPOSITION | 15:00 | Ban, S.; Endoh, S.; Ohkawa, S.; Umekage, T.; Hirahara, F.; Doi, E.; Sakai, Y.: POTENTIAL EFFECT OF FISH PREDATION ON CRUSTACEAN ZOOPLANKTON COMMUNITY IN LAKE BIWA |
| 13:30 | <u>Hampton, S. E.</u> ; Moore, M. V.; Izmest'eva, L. R.: ENVIRONMENTAL FORCING OF PLANKTON DISTRIBUTION IN LAKE BAIKAL, SIBERIA* | 15:15 | Wu, Q.; Ban, S.; Hishida, N.; Nagafuchi, O.: BIOACCUMULATION OF MERCURY THOUGH THE PLANKTON FOOD CHAIN IN THE LAKE BIWA ECOSYSTEM |
| 13:45 | <u>Kishimoto, N.</u> ; Ichise, S.; Suzuki, K.; Yamamoto, C.: POTENTIAL FACTORS INFLUENCING CHANGES IN AVERAGE CELL SIZE OF THE PHYTOPLANKTON COMMUNITY IN LAKE BIWA, JAPAN | | |

* represents Tutorial presentations

Tuesday Oral Talks

GS06 PLANKTON BIOLOGY AND ECOLOGY

Chair(s): Ora Hadas, orah@ocean.org.il

Yuji Tanaka, ytanaka@kaiyodai.ac.jp

Hugh MacIsaac, hughm@uwindsor.ca

Aino Hosia, aino.hosia@imr.no

Location: Piazza Hall-Piazzo Omi

- 13:30 Takahashi, E.; Hara, S.: THREE ACANTHOECIDA (CHOANOFLAGELLATEA) SPECIES FROM LAKE BAIKAL
- 13:45 Sukenik, A.; Nishri, A.; Zohary, T.: PRESENT-ABSENT: A CHRONICLE OF THE DINOFLAGELLA PERIDINUM GATUNENSE FROM LAKE KINNERET
- 14:00 Hadas, O.; Pinkas, R.; Malinsky-Rushansky, N.; Nishri, A.; Kaplan, A.; Rimmer, A.; Sukenik, A.: APPEARANCE AND ESTABLISHMENT OF NOSTOCALES IN LAKE KINNERET, ISRAEL
- 14:15 Suzuki, K.; Kojima, M.; Kishimoto, N.; Ichise, S.; Furuta, S.: INFLUENCE OF N/P RATIO IN CULTURE MEDIUM ON GELATINOUS SEATH SIZE OF *STAURASTRUM ARCTISCON* (CHAROPHYCEAE)
- 14:30 Lyczkowski, E. R.; Karp-Boss, L.: ALLELOPATHIC EFFECTS OF ALEXANDRIUM ON THALASSIOSIRA: DOES CELL SIZE MATTER?
- 15:00 Aparicio Medrano, E.; Uittenboogaard, R.; Dionisio Pires, M.; Clercx, H.: MECHANISM FOR SCUM FORMATION OF *MICROCYSTIS AERUGINOSA* IN FRESH WATER LAKES
- 15:15 Ekvall, M. K.; Hansson, L. A.: WATER QUALITY OF TOMORROW: EFFECTS OF Elevated TEMPERATURE AND INCREASING WATER COLOR ON ALGAL BLOOMS
- 16:00 Tanaka, Y.; Serita, R.; Wakabayashi, K.; Akiba, T.: EPHYRAL WAYS OF FEEDING: UNBALANCED DIET OF MOON JELLY LARVAE
- 16:15 Akiba, T.; Shujuan, X.; Baobo, L.; Wanting, C.; Tanaka, Y.: THE ESCAPE BEHAVIOR OF *OITHONA DAVISAE* FROM SUCTION FLOW
- 16:30 Laforsch, C.: STEALTH MECHANISM OR PREDATOR CONFUSION? THE EXACT DEFENSIVE MECHANISM OF PROTECTIVE HELMETS IN *DAPHNIA*.
- 16:45 Rabus, M.; Söllradl, T.; Clausen-Schaumann, H.; Laforsch, C.: UNCOVERING HIDDEN MORPHOLOGICAL DEFENCES IN *DAPHNIA MAGNA* - AN INTERDISCIPLINARY APPROACH TO ASSES THE PREDATOR-INDUCED FORTIFICATION OF THE CARAPACE
- 17:00 Otte, K. A.; Fröhlich, T.; Arnold, G. J.; Laforsch, C.: PROTEOMIC ANALYSIS OF PREDATOR-INDUCED PHENOTYPIC PLASTICITY IN *DAPHNIA MAGNA*
- 17:15 Engelbrecht, W.; Wolinska, J.; Laforsch, C.: TWO THREATS AT ONCE: *DAPHNIA MAGNA* INVESTS MORE INTO FIRST CLUTCH OFFSPRING WHEN EXPOSED TO PREDATORS AND PARASITES
- 17:30 Herzog, Q.; Laforsch, C.: SAFETY FIRST – DIFFERENT HELMETS FOR DIFFERENT PREDATORS
- 17:45 Fischer, J.; Schoppmann, K.; Laforsch, C.: A NEW MULTIFUNCTIONAL ORGAN SYSTEM FOR THE SENSATION OF GRAVITY AND MICROTURBULENCE IN *DAPHNIA*

SS02 ANALYSES OF LONG-TERM DATA IN MARINE ECOSYSTEMS

Chair(s): Alexandra Kraberg, Alexandra.Kraberg@awi.de
Karen Helen Wiltshire, Karen.Wiltshire@awi.de
Maarten Boersma, Maarten.Boersma@awi.de

Location: Piazza Hall-Piazzo Omi

- 09:00 Reid, P. C.: MARINE ECOLOGICAL TIME SERIES: A TUTORIAL^T
- 09:30 Boersma, M.; Wiltshire, K. H.; Greve, W.: LEARNING FROM DIFFERENT TIME SERIES: 50 YEARS OF PHYTOPLANKTON AND 35 YEARS OF ZOOPLANKTON AT HELGOLAND ROADS
- 09:45 Turner, R. E.; Rabalais, N. N.; Justic, D.: NITROGEN, PHOSPHORUS AND SILICATE GROWTH LIMITATION OF PHYTOPLANKTON ON THE MISSISSIPPI RIVER CONTINENTAL SHELF
- 10:00 Kraberg, A. C.; Gerdts, G.; Boersma, M.; Gebühr, C.; Wiltshire, K.: LONG-TERM CHANGES IN THE PHYTOPLANKTON AND MICROBIAL DYNAMICS AT HELGOLAND ROADS
- 10:15 Tachibana, A.; Nomura, H.; Ishimaru, T.: THE LONG TERM CHANGE OF THE OCCURRENCE OF OCEANIC COPEPODS IN TOKYO BAY, JAPAN

SS03 GROUNDWATER-SURFACE WATER INTERACTIONS IN FRESHWATER AND MARINE ENVIRONMENTS

Chair(s): Isaac Santos, isaac.santos@scu.edu.au
Makoto Taniguchi, makoto@chikyu.ac.jp
Meinhard B. Cardenas, Cardenas@jsg.utexas.edu
William Burnett, wburnett@fsu.edu

Location: Room 2-Collabo Shiga

- 13:30 Li, L.: A MORE COMPLEX COASTAL BOUNDARY THAN WE THOUGHT*
- 14:00 Taniguchi, M.; Ono, M.; Takahashi, M.: SUBMARINE GROUNDWATER DISCHARGE AND ITS EFFECTS ON COASTAL ECOSYSTEM
- 14:15 Zhang, J.: GLOBAL NUTRIENT AND CARBON FLUXES AND LINKAGES BETWEEN SUBMARINE GROUNDWATER SYSTEMS AND THE ENVIRONMENT
- 14:30 Xu, B.; Yu, Z.; Burnett, W. C.: USING RADIUM ISOTOPES TO QUANTIFY WATER FLUSHING RATES AND SGD FLUX IN YELLOW RIVER ESTUARY
- 14:45 Cyronek, T. J.; Santos, I. R.; Eyre, B. D.: EFFECTS OF POREWATER ADVECTION ON CARBON CYCLING IN PERMEABLE CARBONATE SEDIMENTS
- 15:00 Patiris, D. L.; Tsabarlis, C.; Karageorgis, A. P.; Pavlidou, A.; Eleftheriou, G.; Ioannides, K. G.; Stamoulis, K.; Papadopoulos, V. P.; Prospasopoulos, A.; Georgopoulos, D.: STUDY OF A POINT-SOURCE SUBMARINE GROUNDWATER SPRING AT KALOGRIA BAY, SW PELOPONNESUS, GREECE
- 15:15 Schubert, M.; Paschke, A.; Stieglitz, T.: KINETICS OF THE WATER/AIR PHASE TRANSITION OF RADON AND ITS IMPLICATION ON ON-SITE RADON-IN-WATER DETECTION
- 16:00 Cardenas, M. B.; Sawyer, A. H.; Gerecht, K. E.; Markowski, M. S.; Francis, B. A.; Francis, L. K.; Swanson, T. E.; Nowinski, J. D.; Guswa, A. J.: GROUNDWATER-SURFACE WATER INTERACTIONS IN A REGULATED RIVER

TUESDAY

* represents Invited presentations

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| 16:15 | Mendoza-Lera, C.; Federlein, L. L.; Frossard, A.; Knie, M.; Gessner, M. O.; Mutz, M.: PEAKING INTO THE BLACK BOX BELOW STREAM BEDS: THE ROLE OF SEDIMENT PARTICLE SIZE IN HYDROHEIC METABOLISM | 14:00 | Wu, T. F.: THE MOVEMENT OF MICROCYSTIS COLONY INDUCED BY TYPHOON MORAKOT IN TAIHU LAKE, CHINA |
| 16:30 | Welti, N. D.; Guyot, A.; Lockington, D.: GAUGING ECOSYSTEM FUNCTION IN GROUNDWATER DEPENDENT ECOSYSTEMS | 14:15 | Li, W.; Qin, B. Q.: MULTIPLE TEMPORAL SCALES ANALYSIS OF THE MAIN DRIVING FACTORS OF EUTROPHICATION IN MEILIANG BAY, LAKE TAIHU, CHINA |
| 16:45 | Knoeller, K.; Seebach, A.: THE IMPACT OF GROUNDWATER EXCHANGE ON THE BIOGEOCHEMICAL CYCLING IN MEROMICTIC LAKES POLLUTED WITH ACID MINE DRAINAGE | | |
| 17:00 | Gilfedder, B. S.; Hofmann, H.; Cartwright, I.: HIGH RESOLUTION CONTINUOUS ²²² RN MEASUREMENTS IN SURFACE WATER AND GROUNDWATER FOR STUDYING THE DYNAMICS OF GROUNDWATER SURFACE WATER INTERACTIONS | | |
| 17:15 | Ross, K. A.; Schmid, M.; DeBatist, M.; Anselmetti, F. S.; Wüest, A.: SUBAQUATIC GROUNDWATER DISCHARGE SUSTAINS THE STRATIFICATION IN LAKE KIVU PREVENTING THE ERUPTION OF GAS FROM THE DEEPWATER | | |
| 17:30 | Burnett, K. M.; Roumasset, J.; Wada, C.: OPTIMAL JOINT MANAGEMENT OF INTERDEPENDENT RESOURCES: THE CASE OF GROUNDWATER AND KIAWE (PROSOPIS PALLIDA) | 16:00 | Grossart, H. F.: MICROBES IN AND ON ORGANISMS: GAIN OR PAIN?* |
| 17:45 | Duarte, T. K.; Pongkijvorasin, S.; Roumasset, J.; Amato, D.; Burnett, K.: OPTIMAL MANAGEMENT OF A HAWAIIAN COASTAL AQUIFER WITH NEAR-SHORE MARINE ECOLOGICAL INTERACTIONS | 16:15 | Gachon, C.: HOST PATHOGEN ARMS RACE: FROM GENOMES TO AQUATIC ECOSYSTEMS* |
| | SS07 HYPER-EUTROPHICATION OF LAKE TAIHU: A "LOOKING GLASS" FOR LARGE AQUATIC ECOSYSTEMS WORLDWIDE IMPACTED BY HUMAN ACTIVITIES AND CLIMATE CHANGE | 16:30 | Gsell, A. S.; de Senerpont Domis, L. N.; van Donk, E.; Ibelings, B. W.: SPATIO-TEMPORAL VARIATION IN THE DISTRIBUTION OF CHYTRID PARASITES IN DIATOM HOST POPULATIONS |
| | Chair(s): Boqiang Qin, qinbq@niglas.ac.cn Hans W. Paerl, hans_paerl@unc.edu Kumud Acharya, Kumud.Acharya@dri.edu Yiping Li, liyiping@hhu.edu.cn | 16:45 | Våge, S.; Storesund, J.; Thingstad, T. F.: COST OF RESISTANCE EXTENDS THEORY FOR THE ROLE OF LYtic VIRUSES IN STRUCTURING PELAGIC MICROBIAL COMMUNITIES* |
| | Location: Theatre-Biwako Hall | 17:00 | Uchii, K.; Okuda, N.; Minamoto, T.; Telschow, A.; Kawabata, Z.: TRANSMISSION DYNAMICS OF AN EMERGING PATHOGEN CYPRINID HERPESVIRUS 3 AND ITS IMPACT ON HOST POPULATION GENETIC STRUCTURE* |
| 09:00 | Li, Y.; Tang, C.; Zhu, J.; Kumud, A.: QUANTIFYING UNCERTAINTY AND SENSITIVITY IN CIRCULATION MODELING FOR A LARGE SHALLOW FRESHWATER LAKE | 17:15 | Carney, L. T.; Koh, C.; Lane, P. D.; Sommer, G. J.; Lane, T. W.: FORENSICS OF ALgal PRODUCTION POND CRASHES* |
| 09:15 | Zhou, Q.; Li, L.; Chen, W.; Wan, N.; Shan, K.; Song, L.: EXPLORATION ON PREDICTIVE BIOTIC PARAMETERS DURING THE BLOOM-FORMING PROCESS IN TAIHU LAKE, CHINA | 17:30 | Callens, M.; Coopman, M.; Muylaert, K.; Bossier, P.; Decaeestecker, E.: EFFECT OF CYANOBACTERIA ON HOST-SYMBIONT INTERACTIONS IN DAPHNIA* |
| 09:30 | Hu, Z. X.; Liu, T.; Yang, L. Y.; Shi, F.: UNIFORMIZATION MODEL BETWEEN BIOMASS OF SUBMERGED MACROPHYTES AND PHYTOPLANKTON OF LAKE TAIHU, A LARGE SHALLOW LAKE | 17:45 | Sime-Ngando Télesphore, T.; Rasconi, S.; Niquil Nathalie: PHYTOPLANKTON CHYTRIDIOMYCOSIS: COMMUNITY STRUCTURE AND INFECTIVITY OF FUNGAL PARASITES IN AQUATIC ECOSYSTEMS * |
| 09:45 | Qian, X.; Ye, R.; Xiong, W.: NUMERICAL SIMULATION ON ALGAE BLOOM IN TAIHU LAKE, CHINA | | |
| 10:00 | Chen, D.; Li, Y.: HYDRODYNAMIC AND EUTROPHICATION MODELING OF LAKE MEAD UNDER CHANGING WATER LEVELS | | |
| 10:15 | Luo, L.: AUTO-CALIBRATION AND VERIFICATION OF A WATER QUALITY MODEL BASED ON HIGH-FREQUENCY MONITORING DATA AT LAKE TAIHU, CHINA | | |
| 13:45 | Gao, G.; Tang, X. M.; Shao, K. Q.; Chao, J. Y.: AKALINE PHOSPHATASE ACTIVITY AND PHOSPHORUS CYCLE IN LAKE TAIHU | | |
| | SS26 INTERNATIONAL STUDENT SYMPOSIUM: THE WORLD WATER CRISIS | | |
| | Chair(s): Charles R. Goldman, crgoldman@ucdavis.edu Geoff Schladow, gschladow@ucdavis.edu | | |
| | Location: Room 305-Piazzo Omi | | |
| 13:30 | Chang, C. W.; Miki, T.; Shah, F. K.; Kao, S. J.; Wu, J. T.; Liu, K. K.; Hsieh, C. H.: NONLINEARITY IN SIZE SPECTRUM IS AFFECTED BY OMNIVOROUS AND DETRITIVOROUS FEEDING IN PLANKTON FOOD WEBS | 13:45 | Burian, A.; Schagerl, M.; Kainz, M. J.; Singer, G.; Yasindi, A.: ROTIFER BLOOMS IN AFRICAN SODA-LAKES: TRIGGERS AND ECOLOGICAL FUNCTIONING |
| | | 14:00 | Norton, E. N.; Bremigan, M. T.: EFFECTS OF HUMAN LAKESHORE DEVELOPMENT AND AN INVASIVE SPECIES (<i>DREISSENA POLYMORPHA</i>) ON BENTHIC-PELAGIC LINKAGES IN LAKES |
| | | 14:15 | Lavoie, M.; Auclair, J. C.: QUANTIFYING ELUSIVE PHOSPHORUS SOURCES IN SHIELD LAKES: THE ROLE OF ORGANIC CARBON AND METAL OXYHYDROXIDES |

† represents Tutorial presentations

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| 14:30 | <u>Karhunen, J.</u> ; Rissanen, A. J.; Tirola, M.: DENITRIFICATION IN NORTHERN LAKES | 15:15 | Schoener, D. M.; McManus, G. B.: THE CONTRIBUTION OF INORGANIC NUTRIENT UPTAKE AND INGESTION IN THE KLETOPLASTIDIC CILIATE STROMBIDIUM RASSOULZADEGANI AND THE HETEROTROPH STROMBIDINOPSIS SP. |
| 14:45 | <u>Fergus, C. E.</u> ; Finley, A. O.; Soranno, P. A.: QUANTIFYING SPATIAL RELATIONSHIPS FOR LAKE WATER CHEMISTRY ACROSS REGIONS USING HIERARCHICAL BAYESIAN MULTIVARIATE SPATIAL MODELS | | |
| 15:15 | <u>King, G.</u> ; Yamamuro, M.: APPLICATION AND MODIFICATION OF SIMPLIFIED WATER QUALITY CHECKER IN REMOTE AREAS | | |
| 16:00 | <u>Laspoumaderes, C.</u> ; Modenutti, B.; Souza, M. S.; Bastidas Navarro, M.; Cuassolo, F.; Balseiro, E.: GLACIER MELTING AND STOICHIOMETRIC IMPLICATIONS IN LAKE COMMUNITY STRUCTURE: ZOOPLANKTON SPECIES DISTRIBUTIONS IN A NATURAL LIGHT-GRADIENT | | |
| 16:30 | Deemer, B. R.; Harrison, J. A.; Henderson, S. M.; Glavin, M. T.: HOW DO DAM OPERATIONS AFFECT WATER QUALITY AND GREENHOUSE GAS FLUXES? LESSONS FROM THE LACAMAS LAKE CASE STUDY | 09:00 | Hobbie, J. E.; Kling, G. W.: THE LONG-TERM RECORD OF AN ARCTIC ALASKAN LAKE IN A WARMING CLIMATE: NO ECOLOGICAL CHANGE YET BUT EXPERIMENTS YIELD PREDICTIONS |
| 16:45 | <u>Sawada, Y.</u> ; Koike: TOWARDS SUSTAINABLE WATER RESOURCE MANAGEMENT AGAINST SEVERE DROUGHTS IN WEST AFRICA | 09:30 | <u>Chikita, K. A.</u> ; Aiyama, T.; Nomura, Y.; Itaya, T.; Hu, S. G.: THE RECENT NON-FREEZING OF SUBARCTIC DEEP LAKES * |
| 17:00 | <u>Mehring, A. S.</u> ; Lowrance, R. R.; Helton, A. M.; Vellidis, G.; Pringle, C. M.; Thompson, A.; Bosch, D. D.: EFFECTS OF DROUGHT ON DISSOLVED ORGANIC CARBON (DOC) CYCLING: IMPLICATIONS OF CLIMATE CHANGE FOR COASTAL PLAIN BLACKWATER RIVERS | 09:45 | Laurion, I.: CANADIAN THAW PONDS UNDER A WARMING CLIMATE |
| | SS28 MIXOTROPHY IN AQUATIC SYSTEMS: FROM PHYSIOLOGY TO ECOLOGICAL IMPACT | 10:00 | Mariash, H. L.; Rautio, M.: PHYSIOLOGICAL RESPONSES OF ZOOPLANKTON TO ENVIRONMENTAL CHANGE |
| | <i>Chair(s): Per Juel Hansen, pjhansen@bio.ku.dk Robert Ptacnik, ptacnik@icbm.de Stefanie Moorthi, stefanie.moorthi@uni-oldenburg.de Susanne Wilken, s.wilken@nioo.knaw.nl</i> | 10:15 | Gantner, N.; Veillette, J.; Michaud, W. K.; Bajno, R.; Muir, D.; Vincent, W. F.; Power, M.; Dixon, B.; Reist, J. D.; Hausmann, S.; Pienitz, R.: FACTORS AFFECTING MERCURY AND PERFLUORINATED CONTAMINANTS IN ARCTIC CHAR OF PINGUALUIT CRATER LAKE (NUNAVIK, CANADA) |
| | <i>Location: Room 207-Piazzo Omi</i> | 13:30 | <u>Smol, J. P.</u> ; Rühland, K.; Michelutti, N.; Douglas, M.; Paterson, A. M.: RECENT REGIME SHIFTS IN ARCTIC LAKES CANNOT BE EXPLAINED BY ATMOSPHERIC NITROGEN DEPOSITION |
| 13:45 | <u>Park, M. G.</u> ; Kim, M.; Kang, M.: MIXOTROPHY OF THE MARINE DINOFLAGELLATE AMYLAX TRIACANTHA WITH CRYPTOPHYTE ENDOSYMBIONT | 13:45 | <u>Mikomägi, A.</u> ; Marzecova, A.; Puusepp, L.: MULTI-PROXY STUDY OF PALEOPRODUCTIVITY CHANGES IN A SMALL ICELANDIC LAKE (BARAARLAUG, SNFSELLSNES PENINSULA) |
| 14:00 | <u>Lee, S.</u> ; Jeong, H.; Kang, N.; Yoo, Y.; Lee, K.; Lee, K.; Kim, G.; Lee, M.: MIXOTROPHY IN THE PHOTOTROPHIC DINOFLAGELLATE WOLOSZYNSKIA CINCTA ON VARIOUS PREYS FROM WESTERN KOREAN WATERS | 14:00 | <u>Michelutti, N.</u> ; Cooke, C. A.; Hobbs, W. O.; Wolfe, A. P.; Smol, J. P.: UNPRECEDENTED ECOLOGICAL CHANGE IN EQUATORIAL HIGH MOUNTAIN LAKES |
| 14:15 | <u>Ptacnik, R.</u> ; Sazhin, A. F.; Gomes, A. F.; Isari, S.; Pichlova, R.; Striebel, M.; Tanaka, T.; Berger, S. A.; Neistgaard, J. C.; Pitta, P.: PERFORMANCE OF A NATURAL PLANKTON COMMUNITY ALONG A 10X LIGHT-GRADIENT WITH EMPHASIS ON MIXOTROPHIC GRAZERS | 14:15 | <u>Suzuki, Y. S.</u> ; Hashimoto, Y.; Wakabayashi, R.: DIFFERENT GROWTH RESPONSES BETWEEN THE ICE ALGAE AND THE PLANKTONIC ALGAE TO SOME CONDITIONS UNDER THE FIRST YEAR ICE |
| 14:30 | <u>Moorthi, S. D.</u> ; Striebel, M.; Gomez, A. F.; Schabhuettl, S.; Ptacnik, R.: EFFECTS OF LIGHT AND NUTRIENTS ON THE DYNAMICS OF MIXOTROPHIC ALGAE IN AN OLIGOTROPHIC MARINE SYSTEM | 14:30 | <u>Velazquez, D.</u> ; Rochera, C.; Camacho, A.; <u>Quesada, A.</u> : SEASONAL DYNAMIC OF AN ANTARCTIC MICROBIAL MAT: PHYSIOLOGICAL AND ECOLOGICAL INTERACTIONS |
| 14:45 | <u>Fischer, R.</u> ; Hillebrand, H.; Ptacnik, R.: RELATIVE IMPORTANCE OF MIXOTROPHY ALONG GRADIENTS OF LIGHT AND LOSS-RATES | 14:45 | <u>Jungblut, A. D.</u> ; Hawes, I.; Sumner, D. Y.; Webster-Brown, J.; Christenson, H.; Mackey, T. J.; Wood, S. A.; Andersen, D. T.: IMPACTS OF CHANGE ON CYANOBACTERIAL COMMUNITIES AND AQUATIC ECOSYSTEMS IN THE MCMURDO DRY VALLEYS, ANTARCTICA |
| 15:00 | <u>Wilken, S.</u> ; Huisman, J.; Verspagen, J.; Naus-Wiezer, S.; Van Donk, E.: MIXOTROPHY AS A STRATEGY TO FEED EFFICIENTLY ON TOXIC CYANOBACTERIA AND CONTROL THEIR GROWTH | 15:00 | <u>Morgan-Kiss, R. M.</u> ; Kong, W.; Dolhi, J. M.; Priscu, J. C.: CARBON CYCLING IN PERMANENTLY ICE-COVERED ANTARCTIC LAKES: DIVERSITY, DISTRIBUTION AND TRANSCRIPTIONAL ACTIVITY OF RUBISCO GENES (CBBL AND CBBM)* |

TUESDAY

* represents Invited presentations

SS36 CARBON AND NITROGEN STABLE ISOTOPE STUDIES IN AQUATIC ECOSYSTEMS

Chair(s): Bradley Eyre, Bradley.Eyre@scu.edu.au
 Eric Boschker, E.Boschker@nioo.knaw.nl
 Joanne Oakes, Joanne.Oakes@scu.edu.au
 Bart Veugel, B.Veugel@nioo.knaw.nl

Location: Room 1-Collabo Shiga

- 09:00 Yoshida, N.: ISOTOPOMIC SIGNATURES OF NITROUS OXIDE EMITTED FROM EUTROPHIC URBAN RIVERS AND WASTEWATER TREATMENT SYSTEMS^T
- 09:30 Hill, J. M.; Kaehler, S.; Hill, M. P.: BASELINE ISOTOPE DATA FOR FRESHWATER PLANTS: NUTRIENT DIFFERENTIATION IN AQUATIC SYSTEMS.
- 09:45 Baumgartner, S. D.; Robinson, C. T.: CHANGING FOOD WEBS UNDER A GRADIENT OF AGRICULTURAL AND URBANIZATION INFLUENCE
- 13:30 van de Merwe, J. P.; Connolly, R. M.; Lee, S. Y.; Pitt, K. A.; Steven, A.: SPATIAL AND TEMPORAL VARIATION IN ESTUARINE CARBON DYNAMICS: CRITICAL TO UNDERSTANDING THE EFFECTS OF URBANISATION ON THE PRODUCTIVITY OF PERI-URBAN ESTUARIES
- 13:45 Wyatt, A. S.; Leichter, J. J.; Carlson, C. A.; Nelson, C.; Haas, A.; Wegley, L.; Quistad, S.; Smith, J.; Rohwer, F.: DISSOLVED ORGANIC MATTER FLUXES OVER SHALLOW CORAL REEF COMMUNITIES AROUND MOOREA, FRENCH POLYNESIA
- 14:00 Hanamachi, Y.; Nakamura, K.: PRODUCTION OF REFRACTORY DOC DERIVED FROM PHOTOSYNTHETIC PRODUCTS IN LAKE KASUMIGURA, JAPAN: RESULTS FROM INCUBATION EXPERIMENTS USING ¹³C TRACER
- 14:15 Filipsson, H. L.; Mackensen, A.; McCorkle, D. C.; Bernhard, J. M.; Andersson, L. S.; Danielssen, D. S.; Naustvoll, L. J.; Nordberg, K.: A SEASONAL STUDY OF $\delta^{13}\text{C}_{(\text{DIC})}$ ALONG A MARKED OXYGEN AND SALINITY GRADIENT IN THE BALTIC SEA REGION, NE ATLANTIC
- 14:30 Tamooh, F.; Van den Meersche, K.; Meysman, F.; Borges, A. V.; Merckx, R.; Dehairs, F.; Nyunja, J.; Bouillon, S.: DYNAMICS OF DISSOLVED INORGANIC CARBON IN THE TANA RIVER BASIN, KENYA
- 14:45 Waldron, S.; Vihermaa, L. E.; Newton, J.; Krusche, A. V.; Salimon, C. I.: DISSOLVED INORGANIC C DYNAMICS IN THE WESTERN AMAZONIAN BASIN: WHERE DOES THIS CARBON COME FROM?
- 15:00 Wang, H. J.; Dai, M. H.; Kao, S. J.; Cai, X. P.; Hsiao, S. Y.; Lin, J.: WHO IS CONSUMING OXYGEN: AUTOCHTHONOUS OR ALLOCHTHONOUS ORGANIC MATERIAL? A CASE STUDY IN A SMALL LAKE USING CARBON STABLE ISOTOPES
- 16:00 Boschker, E.; Moerdijk-Poortvliet, T. C.; Miyatake, T.: LC-IRMS IN AQUATIC ECOLOGY: TRACING CARBON FLOWS IN MARINE INTERTIDAL SEDIMENTS^T
- 16:30 Moerdijk-Poortvliet, T. C.; Stal, L. J.; Boschker, H. T.: CARBON CYCLING IN BENTHIC DIATOM MATS – A SEASONAL ¹³C IN-SITU LABELING STUDY

- 16:45 Oakes, J. M.; Eyre, B. D.; Middelburg, J. J.: UNRAVELLING THE TRANSFORMATION AND FATE OF MICROPHYTOBENTHOS CARBON IN SUBTROPICAL SHALLOW SUBTIDAL SANDS: A ¹³C-TRACER EXPERIMENT

- 17:00 Moneta, A.; van Rijswijk, P.; Veugel, B.; Meysman, F.; Soetaert, K.; Middelburg, J. J.: DISSOLVED INORGANIC AND ORGANIC NITROGEN AND CARBON UPTAKE IN TIDAL INLET WATERS: A SEASONAL LABELLING STUDY

- 17:15 Mayor, D. J.; Thornton, B.: THE QUANTITY AND QUALITY OF ORGANIC MATTER AFFECT THE RATES AND PATHWAYS OF ELEMENTAL CYCLING IN CONTRASTING MARINE SEDIMENTS

SS47 VERTICAL STRUCTURE OF AQUATIC ECOSYSTEMS: OBSERVATIONS, EXPERIMENTS, AND THEORIES

Chair(s): Chris Klausmeier, klausme1@msu.edu
 Elena Litchman, litchman@msu.edu
 Kohei Yoshiyama, kyoshi@gifu-u.ac.jp

Location: Theatre-Biwako Hall

- 16:00 Diehl, S.: THE FUNDAMENTAL INFLUENCE OF VERTICAL GRADIENTS ON AQUATIC BIODIVERSITY AND ECOSYSTEM DYNAMICS^T
- 16:30 Ryabov, A.; Blasius, B.: PHYTOPLANKTON COMPETITION IN A WEAKLY MIXED WATER COLUMN.
- 16:45 Beisner, B. E.; Longhi, M. L.: SPATIAL NICHE PARTITIONING AND DIVERSITY IN LAKE PHYTOPLANKTON
- 17:00 Jäger, C. G.; Diehl, S.: ASYMMETRIC RESOURCE COMPETITION FOR LIGHT AND NUTRIENTS BETWEEN BENTHIC AND PELAGIC PRIMARY PRODUCERS
- 17:15 Mellard, J. P.; Ballantyne, E.: TROPHIC AND SPATIAL STRUCTURE, ECOSYSTEM STABILITY, AND COMMUNITY INVASIBILITY OF EXPERIMENTAL FRESHWATER PLANKTONIC FOOD WEBS
- 17:30 Yoshiyama, K.: A MODEL OF ALGAL MAT FORMATION AS A MOVING BOUNDARY PROBLEM
- 17:45 Sasaki, A.; Mizuno, A.: ADAPTIVE LIGHT ABSORPTION SPECTRA FOR PROTECTION AND PHOTOSYNTHESIS IN LAYERED PLANT COMMUNITY

SS54 THE MULTIFACETED FUNCTIONS OF NATURAL BIOCHEMICALS IN AQUATIC ECOSYSTEMS

Chair(s): Alexander Wacker, wackera@uni-potsdam.de
 Patrick Fink, patrick.fink@uni-koeln.de

Location: Room 305-Piazzo Omi

- 09:00 Urabe, J.; Shimizu, Y.: SOLVING STOICHIOMETRIC PARADOX OF DAPHNIA GROWTH RATE
- 09:15 Lukas, M.; Wacker, A.: DAPHNIA FEELS THE DIFFERENCE: STOICHIOMETRIC REGULATION AT DIFFERENT FOOD CONDITIONS.
- 09:30 Schwarzenberger, A.; Von Elert, E.: CYANOBACTERIAL PROTEASE INHIBITORS LEAD TO MATERNAL TRANSFER OF INCREASED PROTEASE GENE EXPRESSION IN DAPHNIA

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| 09:45 | Pajk, E.; Von Elert, E.; Fink, P.: INTERACTION OF CHANGES IN FOOD QUALITY AND TEMPERATURE REVEALS MATERNAL EFFECTS ON FITNESS PARAMETERS OF A KEYSTONE AQUATIC HERBIVORE | 14:45 | Terada, M.; Watanabe, K.; Bertoldi, W.; Gurnell, A. M.; Tockner, K.; Takemon, Y.: RELATIONS OF SPECIES DIVERSITY OF AQUATIC ANIMAL COMMUNITIES TO THE HABITAT AGE OF FLOODPLAIN POOLS IN THE TAGLIAMENTO RIVER* |
| 10:00 | Sperfeld, E.; Wacker, A.: DIFFERENCE IN MATERNAL DIET OF <i>DAPHNIA MAGNA</i> FEMALES AFFECT FOOD QUALITY DEPENDENT FITNESS RESPONSES OF ITS OFFSPRING | 15:00 | Takahashi, S.; Watanabe, K.; Omura, T.; Takemon, Y.: HABITAT-SPECIFIC INFLUENCE OF DISCHARGE WATER FROM A DAM ON TROPHIC SOURCES OF STREAM INVERTEBRATES REVEALED BY STABLE ISOTOPE ANALYSIS* |
| 10:15 | Fink, P.; Deines, P.: CAN METHANOTROPHIC BACTERIA COMPENSATE FOR FOOD QUANTITY OR FOOD QUALITY LIMITATIONS IN <i>DAPHNIA</i> ? | 15:15 | Cleees, L.; Chandra, S.; Caires, A.; Rosen, M. R.; Acharya, K.; Wittmann, M.: COLONIZATION DYNAMICS OF INVASIVE QUAGGA MUSSEL IN LAKE MEAD, NV, USA |
| SS57 THE TEMPERATURE DEPENDENCE OF THE CARBON CYCLE IN AQUATIC ECOSYSTEMS | | | |
| <i>Chair(s):</i> Gabriel Yvon-Durocher, g.yvon-durocher@qmul.ac.uk Mark Trimmer, m.trimmer@qmul.ac.uk Paul del Giorgio, del_giorgio.paul@uqam.ca | | | |
| <i>Location:</i> Room 3-Collabo Shiga | | | |
| 16:00 | Allen, A. P.: LINKING BIOTA TO BIOGEOCHEMICAL CYCLES USING METABOLIC THEORY ^T | 09:00 | Alvarez-Salgado, X. A.; Lonborg, C.: RECYCLING VERSUS EXPORT OF BIOAVAILABLE DISSOLVED ORGANIC MATTER IN THE COASTAL OCEAN AND EFFICIENCY OF THE CONTINENTAL SHELF PUMP |
| 16:30 | Staehr, P. A.: TEMPERATURE ACCLIMATION OF METABOLIC RATES IN AQUATIC AUTOTROPHS* | 09:15 | Passow, U.; Carlson, C.: RESPONSE OF THE BIOLOGICAL PUMP TO RISING ATMOSPHERIC CARBON DIOXIDE CONCENTRATIONS |
| 16:45 | Gudasz, C.; Bastviken, D.; Sobek, S.; Koehler, B.; Lars, T. J.: MINERALIZATION OF ORGANIC CARBON AND ITS DEPENDENCE TO TEMPERATURE IN BOREAL LAKE SEDIMENTS* | 09:30 | Fernández-Castro, B.; Rodríguez-Santana, A.; Chouciño, P.; Graña, R.; Piedeleu, M.; Benítez-Barrios, V. M.; Fraile-Nuez, E.; Mouríño-Carballido, B.; Santana, R.; Mouríño-Carballido, B.; Rueda, M. J.; Llináis, O.: TURBULENCE MICROSTRUCTURE MEASUREMENTS AND KPP VALIDATION IN THE TROPICAL AND SUBTROPICAL ATLANTIC AND PACIFIC OCEANS DURING THE MALASPINA EXPEDITION |
| 17:00 | Pumpanen, J.; Rasilo, T.; Huotari, J.; Ojala, A.: RIPARIAN ZONE CONNECTS THE RESPIRATION OF TERRESTRIAL AND AQUATIC ECOSYSTEMS | 09:45 | Mompean de la Rosa, M. C.; Bode, A.; Fraile, E.; Benítez, V.; Lamas, A. F.; Lorenzo, J.; Eiroa, F.; Álvarez-Ossorio, M. T.: VARIABILITY OF BIOMASS AND STABLE ISOTOPES IN SIZE-FRACTIONATED PLANKTON ALONG THE SUBTROPICAL NORTH ATLANTIC |
| 17:30 | Jankowski, K. J.; Schindler, D. E.; Holtgrieve, G. W.: WATERSHED FEATURES INFLUENCE THE SENSITIVITY OF STREAM METABOLIC PROCESSES TO TEMPERATURE | 10:00 | Irigoién, X.; Klevjer, T.; Røstad, A.; Martinez, U.; Boyra, G.; Acuna, J. L.; Bode, A.; Echeverría, F.; Gonzalez-Gordillo, J. I.; Hernandez-Leon, S.; Duarte, C. M.; Kaartvedt, S.: MESOPELAGIC FISH IN TRANSPARENT WATERS, MORE OR LESS ? |
| 17:45 | Marañón, E.; Cermeño, P.; Latasa, M.; Tadonléké, R.: DOES TEMPERATURE AFFECT PHYTOPLANKTON SIZE STRUCTURE IN THE OCEAN? | 10:15 | Klevjer, T. A.; Røstad, A.; Martinez, U.; Boyra, G.; Irigoién, X.; Duarte, C. M.; Kaartvedt, S.: GLOBAL VERTICAL DISTRIBUTION AND VERTICAL MIGRATION PATTERNS OF DEEP SCATTERING LAYERS (DSL) |
| SS59 DYNAMICS OF HABITAT STRUCTURE AND AQUATIC ASSEMBLAGES | | | |
| <i>Chair(s):</i> M. Tokeshi, tokeshi@ambl-ku.jp Y. Takemon, takemon.yasuhiro.5e@kyoto-u.ac.jp | | | |
| <i>Location:</i> Room 3-Collabo Shiga | | | |
| 13:30 | Tokeshi, M.: HABITAT COMPLEXITY IN AQUATIC SYSTEMS: AN OUTLOOK* | 13:30 | Mazumder, A.; Brodeur, R.; Eisner, L.; Farley, E.; Harding, J.; MacFarlane, B.; Mazumder, S.; Moss, J.; Murphy, J.; Trudel, M.: CONTINENTAL-SCALE VARIABILITY IN FEEDING AND RESOURCE ECOLOGY OF JUVENILE CHINOOK SALMON ALONG THE PACIFIC COAST OF NORTH AMERICA |
| 13:45 | Saito, H.; Yano, K.: FLOW, HABITAT STRUCTURE AND FRESHWATER BENTHOS* | | |
| 14:00 | Ishida, Y.; Takemon, Y.: FAUNAL CHARACTERISTICS OF BAR-HEAD WANDO AND BAR-TAIL WANDO, NEWLY CLASSIFIED TYPES OF FLUVIAL LENTIC HABITAT* | | |
| 14:15 | Kobayashi, S.; Takemon, Y.: ROLES OF FLOODS ON THE HABITAT QUALITY OF RIFFLES FOR BENTHIC INVERTEBRATES IN RIVERS* | | |
| 14:30 | Takemon, Y.; Terada, M.; Ikeda, K.; Nishii, K.; Sumi, T.: HABITAT EVALUATION OF FLOODPLAIN-POOLS FOR FISH AND BIVALVES IN THE KIZU RIVER* | | |

TUESDAY

* represents Invited presentations

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| 13:45 | <u>Furuya, K.</u> ; Kodama, T.; Shiozaki, T.; Hashihama, F.; Kitajima, S.; Takeda, S.; Takemura, T.; Kanda, J.: DEVELOPMENT OF LARGE-SCALE PHOSPHATE EXHAUSTION IN THE WESTERN NORTH PACIFIC SUBTROPICAL GYRE | 17:45 | <u>Pernice, M. C.</u> ; Gomes, A.; Gasol, J. M.; Massana, R.: ABUNDANCE AND DISTRIBUTION OF HETEROTROPHIC FLAGELLATES IN THE GLOBAL DEEP OCEAN |
| 14:00 | <u>Uye, S.</u> ; Duarte, C. M.; Pitt, K.; Lucas, C.; Purcell, J. E.; Robinson, K.; Brotz, L.; Decker, M. B.; Southerland, K. R.; Mallej, A.; Madin, L.; Mianzan, H.; Gili, J. M.; Fuentes, V.; Atienza, D.; Pages, F.; Breitburg, D.; Malek, J.; Graham, W. M.; Condon, R.: IS GLOBAL OCEAN SPRawl A TROJAN HORSE FOR JELLYFISH BLOOMS? | | SS62 BIODIVERSITY-ECOSYSTEM FUNCTIONING RELATIONSHIPS ACROSS TROPHIC LEVELS AND GRADIENTS IN THE CONTEXT OF GLOBAL CHANGE |
| 14:15 | <u>Varela, M. M.</u> ; Alvarez-Rodríguez, M.; Álvarez-Salgado, X. A.; González-Pola, C.; Nieto-Cid, M.: PROKARYOTIC ABUNDANCE, ACTIVITY & COMMUNITY COMPOSITION IN RELATION TO THE QUALITY OF DISSOLVED ORGANIC MATTER IN DEEP WATERS OFF THE GALICIAN COAST (NW SPAIN) | <i>Chair(s):</i> Adam J. Heathcote, aheathco@iastate.edu Christopher T. Filstrup, filstrup@iastate.edu W. Stanley Harpole, harpole@iastate.edu | |
| 14:30 | <u>Salazar, G.</u> ; Cornejo-Castillo, F. M.; Acinas, S. G.; Gasol, J. M.: GLOBAL OETA-DIVERSITY PATTERNS IN DEEP OCEAN BACTERIAL COMMUNITIES | <i>Location:</i> Room 207-Piazzo Omi | |
| 14:45 | <u>Sal, S.</u> ; Lopez-Urrutia, A.; Vallina, S. M.; Dutkiewicz, S.; Follows, M.: MULTIPLE DRIVERS OF THE LATITUDINAL DIVERSITY GRADIENT IN MARINE PHYTOPLANKTON | 09:00 | <u>Filstrup, C. T.</u> ; Hillebrand, H.; Heathcote, A. J.; Harpole, W. S.; Downing, J. A.: PHYTOPLANKTON DOMINANCE DETERMINES RESOURCE USE EFFICIENCY AND COMMUNITY STABILITY IN PHYTOPLANKTON AND ZOOPLANKTON COMMUNITIES ^T |
| 15:00 | <u>Agustí, S.</u> ; González-Gordillo, J. L.; Vaque, D.; Duarte, C. M.; Cerezo, M. I.; Puerta, P.: UBIQUITOUS PRESENCE OF HEALTHY PHYTOPLANKTON CELLS IN THE DEEP OCEAN | 09:30 | <u>Downing, J. A.</u> : BIODIVERSITY AND STABILITY IN LAKES* |
| 15:15 | <u>Royer, S. J.</u> ; Galí, M.; Simó, R.; Saltzman, E.: LARGE AND SMALL SCALE PATTERNS OF DMS VARIABILITY IN THE SURFACE OCEAN | 10:00 | <u>Shurin, J. B.</u> ; Mandal, S.; Abbott, R.; Gaarder, K.; Kwan, G.; Mehta, R.: ENGINEERING ALGAE COMMUNITIES FOR BIOFUEL PRODUCTIVITY AND RESILIENCE* |
| 16:00 | <u>Duarte, C. M.</u> ; Dorsett, A.; Ruiz-Halpern, S.; Waite, A.; Pinho, L.; Dachs, J.: A GLOBAL ASSESSMENT OF POOLS AND FLUXES OF VOLATILE ORGANIC CARBON ACROSS THE AIR-SEA INTERFACE | 10:15 | <u>González-Ortiz, V.</u> ; Moreno-Marín, F.; Jimenez-Ramos, R.; Egea-Tinoco, G.; Bouma, T. J.; Pérez-Lloréns, J. L.; Brun, F. G.: HYDRODYNAMIC DRIVEN FOOD SUPPLY FOR FILTER-FEEDERS IN FRAGMENTED SEAGRASS LANDSCAPES |
| 16:15 | <u>García-Corral, L. S.</u> ; Barber, E.; Sal, S.; Holding, J.; AGUSTÍ, S.; Regaudie-De-Gioux, A.; NAVARRO, N.; Serret, P.; Duarte, C. M.: TEMPERATURE-DEPENDENCE OF PLANKTONIC METABOLISM IN THE SUBTROPICAL NORTH ATLANTIC | | SS63 LAKE BIWA STORY: PAST, PRESENT AND FUTURE |
| 16:30 | <u>Puerta, P.</u> ; Cerezo, M. I.; Agustí, S.: GLOBAL ASSESSMENT OF THE SENSITIVITY OF OCEANIC PICOPHYTOPLANKTON TO UV RADIATION | <i>Chair(s):</i> Chunmeng Jiao, jiao-c@lberi.jp Hiroki Haga, haga@lberi.jp Kasuhide Hayakawa, hayakawa-k@lberi.jp | |
| 16:45 | <u>Galand, P. E.</u> ; Ghiglione, J. F.; Pommier, T.; Maas, E.; Kirchman, D. L.; Lovejoy, C.; Pedrós-Alió, C.; Murray, A. E.: POLE TO POLE BIOGEOGRAPHY OF MARINE BACTERIAL COMMUNITIES | <i>Location:</i> Rehearsal Room-Biwako Hall | |
| 17:00 | <u>Cerezo, M. I.</u> ; Puerta, P.; Agustí, S.: EFFECTS OF POLLUTION ON THE GROWTH AND GRAZING BALANCE OF OCEANIC PHYTOPLANKTON COMMUNITIES EXAMINED DURING THE MALASPINA-2010 EXPEDITION | 16:00 | <u>Haga, H.</u> : LONG-TERM CHANGE OF SUBMERGED MACROPHYTES IN THE SOUTHERN BASIN OF LAKE BIWA |
| 17:15 | <u>Cavagna, A. J.</u> ; Dehairs, F.; Quéguiner, B.; Fernandez, C.; Elskens, M.; Lefèvre, D.: REGIMES OF PRODUCTION AND POTENTIAL FOR CARBON EXPORT IN NATURALLY IRON-FERTILIZED WATERS IN THE SOUTHERN OCEAN | 16:15 | <u>Ishikawa, K.</u> ; Haga, H.: INFLUENCE OF THE HEIGHT OF SUBMERGED MACROPHYTES ON WATER TRANSPORT AND DISSOLVED OXYGEN IN THE SOUTH BASIN OF LAKE BIWA |
| 17:30 | <u>Romera-Castillo, C.</u> ; <u>Nieto-Cid, M.</u> ; Marrasé, C.; Repeta, D. J.; Álvarez-Salgado, X. A.: OPTICAL PROPERTIES OF ULTRAFILTERED DISSOLVED ORGANIC MATTER (UDOM) FROM CONTRASTING AQUATIC ENVIRONMENTS AND THEIR ALTERATION BY SUNLIGHT | 16:30 | <u>Sakamoto, M.</u> : BIOGEOCHEMICAL EVOLUTION OF THE PELAGIC SYSTEM OF LAKE BIWA ASSOCIATED WITH GLOBAL WARMING |
| | | 16:45 | <u>Hayakawa, K.</u> ; Tsujimura, S.; Ishikawa, T.; Haga, H.; Okamoto, T.; Jiao, C.; Ishikawa, K.; Kumagai, M.: LONG-TERM CHANGES IN THE CONCENTRATIONS OF NUTRIENTS AND WATER QUALITY PARAMETERS IN LAKE BIWA USING INTEGRATED ANALYSIS FROM SEVERAL MONITORING DATA |
| | | 17:00 | <u>Tanaka, L. L.</u> ; Tamura, M.; Ohkawa, S.; Ban, S.; Kumagai, M.: ABUNDANCE OF CLOSTERIUM ACICULARE IN LAKE BIWA DURING SPRING |
| | | 17:15 | <u>Nakai, K.</u> : LAKE BIWA – THE JAPANESE ANCIENT LAKE, HARBORING MANY ENDEMICS AND INHABITED BY NOT A FEW INVASIVES |
| | | 17:30 | <u>Ballatore, T. J.</u> ; Nakamura, M.: METHOD FOR IDENTIFYING CHANGES IN TOPOGRAPHIC DEPRESSIONS AND LENTIC WATER BODIES: APPLICATION TO THE LAKE BIWA BASIN |
| | | 17:45 | <u>Jiao, C.</u> ; Aoki, S.; Ishikawa, K.; Inoue, E.; Hayakawa, K.: INTERANNUAL FLUCTUATION OF HYPOLIMNION OXYGEN DEPLETION IN THE NORTH BASIN OF LAKE BIWA |

^T represents Tutorial presentations

Tuesday Posters

GS01 RIVERS, WETLAND AND ESTUARIES

Chair(s): Patricia Natin, p.natin@griffith.edu.au
Tsuyoshi Kobayashi, Yoshi.Kobayashi@environment.nsw.gov.au

Location: Biwako Hall Foyer

- 1 Hirosuke, N.; Nagamitsu, M.; Masataka, N.; Eikichi, S.: NUTRIENT LOADING IN AN AGRICULTURAL WATERSHED DURING PUDDLING PERIOD OF RICE PADDIES.
- 2 Chen, T.; Chen, Y.: DEVELOPMENTAL AND BEHAVIORAL EFFECTS ON LARVAL FISH OF WATER FROM SEWAGE STREAMS IN KENTING NATIONAL PARK, TAIWAN
- 3 Tsuda, K.; Aradate, E.; Nomura, K.; Okamoto, M.: BIWAKO INVESTIGATIVE-PARTY REPORT: A SENIBLE INVESTIGATION OF LAKE BIWA AND ITS INFLOWING RIVERS
- 4 Poh, S. C.; Gasparon, M.: HYDRAULIC CONNECTIVITY BETWEEN ESTUARY AND WETLAND: AN INSIGHT FROM RARE EARTH ELEMENTS
- 5 Miura, A.; Urabe, J.: SPATIAL GRADIENTS OF RIVERINE FUNGAL COMMUNITIES AND RIPARIAN LAND USE AND LAND COVER
- 6 Rockwell, R. E.; Domine, L. M.; Zimmer, K. D.; Cotner, J. B.: EFFECTS OF WATER DEPTH, TYPE OF PRIMARY PRODUCER, AND VARIATION AMONG LAKES ON DECOMPOSITION RATES IN SHALLOW LAKES
- 7 Asahi, T.; Ichimi, K.; Yamaguchi, H.; Tada, K.: BEHAVIOR OF PARTICULATE AND DISSOLVED PHOSPHORUS DURING HIGH AND LOW TIDES IN THE TIDAL FLAT, SHINKAWA-KASUGAGAWA ESTUARY IN THE SETO INLAND SEA, JAPAN.
- 8 Itakura, H.; Kitagawa, T.; Kimira, S.: DISTRIBUTION CHARACTERISTICS OF THE JAPANESE EELS IN RELATION TO HABITAT DESTRUCTIONS
- 9 Phan, T. N.; Wells, J. C.; Kirkey, W. D.; Islam, M. S.; Fuller, C. B.; Oto, T. O.; Bonner, J. S.; Nguyen, L. V.; Susuki, Y.: LARGE EDDY SIMULATION AND DYNAMIC MODE ANALYSIS IN THE HUDSON RIVER ESTUARY
- 10 Chau, K. C.; Goodkin, N. F.; Zong, Y. Q.: HEAVY METAL CONCENTRATION IN DEEP BAY, HONG KONG
- 11 Chung, C.; Jackson, L. J.: EFFECTS OF AN URBAN NUTRIENT FOOTPRINT ON PERiphyton AND MACROPHYTE BIOMASS, AND DIEL OXYGEN CYCLES IN THE BOW RIVER, ALBERTA (CANADA)
- 12 Ruibal Conti , A. L.; Bruce, L. C.; Hipsey , M. R.: UNRAVELLING THE RESPONSE OF A SHALLOW ESTUARY TO A SIMULTANEOUS DECREASE IN NUTRIENT LOADING AND INCREASE IN OCEANIC EXCHANGE USING AN INVERSE MODEL APPROACH.
- 13 Morrison, R. R.; Stone, M. C.: DETERMINING THE HYDROLOGIC EFFECTS OF WATER MANAGEMENT EFFORTS ON THE RIO CHAMA, NEW MEXICO, USING INDICATORS OF HYDROLOGIC ALTERATION ANALYSES

GS02 NEARSHORE AND COASTAL REGIONS

Chair(s): Satoshi Nakada, snakada@kugi.kyoto-u.ac.jp
Naoki Yoshie, yoshie.naoki.mm@ehime-u.ac.jp

Location: Biwako Hall Foyer

- 14 Suursaar U; Aps, R.; Kullas, T.: DECADAL VARIATIONS IN WAVE CONDITIONS AND HYDRODYNAMICALLY INDUCED TURBIDITY IN THE COASTAL WATERS OF ESTONIA, BALTIC SEA
- 15 Kobayashi, S.; Fujiwara, T.: NITROGEN DYNAMICS IN RESPONSE TO THE LOAD REDUCTION IN A COASTAL EMBAYMENT: TOKYO BAY, JAPAN
- 16 Yamaguchi, H.; Katahira, R.; Asahi, T.; Tamura, T.; Ichimi, K.; Tada, K.: INFLUENCE OF PARTICULATE MATERIALS ON WATER CLARITY IN HARIMA NADA, THE EASTERN SETO INLAND SEA, JAPAN
- 17 Mulder, L. L.; Epping, E. H.; Philippart, J. C.; Soetaert, K.: METABOLISM AND NUTRIENT FLUXES OF AN INTERTIDAL FLAT IN THE WESTERN WADDENSEA
- 18 Zou , T.; Gao , H. W.: STUDY ON THE TOTAL WATER POLLUTANT LOAD ALLOCATION IN JIAOZHOU BAY IN SUMMER

GS04 PHYSICAL OCEANOGRAPHY AND LIMNOLOGY

Chair(s): Takeyoshi Nagai, tnagai@kaiyodai.ac.jp

Location: Biwako Hall Foyer

- 19 Ramírez-Romero, E.; Roque, D.; Macías, D.; García, C. M.; Bruno, M.: INTERNAL WAVES AND BIOGEOCHEMICAL PATTERNS OF THE ATLANTIC INFLOW TO ALBORAN SEA DURING SPRING TIDES
- 20 Ficek, D.; Zapadka, T.; Meler, J.; Majchrowski, R.: INHERENT OPTICAL PROPERTIES AND REMOTE SENSING REFLECTANCE RELATED TO WATER CONSTITUENTS IN THE POMERANIAN LAKES AND THE BALTIC SEA
- 21 Majchrowski, R.; Ston-Egert, J.; Ficek, D.: INFLUENCE OF PHOTO- AND CHROMATIC ACCLIMATION ON PHYTOPLANKTON COMMUNITIES IN THE BALTIC SEA – PRELIMINARY RESULTS

GS06 PLANKTON BIOLOGY AND ECOLOGY

Chair(s): Ora Hadas, orah@ocean.org.il
Yuji Tanaka, ytanaka@kaiyodai.ac.jp
Hugh MacIsaac, hughm@uwindsor.ca
Aino Hosia, aino.hosia@imr.no

Location: Biwako Hall Foyer

- 22 Hwang, J. S.; Souissi, S.; Tseng, L. C.; Molinero, J. C.; Chen, Q. C.; Wong, C. K.: LONG TERM STUDY OF MONSOON EFFECT ON THE DISTRIBUTION AND SEASONALITY OF CALANUS SINICUS IN THE WATERS OF TAIWAN, WESTERN NORTH PACIFIC OCEAN
- 23 Nagano, M.; Yoshida, T.: INTER- AND INTRA-SPECIFIC VARIATIONS IN MORPHOLOGICAL PLASTICITY OF *DAPHNIA* INDUCED BY TWO DIFFERENT PREDATORS
- 24 Lo, W. T.; Hsieh, H. Y.; Kang, P. R.: SIPHONOPHORES OF A TRANSECT OFF SOUTHERN TAIWAN BETWEEN SOUTH CHINA SEA AND KUROSHIO

TUESDAY

| | | | |
|----|--|----|--|
| 25 | Hidaka, K.; Nishibe, Y.; Ichikawa, T.; Kurogi, H.; Takahashi, K.; Saito, H.; Sugisaki, H.: THE FATE OF APPENDICULARIAN HOUSE IN THE SLOPE WATER SOUTH OF JAPAN | 39 | Hu, J.; Wu, Y.; Zhu, Z. Y.; Zhang, J.: STUDIES ON PHYTOPLANKTON COMMUNITY FEATURES IN THE EAST CHINA SEA DURING THE SPRING AND SUMMER OF 2011 |
| 26 | Hsieh, H. Y.; Lo, W. T.; Hsu, P. K.; Fang, T. H.; Hu, J. H.: EFFECTS OF THERMAL DISCHARGES ON PHYTOPLANKTON COMMUNITIES IN THE WATERS OFF TWO COASTAL NUCLEAR POWER PLANTS | 40 | Kazuhiko, I.; Tomohiko, K.; Kuninao, T.; Paul, H. J.: EXTREMELY HIGH GROWTH POTENTIAL OF SMALL CHAETOCEROS spp. ISOLATED FROM AN ESTUARY IN THE SETO INLAND SEA, JAPAN |
| 27 | Chen, J.; Huang, B.: INORGANIC CARBON FIXATION AND GENE EXPRESSION OF <i>MICROMONAS PUSILLA</i> AND <i>OSTREOCOCCUS TAURI</i> UNDER DIFFERENT LEVELS OF ATMOSPHERIC CO ₂ | 41 | Sou, M.; Ishida, S.; Ohtsuki, H.; Urabe, J.: OBLIGATE ASEXUAL POPULATIONS OF <i>DAPHNIA PULEX</i> IN JAPAN: ARE THEY ALIEN OR INDIGENOUS SPECIES? |
| 28 | Chang, J.; Kang, L. K.: CROSS-SHELF VARIATION OF NITRATE TRANSPORTER MESSENGER RNA LEVEL AS AN INDICATION OF DIATOM NITROGEN STRESS | 42 | Kumagai, H.; Ishida, S.; Makino, W.; Urabe, J.: MAINTENANCE OF GENETIC DIVERSITY IN A DAPHNIA POPULATION WITH OVWERWINTERING INDIVIDUALS |
| 29 | Hasegawa, T.; Gomi, Y.; Sasaki, H.; Kiyomoto, Y.; Okamura, K.; Nishiuchi, K.: SEASONAL VARIATION OF PRIMARY PRODUCTION AT THE SURFACE IN THE EAST PART OF THE EAST CHINA SEA | 43 | Huebner, E.; Huebner, J. D.: AN INTEGRATED CELLULAR ANALYSIS OF <i>DAPHNIA MAGNA</i> USING AN ARRAY OF LIGHT MICROSCOPY, TRANSMISSION AND SCANNING ELECTRON MICROSCOPY TECHNIQUES. |
| 30 | Nedoma, J.; Simek, K.; Zapomelova, E.; Znachor, P.; Jezbera, J.; Hornak, K.: EXTRACELLULAR DOC RELEASE BY PHYTOPLANKTON IN TEMPERATE EUTROPHIC RESERVOIRS | 44 | Tomoyo, K.; Ai, M.; Satoru, T.: RESPONSE OF VARIABLE CHLOROPHYLL FLUORESCENCE TO SILICATE AVAILABILITY DURING DARK SURVIVAL AND RECOVERY IN MARINE DIATOM <i>THALASSIOSIRA WEISSFLOGII</i> |
| 31 | Znachor, P.; Visocka, V.; Nedoma, J.; Rychtecky, P.: APPLICATION OF THE PDMPO FLUORESCENCE TECHNIQUE IN STUDYING THE ECOLOGY OF FRESHWATER DIATOMS | 45 | Keigo, H.; Kazuhiko, I.; Yutaka, O.; Kuninao, T.: DYNAMICS OF MICROALGAL COMMUNITY IN AN ESTUARINE TIDAL FLAT ECOSYSTEM IN THE SETO INLAND SEA, JAPAN |
| 32 | Oribe, E.; David, H.; Laza-Martinez, A.; Seoane, S.: HARMFUL BLOOMS OF SMALL CENTRIC DIATOMS IN ESTUARINE WATERS | 46 | Murakami, K.; Hayashi, H.; Agatsuma, S.; Gomyo, M.: COMPARISON OF STABILITY AND REPRODUCIBILITY OF AQUIFER EXPERIMENTAL MICROCOSSM SYSTEM FROM THE VIEWPOINT OF ECOSYSTEM FUNCTION AND STRUCTURE |
| 33 | Dang, C. T.; Fujii, M.; Rose, A. L.; Bligh, M.; Waite, T. D.: GROWTH AND RESPONSES TO IRON STRESS OF THE FRESHWATER CYANOBACTERIUM <i>MICROCYSTIS AERUGINOSA</i> IN BOTH NUTRIENT-INSUFFICIENT AND -REPLETE CONTINUOUS CULTURES | 47 | Shih, C. Y.; Kang, L. K.; Chang, J.: GENOME-WIDE TRANSCRIPTOME ANALYSES IN <i>CHAETOCEROS AFFINIS</i> REVEAL REGULATORY PATHWAYS RELATED TO PHOSPHATE STARVATION |
| 34 | Li, Z.; Han, M.: RESTING STAGES OF FRESHWATER ALGAE FROM SURFACE SEDIMENTS IN THE PALDANG RESERVOIR SYSTEM, KOREA: AN IDENTIFICATION BASED ON DIFFERENT LIFE STAGES | 48 | Ishida, S.: BIODIVERSITY OF FRESHWATER ZOOPLANKTON (CLADOCERA: BOSMINA, CERIODAPHNIA, DIAPHANOSOMA, AND BOSMINOPSIS) IN A GLACIAL REFUGIUM, JAPAN |
| 35 | Akiha, F.; Hashida, G.; Sasaki, H.: DISTRIBUTION AND ABUNDANCE OF EUTHECOSOMATOUS PTEROPODS IN THE INDIAN SECTOR OF THE SOUTHERN OCEAN DURING AUSTRAL SUMMER | 49 | Nakamura, K.; Hanamachi, Y.; Kitamura, T.: WHY DID OSCILLATORIALES/PLANKTOTHRIX SUSPensa DOMINATE IN SHALLOW HYPERTROPHIC LAKE (LAKE KASUMIGURA, NISHIURA, JAPAN)? |
| 36 | Yamada, K.; Yoshikawa, S.; Ichinomiya, M.; Sasase, M.; Kuwata, A.; Kamiya, M.; Ohki, K.: EFFECTS OF PHOSPHATE, NITRATE AND SILICATE ON THE GROWTH OF <i>TRIPARMA LAEVIS</i> (PARMALES, HETEROKONTA) CULTURED IN SYNTHETIC MEDIUM | 50 | Sakai, Y.; Okuda, N.: INTRASPECIFIC DIFFERENCES IN VERTICAL HABITAT UTILIZATION BY CRUSTACEAN ZOOPLANKTON: STABLE ISOTOPIC EVIDENCE |
| 37 | Yoshimura, T.; Sugie, K.; Endo, H.; Suzuki, K.: IMPACTS OF OCEAN ACIDIFICATION ON IRON-DEFICIENT PHYTOPLANKTON ASSEMBLAGES AND ORGANIC MATTER PRODUCTION IN OPEN SUBARCTIC WATERS | 51 | Ichinomiya, M.; Kuwata, A.: SEASONAL VARIATION OF THE PARMALES ASSEMBLAGE IN THE OYASHIO REGION, THE WESTERN NORTH PACIFIC |
| 38 | Tew, K. S.; Wang, Y. P.; Kuo, J.; Ko, F. C.; Meng, P. J.: THE EFFECT OF CORAL POLYP SIZES AND CORAL EXUDATES ON PICOEUKARYOTE DYNAMICS IN A CONTROLLED ENVIRONMENT | 52 | Takahashi, K.; Ichikawa, T.; Saito, H.; Kakehi, S.; Sugimoto, Y.; Hidaka, K.; Hamasaki, K.: SAPPHIRINID COPEPODS AS PREDATORS OF DOLIOLIDIDS: THEIR CONTRIBUTION TO DOLIOLIDIDS MORTALITY AND SINKING FLUX |

† represents Tutorial presentations

- 53 Masuda, T.; Furuya, K.; Kodama, T.; Takeda, S.; Harrison, P. J.: AMMONIUM UPTAKE AND NITROGEN FIXATION OF THE UNICELLULAR CYANOBACTERIACROCOSPHAERA WATSONII IN NITROGEN LIMITED CONTINUOUS CULTURES
- 54 Guo, C.; Liu, H.; Song, S.; Zheng, L.; Chen, B.: DYNAMICS OF PICOPHYTOPLANKTON IN THE EAST CHINA SEA
- 55 Sugai, Y.; Tsuchiya, K.; Nakajima, R.; Kikuchi, T.; Toda, T.: POTENTIAL INCREASE IN BACTERIAL PRODUCTION INDUCED BY TERRESTRIAL RUNOFF IN SAGAMI BAY, JAPAN
- 56 Milano, E. A.; Hairston, N. G.; Schaffner, L. R.; Brown, M. E.: THE EFFECTS OF SEDIMENT LOADING AND SEICHE ACTIVITY ON DAPHNIA RETROCURVA.
- 57 Ueda, M.; Doi, K.; Honda, D.: SEASONAL DYNAMICS OF FUNGOID PROTISTS, THRAUSTOCHYTRIDS, IN COASTAL WATER
- 58 Yamada, M.; Otsubo, M.; Kodama, M.; Yamamoto, K.; Nishikawa, T.; Ichimi, K.; Tada, K.; Harrison, P. J.: SPECIES DIVERSITY OF VEGETATIVE AND RESTING CELLS OF THE GENUS SKELETONEMA (BACILLARIOPHYCEAE) IN OSAKA BAY AND TOKYO BAY, JAPAN
- 59 Kitajima, S.; Okuno, A.; Honda, N.; Iguchi, N.; Watanabe, T.; Katoh, O.: DISTRIBUTION OF *NEMOPILEMA NOMURI* IN THE JAPAN SEA RELATED WITH BRANCHING AND JOINING OF THE TSUSHIMA CURRENT
- SS03 GROUNDWATER-SURFACE WATER INTERACTIONS IN FRESHWATER AND MARINE ENVIRONMENTS**
- Chair(s):* Isaac Santos, isaac.santos@scu.edu.au
Makoto Taniguchi, makoto@chikyu.ac.jp
Meinhard B. Cardenas, Cardenas@jsg.utexas.edu
William Burnett, wburnett@fsu.edu
- Location:* Biwako Hall Foyer
- 60 Lun, S.; Tokunaga, T.: INTERACTION OF GROUNDWATER AND SURFACE WATER INDUCED BY SEASONAL WATER-LEVEL CHANGE IN WESTERN TONLE SAP LAKE, CAMBODIA
- 61 Jing, W. P.; Dai, M. H.; Xu, Y.; Wang, G. Z.: EFFECTS OF SUBMARINE GROUNDWATER DISCHARGE ON THE CARBONATE SYSTEM IN A COASTAL CORAL REEF ENVIRONMENT: SIGNIFICANCE OF TIDAL FORCING
- 62 Chen, H.; Tokunaga, T.; Obanawa, H.: A STUDY ON THE INTERACTION OF SURFACE WATER AND GROUNDWATER AT THE KUJKURI PLAIN IN CHIBA PREFECTURE, JAPAN
- 63 Hsu, F.; Huh, C.; Chen, W.; Ho, P.: USING 228RA AND 226RA TO CHARACTERIZE WATER MASS AND COASTAL MIXING IN THE TAIWAN STRAIT
- 64 Xin, P.; Robinson, C.; Li, L.; Barry, D. A.: EFFECT OF VARYING WAVE CONDITIONS ON A SUBTERRANEAN ESTUARY
- 65 Gray, E. R.; Esch, M.; Jenner, B. A.; Wang, X.; Gardner, B.; Cable, J. E.: OVERLAND FLOW AND GROUNDWATER CONTRIBUTIONS TO CARBON EXPORT FROM A FLORIDA SALT MARSH
- 66 Kim, T.; Kim, G.: DISSOLVED ORGANIC MATTER IN THE SUBTERRANEAN ESTUARY OF A LARGE TIDAL FLAT IN HAMGYEONG BAY, KOREA
- 67 Cable, J. E.; Gardner, G. B.; Jenner, B. A.; Peri, F.: COMPARING CONTINUOUS CDOM AND RN-222 MEASUREMENTS IN SPRING-FED AND RUNOFF DOMINATED RIVERS
- 68 Mandal, A. K.; Zhang, J.: ISOTOPE TRACER OF GROUNDWATER RECHARGE, FLOW PATHS AND NITRATE SOURCES IN THE VOLCANIC ISLAND RISHIRI: IMPLICATIONS FOR NUTRIENT ADDITION TO THE COASTAL AREA
- 69 Yoshikawa, M.; Onodera, S.; Saito, M.; Onishi, K.; Shimizu, Y.: EVALUATION OF THE NUTRIENT PRODUCTION VIA RECIRCULATED SUBMARINE GROUNDWATER DISCHARGE AT AN INTERTIDAL ZONE WITH LARGE TIDAL VARIATION
- 70 Jin, G.; Onodera, S.; Saito, M.; Shimizu, Y.; Guo, X.; Amano, A.; Sato, T.; Jige, M.: EVALUATION OF THE EFFECT OF SUBMARINE GROUNDWATER DISCHARGE ON THE NUTRIENT PROPERTY OF THE COASTAL SEDIMENT IN THE SETO INLAND SEA, JAPAN
- SS07 HYPER-EUTROPHICATION OF LAKE TAIHU: A "LOOKING GLASS" FOR LARGE AQUATIC ECOSYSTEMS WORLDWIDE IMPACTED BY HUMAN ACTIVITIES AND CLIMATE CHANGE**
- Chair(s):* Boqiang Qin, qinbq@niglas.ac.cn
Hans W. Paerl, hans_paerl@unc.edu
Kumud Acharya, Kumud.Acharya@dri.edu
Yiping Li, liyiping@hhu.edu.cn
- Location:* Biwako Hall Foyer
- 72 Zhang, C. L.; Jin, W.: SOLIDIFICATION TREATMENT OF TAIHU LAKE (CHINA) DREDGED SEDIMENT FOR PLANTING USE
- 73 Wang, C.; Shen, C.; Wang, P. F.; Chen, H. Y.: THE EFFECTS OF WATER TRANSFER ON WATER QUALITY IMPROVEMENT OF LAKE TAIHU
- 74 Chen, W.; Jia, Y.; Liu, L.; Zhao, S.; Zhou, Q.; Li, L.; Song, L.: MECHANICAL COLLECTION OF CYANOBACTERIAL BLOOMS FROM CHINESE EUTROPHIC LAKES: ELIMINATIONS OF CYANOTOXINS AND PCBs BASED ON A "GREEN BIOADSORPTION CONCEPT"
- SS10 RIVER SYSTEMS – ECOLOGICAL SITUATION AND HUMAN DIMENSION**
- Chair(s):* Takashi Asaeda, asaeda@mail.saitama-u.ac.jp
Thomas Hein, thomas.hein@boku.ac.at
- Location:* Biwako Hall Foyer
- 75 Kasahara, T.; Le, A. T.: NITROGEN RETENTION RATE IN AGRICULTURAL DRAINAGE CANALS IN CENTRAL THAILAND
- 76 Yamamoto, T.; Sakai, H.: ECOLOGICAL RESEARCH OF AN AMPHIDROMOUS FISH IN A RIVER FRAGMENTED BY DAMS AND RESERVOIRS IN CENTRAL JAPAN

TUESDAY

SS13 CONSEQUENCES OF CROSS-ECOSYSTEM RESOURCE SUBSIDIES FOR FRESHWATER FOODWEBS

Chair(s): John S. Richardson, john.richardson@ubc.ca
Takuya Sato, takuya@species.jp

Location: Biwako Hall Foyer

- 77 Grosbois, G.; Rautio, M.: ZOOPLANKTON PRODUCTIVITY DEPENDENCY ON TERRESTRIAL SUBSIDIES IN A BOREAL LAKE
- 78 Kochi, K.: SEASONAL CHANGE OF TERRESTRIAL ENERGY INPUT TO STREAM ECOSYSTEM

SS14 PARASITISM IN AQUATIC MICROBIAL ECOLOGY

Chair(s): Claire Gachon, claire.gachon@sams.ac.uk
John DOLAN, dolan@obs-vlfr.fr
Nathalie NIQUIL, nathalie.niquid@univ-lr.fr
Télesphore Sime-Ngando, telesphore.sime-ngando@univ-bpclermont.fr

Location: Biwako Hall Foyer

- 79 Kagami, M.; Ishii, N.: COMMUNITY STRUCTURE OF PLANKTONIC FUNGI AND THE IMPACT OF PARASITIC CHYTRIDS ON PHYTOPLANKTON IN LAKE INBA, JAPAN
- 80 Ohtsuka, S.; Kanazawa, A.; Ando, M.; Suzuki, T.: THE LIFE CYCLE AND ULTRASTRUCTURE OF THE HISTOPHAGOUS APOSTOME CILIATE *VAMPYROPHRYA PELAGICA* ON MARINE PLANKTONIC COPEPODS
- 81 Maier, M. A.; Peterson, T. D.; Needoba, J. A.: SEASONAL DYNAMICS OF CHYTRID FUNGAL PARASITISM OF FRESHWATER DIATOMS IN THE LOWER COLUMBIA RIVER, U.S.A.
- 82 Kimura, S.; Yoshida, T.; Hosoda, N.; Honda, T.; Kuno, S.; Kamiji, R.; Hashimoto, R.; Sako, Y.: GENETIC DIVERSITY OF MICROCYSTIS CYANOPHAGE REVEALED BY SEQUENCES OF PHAGE TAIL SHEATH GENE

SS17 MICROBIAL DIVERSITY AND FUNCTIONS

Chair(s): Shin-ichi Nakano , nakano@ecology.kyoto-u.ac.jp
Senjie Lin, senjie.lin@uconn.edu
Taichi Yokokawa, taichi.yokokawa@ehime-u.ac.jp

Location: Biwako Hall Foyer

- 83 Thao, N. V.; Obayashi, Y.; Yokokawa, T.; Suzuki, S.: BACTERIAL PROTEASES ARE NOT SUFFICIENT TO DEGRADE PROTEINS IN SEAWATER
- 84 Watanabe, K.; Imai, A.; Watanabe, M.; Yamamura, S.; Hayashi, S.: ECOLOGICAL NICHE SEPARATION IN THE *POLYNUCLEOBACTER* SUBCLUSTERS LINKED TO QUALITY OF DISSOLVED ORGANIC MATTER
- 85 Murakami, A.; Nakano, S.: MICROBIAL ECOLOGY OF EPILITHIC BIOFILMS - SPATIAL AND TEMPORAL POSITIONING MATTERS
- 86 Kuo, J.; Chen, Y. H.; Sung, P. J.; Chang, Y. C.; Lu, M. C.; Twan, W. H.; Kuo, F. W.: MARINE BACTERIA WITH ANTIMICROBIAL ACTIVITIES FROM SOFT CORALS: ISOLATION, DIVERSITY AND BIOLOGICAL ACTIVITY

87 Kazama, T.; Urabe, J.: FACTORS REGULATING COMMUNITY STRUCTURES OF TINTINNID CILIATES IN COSTAL WATERS: IMPORTANCE OF INDIRECT BIOLOGICAL INTERACTIONS

- 88 Shimotori, K.; Watanabe, K.; Hama, T.: RELATIONSHIP BETWEEN FLUORESCENCE CHARACTERISTICS AND MOLECULAR WEIGHT OF FLUORESCENT DISSOLVED ORGANIC MATTER PRODUCED BY BACTERIA
- 89 Ohno, H.; Nishitani; Sato-Okoshi, W.; Endo, Y.: THE GRAZING IMPACT OF THE NOVEL DIATOM-FEEDING FLAGELLATE *ONAGAWA BAY, NORTHEASTERN JAPAN*

90 Amano-Sato, C.; Li, Q.; Akiyama, S.; Uchida, M.; Utsumi, M.: IN SITU MEASUREMENT OF MARINE BACTERIAL GROWTH RATE AND COMMUNITY STRUCTURE USING THE ROCS INCUBATION SYSTEM

- 91 Tarao, M.; Kudo, J.: ENUMERATION AND ISOLATION OF N₂O PRODUCING DENITRIFIERS FROM FRESHWATER BY USING OF A MEDIUM WITH LOW CONCENTRATION OF NITRATE AND ORGANIC CARBON

92 Sohrin, R.; Mori, A.; Nagaosa, K.; Kato, K.; Suzuki, Y.: MICROBIAL DEGRADATION OF DISACCHARIDES IN SEAWATER

- 93 Yamaguchi, A.; Sayama, M.; Wada, M.; Takano, Y.; Umezawa, Y.: POTENTIAL CONTRIBUTION OF POLYPHOSPHATE ACCUMULATING ORGANISMS (PAOS) TO PHOSPHORUS CYCLING IN THE SEDIMENT AT INTERTIDAL FLAT

94 Zhang, Y.; Zhao, Z. H.; Chen, C. A.; Jiao, N. Z.: RIBOSOMAL TAG PYROSEQUENCING REVEALS THAT SULFUR METABOLIZING MICROBES DRIVE THE SHALLOW-SEA HYDROTHERMAL SYSTEMS OFF NE TAIWAN'S COAST

- 95 Nishimura, Y.; Yoshiyama, K.; Nakamura, Y.: VARIATIONS IN BACTERIAL COMMUNITY COMPOSITION DURING THE PROCESS OF HYPOXIA FORMATION IN COASTAL WATERS

96 Obayashi, Y.; Suzuki, S.; Hamasaki, K.: DIFFERENT RESPONSE OF MARINE BACTERIAL COMMUNITY TO ADDITION OF DISSOLVED PROTEIN AND FREE AMINO ACIDS

- 97 Honjo, M. N.; Minamoto, T.; Yamanaka, H.; Takahara, T.; Kawabata, Z.: SEASONAL AND SPATIAL DISTRIBUTION OF CYPRINID HERPESVIRUS 3 IN WATER AND SEDIMENT OF A LAGOON OF LAKE BIWA, JAPAN

SS19 FOOD WEB: ITS STRUCTURE, DYNAMICS, AND ECOSYSTEM CONSEQUENCES

Chair(s): Hongbin Liu , liuhb@ust.hk
Richard Rivkin , rrivkin@mun.ca
Andrea Belgrano, andrea.belgrano@slu.se
Michio Kondoh, mkondoh@rins.ryukoku.ac.jp

Location: Biwako Hall Foyer

- 98 Chiang, K. P.; Tsai, P. J.; Tsai, A. Y.: COUPLING OF THE SPATIAL DYNAMIC OF BACTERIA COMMUNITY AND NANOFAGELLATE GRAZING PRESSURE IN THE SUBTROPICAL PELAGIC CONTINENTAL SHELF ECOSYSTEM

- 99 Sasaki , H.; Konno, S.; Fumihiro, A.: VARIABILITY OF SHELLED PTEROPOD BIOMASS IN THE SEASONALLY ICE-COVERED ANTARCTIC OCEAN USING A SIMPLE ECOSYSTEM MODEL
- 100 Ng, W. H.; Rivkin, R. B.; Liu, H. B.; Chen, B. Z.; Guo, C.; Sun, M. M.: EFFECT OF NUTRIENT ENRICHMENT TO PHYTOPLANKTON AND BACTERIAL GROWTH AND GRAZING MORTALITY IN COASTAL WATERS

SS20 ACTIVE FLUORESCENCE MEASURES OF PHOTOSYNTHETIC PHYSIOLOGY AND PRIMARY PRODUCTION

- Chair(s):* Greg Silsbe, g.silsbe@nioo.knaw.nl
Jacco Kromkamp, j.kromkamp@nioo.knaw.nl
Ondrej Prasil, prasil@alga.cz
Tetsuichi Fujiki, tfujiki@jamstec.go.jp

Location: Biwako Hall Foyer

- 101 Fujiki, T.; Mino, Y.; Sasaoka, K.; Matsumoto, K.; Honda, M.; Saino, T.: PHYTOPLANKTON PRODUCTIVITY IN THE WESTERN NORTH PACIFIC MEASURED BY FAST REPETITION RATE FLUOROMETRY

SS26 INTERNATIONAL STUDENT SYMPOSIUM: THE WORLD WATER CRISIS

- Chair(s):* Charles R. Goldman, crgoldman@ucdavis.edu
Geoff Schladow, gischladow@ucdavis.edu

Location: Biwako Hall Foyer

- 102 Ho, P. C.; Chang, C. W.; Hsieh, C. H.; Miki, T.: EFFECTS OF INCREASING NUTRIENT SUPPLY AND OMNIVOROUS FEEDING ON THE SLOPE OF SIZE SPECTRUM: A SIZE-BASED NUTRIENT-PHYTOPLANKTON-ZOOPLANKTON MODEL
- 104 Droscha, K. L.; Soranno, P. A.: COMPARING THE RELATIONSHIPS BETWEEN LAKE NUTRIENTS AND AGRICULTURAL LAND USE/COVER AT DIFFERENT SPATIAL SCALES
- 106 Mirbach, S.; Lang, U.: MODELING MIXING PROCESSES IN LAKE CONSTANCE UNDER CURRENT AND CHANGED CLIMATIC CONDITIONS
- 108 Marman Sofi, S.; Sher, D.: CAN THE DISTRIBUTION PATTERNS OF GENES ENCODING CYANOBACTERIAL TOXINS HELP PREDICT THE OCCURRENCE OF TOXIC BLOOMS?

SS27 ACOUSTIC TOMOGRAPHY AND ENVIRONMENTAL MODELING IN COASTAL SEAS, ESTUARIES, RIVERS AND LAKES

- Chair(s):* Arata Kaneko, akaneko@hiroshima-u.ac.jp
Prof. Bruce M Howe, bhowe@hawaii.edu
Prof. Xiaohua Zhu, xhzhu@sio.org.cn
Prof. Xinyu Guo, guoxinyu@sci.ehime-u.ac.jp

Location: Biwako Hall Foyer

- 109 Takahashi, R.; Zhu, X.; Kaneko, A.; Zhang, C.; Wu, Q.; Gohda, N.: INNOVATIVE MEASUREMENT OF TIDAL BORES IN THE QIANTANG RIVER, CHINA BY THE COASTAL ACOUSTIC TOMOGRAPHY SYSTEM (CATS)
- 110 Kaneko, A.; Zhang, C. Z.; Takahashi, R.; Lin, J.; Guo, X.; Zheng, H.; Gohda, N.: LONG-RANGE ACOUSTIC MONITORING OF ENVIRONMENTAL VARIATIONS IN A SEMI-ENCLOSED SEA WITH APPLICATION TO TSUNAMI MONITORING*

- 111 Guo, X.; Yu, X.; Chang, P. H.; Takahashi, D.; Futamura, A.; Takeoka, H.: COMPETITION OF A LOCAL CYCLONIC EDDY AND AN ESTUARINE CIRCULATION IN THE IYONADA, SETO INLAND SEA, JAPAN*

SS28 MIXOTROPHY IN AQUATIC SYSTEMS: FROM PHYSIOLOGY TO ECOLOGICAL IMPACT

- Chair(s):* Per Juel Hansen, pjhansen@bio.ku.dk
Robert Ptacnik, ptacnik@icbm.de
Stefanie Moorthi, stefanie.moorthi@uni-oldenburg.de
Susanne Wilken, s.wilken@nioo.knaw.nl

Location: Biwako Hall Foyer

- 112 de Schryver, V.; Schoenn, J.; Nahéou, K.; Minne, E.; Lambert, C.; Stibor, H.: DISSOLVED ORGANIC CARBON-TO-NUTRIENT RATIOS AFFECT PHOTOSYNTHESIS AND GROWTH OF OCHROMONAS MINIMA IN THE PRESENCE OF HETEROTROPHIC BACTERIA
- 113 Busch, M.; Hillebrand, H.; Moorthi, S. D.: EFFECTS OF NUTRIENT LIMITATION AND DIFFERENT PREY SPECIES ON FEEDING OF POTENTIALLY HARMFUL MIXOTROPHIC DINOFLAGELLATES

SS34 MODELING BIOGEOCHEMICAL AND ECOLOGICAL FUNCTIONS IN AQUATIC ECOSYSTEMS

- Chair(s):* Meike Vogt, meike.vogt@env.ethz.ch
Daisuke Kitazawa, dkita@iis.u-tokyo.ac.jp
Md. Nazrul Islam, islam009@iis.u-tokyo.ac.jp
Taka Hirata, tahi@ees.hokudai.ac.jp

Location: Biwako Hall Foyer

- 114 Ostrowska, M.: MODEL OF THE DEPENDENCE OF THE SUN-INDUCED CHLOROPHYLL A FLUORESCENCE QUANTUM YIELD ON THE ENVIRONMENTAL FACTORS IN THE SEA
- 115 Ston-Egriet, J.; Majchrowski, R.; Ostrowska, M.; Darecki, M.; Rozwadowska, A.; Sobiechowska, M.; Kosakowska, A.; Wozniak, B.: VERTICAL PROFILES OF PHYTOPLANKTON PIGMENTS IN THE BALTIC SEA - THE PRELIMINARY RESULTS FOR REMOTE SENSING APPLICATION
- 116 Wang, T.; Völker, C.; Hauck, J.; Hohn, S.; Wolf-Gladrow, D. A.: IMPACT OF DIATOM Si:N STOICHIOMETRY ON MARINE PRODUCTION AND PARTICLE EXPORT IN A GLOBAL MODEL
- 117 Eiji, K.; Takehiko, F.; Yuichi, S.; Hideaki, N.; Takahiro, O.; Hirata, T.: INFLUENCE OF ACCUMULATION OF NUTRIENTS IN WATERSHED AND LAKE ON THE LONG-TERM CHANGE OF LAKE WATER QUALITY AND AQUATIC ECOSYSTEMS

SS36 CARBON AND NITROGEN STABLE ISOTOPE STUDIES IN AQUATIC ECOSYSTEMS

- Chair(s):* Bradley Eyre, Bradley.Eyre@scu.edu.au
Eric Boschker, E.Boschker@nioo.knaw.nl
Joanne Oakes, Joanne.Oakes@scu.edu.au
Bart Veugel, B.Veugel@nioo.knaw.nl

Location: Biwako Hall Foyer

- 118 Thibodeau, B.; Hélie, J.; Rosa; Hélie, J.; Rosa, E.: SEASONAL VARIATIONS OF NITRATE ISOTOPIC COMPOSITION IN THE ST. LAWRENCE RIVER

TUESDAY

- 119 Machida, M.; Nishikawa, J.; Miyajima, T.; Yusoff, F. M.; Kuppan, P.; Razak, S. B.; Nishida, S.: QUALIFICATION OF TROPHIC POSITION OF A JELLYFISH ACROMITUS HARDENBERGI IN THE PERAK RIVER, MALAYSIA USING COMPOUND-SPECIFIC ISOTOPE ANALYSIS
- 120 Lee, Y. J.; Shin, K. H.; Hur, J.: CONTRIBUTION OF ALGAL-PRODUCED ORGANIC MATTER TO REFRACTORY ORGANIC MATTER IN AQUATIC ENVIRONMENT
- 121 Suzuki, T.; Nagao, S.; Yonebayashi, K.; Ochiai, S.; Tokunari, T.; Yamamoto, M.: CHARACTERISTICS AND BEHAVIOR OF PARTICLE ORGANIC MATTER IN THE KUMAKI RIVER AND NANAO BAY ON NOTO PENINSULA, JAPAN
- 122 Tobias, C. R.; Bohlke, J. K.; Harvey, J. W.; Lettrich, M.; Duernberger, K.: ALTERING HYDROLOGY OF A COASTAL STREAM: IMPACTS ON STREAMBED BIOGEOCHEMISTRY AND DENITRIFICATION
- 123 Inamura, O.; Zhang, J.; Minagawa, M.: $\delta^{13}\text{C}$ AND $\delta^{15}\text{N}$ VALUES OF *MICROPTERUS SALMOIDES* LARGEMOUTH BASS AS A FRESHWATER ENVIRONMENTAL INDICATOR
- SS40 LAKES AND THEIR CLIMATIC AND ENVIRONMENTAL SEDIMENT RECORDS**
- Chair(s)*: Reinhard Pienitz, reinhard.pienitz@cen.ulaval.ca
Kenji Kashiwaya, kashi@kenroku.kanazawa-u.ac.jp
David T. Long, long@msu.edu
Michio Kumagai, kumagai-m@lberi.jp
- Location*: Biwako Hall Foyer
- 124 Ochiai, S.; Nagao, S.; Yonebayashi, K.; Itono, T.; Kashiwaya, K.; Yamamoto, M.: CATCHMENT ENVIRONMENTAL CHANGES INFERRED FROM LAKE ONUMA IN HOKKAIDO, JAPAN
- 125 Yoshimura, K.; Zaitsu, N.; Sekimura, Y.; Matsushita, B.; Fukushima, T.; Imai, A.: PARAMETERIZATION OF CHLOROPHYLL A-SPECIFIC ABSORPTION COEFFICIENT AND EFFECTS OF THEIR VARIATIONS IN A HIGHLY EUTROPHIC LAKE: A CASE OF LAKE KASUMIGAURA, JAPAN
- 126 Suwannarat, G.; Suwanwaree, P.: THE ASSESSMENT OF WATER QUALITY OF LAM TAKONG RESERVOIR IN NAKHON RATCHASIMA, THAILAND
- 127 Fuchizaki, M.; Yabe, T.; Abe, H.; Fukushima, K.; Hasebe, N.; Kashiwaya, K.: MINERALOGY OF LACUSTRINE SEDIMENT FROM DARHAD BASIN RECORDS THE PAST LAKE LEVEL CHANGES OF THE PALEOLAKE
- 128 Romanescu, G.; Romanescu, A. M.; Stoleriu, C.: WATER QUALITY AND ITS POLICY USE FOR THE STNNCA-COSTETTI TRANS-BOUNDARY WATER RESERVOIR
- 129 Marzecova, A.; Mikomägi, A.; Puusepp, E.; Koff, T.: LAKE SEDIMENT RESPONSES TO THE 20TH CENTURY ANTHROPOGENIC STRESSORS: MULTI-PROXY EVIDENCE FROM THREE ESTONIAN LAKES
- 130 Seki, O.; Kawamura, K.; Ishiwatari, R.: HYDROGEN ISOTOPE RECORD OF N-FATTY ACIDS IN LAKE BIWA SEDIMENT CORE OVER THE PAST 150 KYR
- 132 Sima, S.; Tajrishy, M.; Ahmadalipour, A.: COMPARISON OF THE HYDRO-METEOROLOGICAL CONDITIONS IN TWO ADJACENT LAKES: LAKE URMIA AND LAKE VAN
- SS52 ECOLOGY AND MANAGEMENT OF DAMS AND THEIR WATERSHEDS**
- Chair(s)*: Kunihiko Amano, amano-k92ta@nilim.go.jp
Takashi Asaeda, asaeda@mail.saitama-u.ac.jp
- Location*: Biwako Hall Foyer
- 133 Shirai, A.; Iwami, Y.: A STUDY ON THE RESPONSE OF THE PHYSICAL ENVIRONMENT AND THE BENTHIC ANIMAL COMMUNITY IN A DAM DOWNSTREAM RIVER AFTER DAM CONSTRUCTION
- 134 Muraoka, K.; Miwa, J.: EXPERIMENTAL STUDY OF BOULDER ARRANGEMENTS ON RAMP FISH PASSAGE BASED ON SWIMMING BEHAVIORS OF FISHES
- 135 Takashi, T.; Koshi, Y.; Tetsuro, T.: EFFECTS OF DAM AND RESERVOIR ON FOOD WEB STRUCTURES WITH A PARTICULAR REFERENCE TO FRESHWATER GOBIES, *RHINOGOBius FLUMINEUS* IN THE AGI-GAWA RIVER SYSTEM
- SS59 DYNAMICS OF HABITAT STRUCTURE AND AQUATIC ASSEMBLAGES**
- Chair(s)*: M. Tokeshi, tokeshi@ambl-ku.jp
Y. Takemon, takemon.yasuhiro.5e@kyoto-u.ac.jp
- Location*: Biwako Hall Foyer
- 136 Choi, M.; Ikeda, K.; Nishi, K.; Takemon, Y.; Takemon, Y.: AQUATIC HABITAT DIVERSITY ON FLOODPLAIN OF THE KIZU RIVER*
- 137 Wall, A. A.; Nakano, S.; Koitabashi, T.; Goda, Y.: VARIATION OF LAKE BIWA TESTATE AMOEBA COMMUNITIES IN FUNCTION OF DEPTH, SEDIMENT COMPOSITION AND SPATIAL LOCATION
- 138 Takashina, N.; Mouri, A.; Iwasa, Y.: MATHEMATICAL ANALYSIS FOR AN ESTABLISHMENT OF MARINE PROTECTED AREAS: ARE THE MPAS ALWAYS EFFECTIVE?
- 139 Yamazaki, N.; Zhang, J.; Inamura, O.: STUDY OF *WATASENIA SCINTILLANS* MIGRATORY BEHAVIOUR BETWEEN SPAWNING AREA AND GROWTH AREA IN THE SEA OF JAPAN
- SS61 THE GLOBAL OCEAN ECOSYSTEM: PATTERNS, DRIVERS AND CHANGE**
- Chair(s)*: Carlos M. Duarte, carlosduarte@imedea-uib-csic.es
Josep M. Gasol, pepgasol@icm.csic.es
Susana Agustí, sagusti@imedea.uib-csic.es
Xose A. Alvarez-Salgado
- Location*: Biwako Hall Foyer
- 140 Mazuecos, I. P.; Aristegui, J.; Ortega-Retuerta, E.; Gasol, J. M.; Reche, I.: GLOBAL DISTRIBUTION OF EXOPOLYMERIC PARTICLES IN THE OCEAN
- 141 Not, C.; Yokoyama, Y.; Kawakubo, Y.; Hikami, M.; Suzuki, A.; Miyairi, Y.; Kawahata, H.; Nojiri, Y.: VARIATION OF TRACE ELEMENT RATIO IN BENTHIC FORAMINIFERA IN RESPOND TO OCEAN ACIFICATION

142 Catalá, T. S.; Reche, I.; Fuentes-Lema, A.; Romera-Castillo, C.; Nieto-Cid, M.; Ortega-Retuerta, E.; Álvarez, M.; Marrasé, C.; Stedmon, C.; Álvarez-Salgado, X. A.: FLUORESCENT DISSOLVED ORGANIC MATTER IN THE DARK OCEAN

143 Kodama, T.; Shiozaki, T.; Furuya, K.: ADVECTIVE TRANSPORT OF HIGH N₂ FIXATION WATER PRODUCES HETEROGENEOUS DISTRIBUTION OF NUTRIENTS IN THE NORTHERN PART OF THE WESTERN PACIFIC WARM POOL

SS62 BIODIVERSITY-ECOSYSTEM FUNCTIONING RELATIONSHIPS ACROSS TROPHIC LEVELS AND GRADIENTS IN THE CONTEXT OF GLOBAL CHANGE

Chair(s): Adam J. Heathcote, aheathco@iastate.edu
Christopher T. Filstrup, filstrup@iastate.edu
W. Stanley Harpole, harpole@iastate.edu

Location: Biwako Hall Foyer

144 Baker, L. J.; Kemp, P. F.: THE BACTERIA-DIATOM METAORGANISM: COMPARING THE BACTERIAL ASSEMBLAGES ON A VARIETY OF HOST CELLS USING SINGLE-CELL WHOLE GENOME AMPLIFICATION.

SS63 LAKE BIWA STORY: PAST, PRESENT AND FUTURE

Chair(s): Chunmeng Jiao, jiao-c@lberi.jp
Hiroki Haga, haga@lberi.jp
Kasuhide Hayakawa, hayakawa-k@lberi.jp

Location: Biwako Hall Foyer

145 Mabuchi, K.; Song, H. Y.; Takeshima, H.; Nakai, K.; Senou, H.; Nishida, M.: LAKE BIWA AS A REFUGE OF NATIVE JAPANESE COMMON CARP

146 Manabe, C.; Ban, S.: SEASONAL CHANGES IN VERTICAL DISTRIBUTION OF LARGE PHYTOPLANKTON AND ITS CHYTRID FUNGAL INFECTION IN LAKE BIWA

147 Koyama, M.; Nagao, N.; Niwa, C.; Ida, J.; Ishikawa, K.; Ban, S.; Toda, T.: BIOGAS PRODUCTION FROM SUBMERGED MACROPHYTE EXCESSIVELY GROWN IN LAKE BIWA

148 Maruo, M.; Obata, H.; Yaginuma, Y.; Wakiyama, S.; Nagaoka, K.; Mase, A.: COMPARISON OF DETERMINATION METHODS OF IRON(II) IN FRESHWATER OF LAKE BIWA, JAPAN, IN CONSIDERATION OF ORGANIC COMPLEXATION

TUESDAY

Wednesday Oral Talks

GS01 RIVERS, WETLAND AND ESTUARIES

Chair(s): Patricia Natin, p.natin@griffith.edu.au
 Tsuyoshi Kobayashi, Yoshi.Kobayashi@environment.nsw.gov.au

Location: Ensemble Hall-Biwako Hall

- 13:30 Yeung, A.; Dudgeon, D.: ARE SNAIL-INSECT INTERACTIONS IMPORTANT IN TROPICAL STREAMS?
- 13:45 Sugimatsu, H.; Ura, T.; Kojima, J.; Asada, A.; Bahl, R.; Behera, S.; Sagar, V. S.; Singh, H.: ACOUSTIC OBSERVATION OF THE GANGES RIVER DOLPHIN (*PLATANISTA GANGETICA*)
- 14:00 Antonio, E. S.; Richoux, N.: TROPHIC ECOLOGY OF COMMON CRUSTACEANS IN AN OLIGOTROPHIC SOUTH AFRICAN ESTUARY: A FATTY ACID AND STABLE ISOTOPE APPROACH
- 14:15 Natin, P.; Lee, S. Y.: INFLUENCE OF LOCAL MANGROVE FOREST DIVERSITY ON ASSEMBLAGE COMPOSITION AND ABUNDANCE OF JUVENILE NEKTON
- 14:30 Lejeusne, C.; Latchère, O.; Saunier, A.; Petit, N.; Rico, M. I.; Green, A. J.; Rico, C.: GENETIC HISTORY OF THE INVASION OF THE ORIENTAL SHRIMP *PALAEMON MACRODACTYLUS* IN EUROPEAN ESTUARIES, AND COMPARISON OF STRESS RESISTANCE WITH NATIVE SPECIES
- 14:45 Galarza, J. A.; Carreras-Carbonell, J.; Macpherson, E.; Pascual, M.; Roques, S.; Turner, G. F.; Rico, M. I.; Rico, C.: THE INFLUENCE OF OCEANOGRAPHIC FRONTS AND EARLY-LIFE HISTORY TRAITS ON CONNECTIVITY AMONG FISH POPULATIONS: A MULTI-SPECIES APPROACH
- 15:00 Jones, C. M.; Schaffler, J.: EVALUATING POPULATION STRUCTURE IN AN IMPORTANT PREY SPECIES, ATLANTIC MENHADEN, WITH OTOLITH CHEMISTRY AND PHYSICAL MODELING
- 15:15 Danielsson, Å.: LANDSCAPE CONTROL OF IRON FLUXES AND LOAD
- 16:00 Wang, L. X.; Pan, X. F.; Yan, B. X.; Zhu, H.: THE IMPACT OF CHANGE FROM WETLAND INTO PADDY FIELD ON TOTAL DISSOLVED IRON IN SANJIANG PLAIN
- 16:15 Kobayashi, T.; Thomas, R.; Simpson, S.; Hunter, S.: RELEASE OF NUTRIENTS FROM FLOODPLAIN SEDIMENTS OF A SEMI-ARID FLOODPLAIN WETLAND: RELATIONSHIP WITH SPRING FLOOD INUNDATION FREQUENCY AND ALTITUDES
- 16:30 Roberts, K. L.; Eate, V. M.; Eyre, B. D.; Holland, D. P.; Grace, M. R.; Cook, P.: HYPOXIC EVENTS STIMULATE NITROGEN RECYCLING IN A SHALLOW SALT WEDGE ESTUARY: THE YARRA RIVER ESTUARY, AUSTRALIA.*
- 16:45 Ali, A.; Lemckert, C. J.; Zhang, H.: SALT AND SEDIMENT FLUXES WITHIN A VERY SHALLOW SUBTROPICAL COASTAL ESTUARY
- 17:00 Uchiyama, Y.; Ishii, S.; Tuy, P.; Wells, J.; Kirkey, W. D.; Islam, M. S.; Bonner, J. S.: TRANSIENT THERMAL PLUME DISPERSAL IN THE HUDSON RIVER ESTUARY

- 17:30 Casamitjana, X.; Pujol, D.; Serra, T.; Colomer, J.: CANOPY EFFECTS ON A WAVE DOMINATED FLOW

GS06 PLANKTON BIOLOGY AND ECOLOGY

Chair(s): Ora Hadas, orah@oceanc.org.il
 Yuji Tanaka, ytanaka@kaiyodai.ac.jp
 Hugh MacIsaac, hughm@uwindsor.ca
 Aino Hosia, aino.hosia@imr.no

Location: Piazza Hall-Piazzo Omi

- 13:30 Wong, C. K.; Lie, A.; Tse, P.: THE COEXISTENCE OF THREE SPECIES OF CHAETOGNATHS IN A SHALLOW SUBTROPICAL BAY
- 13:45 Kuwata, A.; Ichinomiya, M.; Yoshikawa, S.; Ohki, K.; Kawachi, M.; Saitoh, K.; Sato, N.; Sawada, K.: EXPLORING THE EVOLUTIONARY LINK BETWEEN PARMALES AND THE SUCCESS OF DIATOMS IN MARINE ECOSYSTEMS
- 14:00 Endo, Y.; Nishitani, G.; Bucklin, A.; Wiebe, P. H.; Dalpadado, P. T.; Kobayashi, M.; Nakano, N.: TAXONOMIC RELATION OF EPHELOTA SUCTORIANS ATTACHED TO THREE EUPHAUSIID SPECIES
- 14:15 Lebret, K.; Kritzberg, E. S.; Rengefors, K.: POPULATION GENETIC STRUCTURE AND PHYLOGEOGRAPHY OF THE INVASIVE RAPHIDOPHYTE *GONYOSTOMUM SEMEN*
- 14:30 MacIsaac, H. J.; Zhan, A.; Heath, D. D.; Cristescu, M. E.: EXCEPTIONAL BIODIVERSITY OF CANADIAN FRESHWATER AND MARINE PORTS REVEALED USING NEXT GENERATION PYROSEQUENCING
- 14:45 Kuster, C. J.; von Elert, E.; Wessels, M.; Smith, Z.; Colbourne, J.: COMPARATIVE POPULATION GENOMICS OVER TIME: THE INFLUENCE OF EUTROPHICATION ON *DAPHNIA GALEATA*
- 15:00 Mihuc, T. B.: ZOOPLANKTON COMMUNITY PATTERNS IN LAKE CHAMPLAIN, U.S.A.: TWO DECADES OF CHANGE
- 15:15 Voutilainen, A.; Rahkola-Sorsa, M.; Dushkina, I.; Jurvelius, J.; Lilja, J.; Viljanen, M.: SPATIAL STRUCTURING OF FRESHWATER ZOOPLANKTON DENSITY OVER A WIDE RANGE OF GEOGRAPHICAL SCALE – ANALYZING LOPC DATA WITH THE PCNM METHOD
- 16:00 Gao, K.; Gao, G.; Xu, J.; Ruan, Z.; Wu, Y.; Xu, K.; Yang, G.; Li, G.; Li, W. W.; Jin, P.; Chen, S.W.; Wu, X.J.; Zheng, Y.; Li, Y.; Hutchins, D.; Huang, B.; Cai, X.; Hader, D. P.; Liu, N.; Helbling, W.; Riebesell, U.; Villafane, V.: EFFECTS OF OCEAN ACIDIFICATION ON CALCIFYING ALGAE, DIATOM AND PHYTOPLANKTON ASSEMBLAGES, WITH SPECIAL REFERENCES TO INTERACTIVE IMPACTS WITH SOLAR UV AND PAR
- 16:30 García-Comas, C.; Marquis, E.; Teng, W. H.; Lee, Y. C.; Chang, C. Y.; Gong, G. C.; Hsieh, C. H.: PLANKTON SIZE STRUCTURE AS INDICATOR OF COMMUNITY ORGANIZATION: TESTING THEORETICAL ASSUMPTIONS WITH EMPIRICAL MEASURES OF A VERY DYNAMIC COASTAL ENVIRONMENT
- 16:45 Saito, R.; Yamaguchi, A.; Ueno, H.; Onishi, H.; Imai, I.: ZOOPLANKTON COMMUNITY IN THE ALASKAN STREAM WATER DURING SUMMER OF 2010: THE INFLUENCE OF MESOSCALE EDDIES

- 17:00 Collignon, A.; Hecq, J. H.; Goffart, A.: UNDERSTANDING DRASTIC CHANGES IN ZOOPLANKTON AND MEDUSAE COMMUNITIES OVER THE 2003-2011 PERIOD IN THE MEDITERRANEAN SEA (CORSICA)
- 17:15 Hosia, A.; Augustin, C.; Egge, J. K.; Granhag, L.; Paulsen, M. L.; Rintala, J. M.; Setälä, O.; Talvitie, J.; Titelman, J.: SENESCENT *CYANEA CAPILLATA* JELLYFISH MAY CONTRIBUTE TO INCREASED AUTUMNAL PRODUCTION: A MESOCOSM STUDY
- 17:30 Tsuchiya, K.; Nakajima, R.; Kuwahara, V. S.; Hamasaki, K.; Tada, Y.; Kikuchi, T.; Imai, A.; Toda, T.: FAST RESPONSE OF BACTERIA TO TYPHOON MALOU PASSAGE IN THE COASTAL WATERS OF SAGAMI BAY, JAPAN
- 17:45 Teira, E.; Mouriño-Carballido, B.; Martínez-García, S.; Sobrino, C.; Ameneiro, J.; Hernández-León, S.; Vázquez, E.: CONTROLS OF PRIMARY PRODUCTION AND BACTERIAL CARBON METABOLISM AROUND SOUTH SHETLAND ISLANDS (ANTARCTICA)

SS09 BIOGEOCHEMICAL AND MICROBIAL PROCESSES OF LARGE LAKES OF THE WORLD

Chair(s): George S. Bullerjahn, bullerj@bgsu.edu
R. Michael McKay, rmmckay@bgsu.edu
Robert Sterner, stern007@umn.edu
Sergei Katsev, skatsev@umn.edu

Location: Room 3 Collabo Shiga

- 16:00 Sternер, R. W.; Small, G. E.; Finlay, J. C.; Bullerjahn, G.; McKay, R. M.; Beall, B.: CHANGING BIOMASS POOLS IN LAKE SUPERIOR
- 16:15 Small, G. E.; Finlay, J. C.; Sternер, R. W.; McKay, R. M.: DENITRIFICATION ALONG A BIOGEOCHEMICAL GRADIENT IN THE GREAT LAKES
- 16:30 Bullerjahn, G. S.; Mukherjee, M.; Ray, A.; Beall, B. F.; McKay, R. M.; Schlais, M.; Small, G.; Finlay, J.; Sterner, R.: IDENTIFICATION AND ENUMERATION OF NITRIFYING MICROBES IN THE LAURENTIAN GREAT LAKES
- 16:45 KATSEV, S.; Kistner, M.; Li, J.: REACTIVITY AND MINERALIZATION RATES OF AUTOCHTHONOUS ORGANIC CARBON IN LAKES
- 17:00 Morana, C.; Sarmento, H.; Bouillon, S.; Gasol, J. M.; Descy, J. P.; Darchambeau, F.: DISSOLVED PRIMARY PRODUCTION AND HETEROTROPHIC PROKARYOTE REASSIMILATION IN A LARGE OLIGOTROPHIC TROPICAL LAKE (LAKE KIVU, EASTERN AFRICA)
- 17:15 Thottathil, S. D.; Hayakawa, K.; Hodoki, Y.; Yoshimizu, C.; Kobayashi, Y.; Nakano, S.: BIOGEOCHEMICAL CONTROL ON FLUORESCENT DISSOLVED ORGANIC MATTER IN A LARGE FRESHWATER LAKE (LAKE BIWA, JAPAN)
- 17:30 Li, Y.; Gal, G.; Makler-Pick, V.; Waite, A. M.; Bruce, L. C.; Hipsey, M. R.: THE MECHANISMS BY WHICH THE MICROBIAL LOOP CAN INFLUENCE PHYTOPLANKTON DYNAMICS IN LAKES

SS10 RIVER SYSTEMS – ECOLOGICAL SITUATION AND HUMAN DIMENSION

Chair(s): Takashi Asaeda, asaeda@mail.saitama-u.ac.jp
Thomas Hein, thomas.hein@boku.ac.at

Location: Piazza Hall-Piazza Omi

- 09:00 Tamai, N.: FUNDAMENTALS OF ECO-COMPATIBLE RIVER MANAGEMENT^T
- 09:30 Takahashi, K.; Asaeda, T.: SPRING WATER AS AN IMPORTANT COMPONENT OF RIVER ECOSYSTEMS
- 09:45 Stoll, S.; Sundermann, A.; Lorenz, A. W.; Kail, J.; Haase, P.: SMALL AND IMPOVERISHED REGIONAL SPECIES POOLS ARE A MAJOR CHALLENGE TO THE COLONIZATION OF RESTORED RIVER REACHES BY FISH
- 10:00 Rashid, M. H.; Asaeda, T.: HOW DO FLOODING REGIME AND EDAPHIC FACTORS INFLUENCE COLONIZATION OF INVASIVE LIANAS IN THE FLOODPLAIN OF A REGULATED RIVER?
- 10:15 Hein, T.; Weigelhofer, G.; Arnberger, A.; Eder, R.; Mair, M.; Preiner, S.; Reckendorfer, W.; Schabhuettl, S.; Striebel, M.: SELECTED POTENTIAL EFFECTS OF GLOBAL CHANGE ON THE MANAGEMENT OF AN URBAN FLOODPLAIN ALONG A LARGE RIVER SYSTEM IN AUSTRIA

SS13 CONSEQUENCES OF CROSS-ECOSYSTEM RESOURCE SUBSIDIES FOR FRESHWATER FOODWEBS

Chair(s): John S. Richardson, john.richardson@ubc.ca
Takuya Sato, takuya@species.jp

Location: Rehearsal Room-Biwako Hall

- 16:00 Richardson, J. S.; Sato, T.: CROSS-ECOSYSTEM RESOURCE SUBSIDIES FOR AQUATIC ECOSYSTEMS: TUTORIAL *
- 16:15 Takimoto, G.: TIMESCALES DETERMINE INDIRECT EFFECTS OF CROSS-HABITAT RESOURCE SUBSIDIES*
- 16:30 Sato, T.; Watanabe, K.: RESOURCE SUBSIDY ALTERS A TROPHIC CASCADE IN A RECIPIENT SYSTEM THROUGH CONSUMER'S STAGE-SPECIFIC FUNCTIONAL RESPONSES*
- 16:45 Wipfli, M. S.: MARINE AND TERRESTRIAL RESOURCE SUBSIDIES HELP DRIVE FOOD WEB PRODUCTIVITY IN THE OLIGOTROPHIC FRESHWATER ECOSYSTEMS OF ALASKA*
- 17:00 Attermeyer, K.; Hornick, T.; Kayler, Z.; Bahr, A.; Hilt, S.; Grossart, H. P.; Premke, K.: MICROBIAL TERRESTRIAL C-TURNOVER IN FRESHWATER: CONTRASTING EFFECTS OF DISSOLVED (DOC) AND PARTICULATE ORGANIC CARBON (POC) IN THE WATER COLUMN VS. SEDIMENTS*
- 17:15 Brothers, S. M.; Hilt, S.; Attermeyer, K.; Casper, P.; Gaedke, U.; Lischke, B.; Grossart, H. P.; Mehner, T.; Meyer, N.; Scharnweber, K.; Koehler, J.: A TALE OF TWO LAKES: SMALL-SCALE CARBON ECONOMIES AND THE IMPORTANCE OF ECOSYSTEM STRUCTURE OVER NUTRIENT AVAILABILITY*
- 17:30 Nishijima, S.; Takimoto, G.; Miyashita, T.: SUBSIDIZED INVASIVE CRAYFISH CAN CAUSE A COMMUNITY REGIME SHIFT: AN EXPERIMENTAL AND MODELING APPROACH*

WEDNESDAY

* represents Invited presentations

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| 17:45 | <u>Kameda, K. O.</u> : CHARACTERISTICS OF THE RESOURCE SUBSIDIES TRANSPORTED BY SEABIRDS: BOTTOM-UP EFFECTS AND WIDESPREAD DISTRIBUTIONS IN TERRESTRIAL ECOSYSTEMS* |
| SS19 FOOD WEB: ITS STRUCTURE, DYNAMICS, AND ECOSYSTEM CONSEQUENCES | |
| <i>Chair(s):</i> Hongbin Liu , liuhb@ust.hk Richard Rivkin , rrivkin@mun.ca Andrea Belgrano, andrea.belgrano@slu.se Michio Kondoh, mkondoh@rins.ryukoku.ac.jp | |
| <i>Location:</i> Rehearsal Room-Biwako Hall | |
| 09:00 | <u>Kondoh, M.</u> ; <u>Kato, S.</u> : NESTED FOOD WEBS: IMPLICATIONS FOR STRUCTURE-DYNAMICS RELATIONSHIPS* |
| 09:15 | <u>Vallina, S. M.</u> ; <u>Ward, B. A.</u> ; <u>Dutkiewicz, S.</u> ; <u>Follows, M. J.</u> : MAXIMAL FORAGING WITH ACTIVE PREY-SWITCHING: A NEW KILL-THE-WINNER FUNCTIONAL RESPONSE AND ITS EFFECT ON GLOBAL SPECIES RICHNESS AND BIOGEOGRAPHY |
| 09:30 | <u>Namba, T.</u> ; <u>Ibuki, A.</u> : EFFECTS OF APEX CONSUMERS AND DYNAMIC TROPHIC CASCADES |
| 09:45 | <u>Ye, H.</u> ; <u>Deyle, E. R.</u> ; <u>Hsieh, C. H.</u> ; <u>Sugihara, G.</u> : DYNAMIC CONNECTIVITY IN THE CALIFORNIA CURRENT AND GULF OF MAINE: IDENTIFYING ECOSYSTEM INTERACTIONS USING CHAOTIC TIME SERIES ANALYSIS |
| 10:00 | <u>Doi, H.</u> ; <u>Vander Zanden, M. J.</u> ; <u>Hillebrand, H.</u> : SHORTER FOOD CHAIN LENGTH IN ANCIENT LAKES |
| 10:15 | <u>Covich, A. P.</u> ; <u>Crowl, T. A.</u> ; <u>Perez-Reyes, O.</u> : ECOSYSTEM SERVICES IN PUERTO RICAN HEADWATER STREAMS* |
| 13:30 | <u>Calbet, A.</u> ; <u>Schmoker, C.</u> : TROPHIC ECOLOGY OF MARINE MICROZOOPLANKTON ^T |
| 14:00 | <u>Rivkin, R. B.</u> ; <u>Way, C. J.</u> : NUTRIENT CONTROL OF MICROZOOPLANKTON PROCESSES COLD COASTAL OCEANS |
| 14:15 | <u>Lim, A.</u> ; <u>Jeong, H.</u> ; <u>Kim, T.</u> ; <u>Yoon, E.</u> ; <u>Kim, J.</u> ; <u>Soeng, K.</u> ; <u>Park, J.</u> ; <u>Potvin, E.</u> ; <u>Hwang, Y.</u> : FEEDING BY HETEROTROPHIC PROTISTS ON COMMON RED-TIDE EULENOPHYTE EUTREPTIELLA GYMNASTICA IN MASAN BAY, KOREA |
| 14:30 | <u>Caldwell, T. J.</u> ; <u>Gamble, A. E.</u> ; <u>Chandra, S.</u> ; <u>Liston, A. M.</u> : WINTER DIET ANALYSIS OF NON-NATIVE MYSIS DILUVIANA IN THE WESTERN UNITED STATES |
| 14:45 | <u>Iwabuchi, T.</u> ; <u>Urabe, J.</u> : COMPETITIVE OUTCOMES BETWEEN HERBIVOROUS CONSUMERS CAN CHANGE WITH FOOD STOICHIOMETRY AND BE PREDICTED FROM THEIR STOICHIOMETRIC DEMANDS |
| 15:00 | <u>Mehler, K.</u> ; <u>Acharya, K.</u> : ECOLOGICAL STOICHIOMETRY OF TROPHIC INTERACTIONS IN SPRING ECOSYSTEMS IN THE SOUTHWESTERN UNITED STATES |
| 15:15 | <u>Eklöv, P.</u> ; <u>Bartels, P.</u> ; <u>Hirsch, P.</u> ; <u>Svanbäck, R.</u> : WATER TRANSPARENCY MEDIATES NICHE PARTITIONING AMONG FISH PREDATORS AFFECTING FOOD WEB COUPLING IN LAKES |

SS20 ACTIVE FLUORESCENCE MEASURES OF PHOTOSYNTHETIC PHYSIOLOGY AND PRIMARY PRODUCTION

Chair(s): Greg Silsbe, g.silsbe@nioo.knaw.nl
Jacco Kromkamp, j.kromkamp@nioo.knaw.nl
Ondrej Prasil, prasil@alga.cz
Tetsuichi Fujiki, tfujiki@jamstec.go.jp

Location: Room 207-Piazzo Omi

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| 09:00 | <u>Cullen, J. J.</u> ; <u>Barnett, A. B.</u> ; <u>Comeau, A. J.</u> ; <u>Huot, Y.</u> ; <u>MacIntyre, H. L.</u> : A FRAMEWORK FOR DESCRIBING THE DYNAMICS OF PHYTOPLANKTON BASED ON OPTICAL MEASUREMENTS, INCLUDING FLUORESCENCE ^T |
| 09:30 | <u>Suzuki, K.</u> ; <u>Sato-Takabe, Y.</u> : PHOTOSYNTHETIC PROPERTIES OF MARINE AEROBIC ANOXYGENIC PHOTOTROPHIC BACTERIA AS ESTIMATED FROM VARIABLE BACTERIOCHLOROPHYLL FLUORESCENCE* |
| 09:45 | <u>Oxborough, K.</u> ; <u>Moore, C. M.</u> ; <u>Suggett, D. J.</u> ; <u>Lawson, T.</u> ; <u>Chan, H. G.</u> ; <u>Geider, R. J.</u> : DIRECT ESTIMATION OF FUNCTIONAL PSII REACTION CENTRES AND PSII ELECTRON FLUX, ON A VOLUME BASIS, THROUGH ANALYSIS OF FAST REPETITION RATE FLUOROMETRY DATA* |
| 10:00 | <u>Prasil, O.</u> ; <u>Sediva, B.</u> ; <u>Komarek, O.</u> ; <u>Kotabova, E.</u> : USE OF LOW TEMPERATURE EMISSION SPECTROSCOPY IN PHYTOPLANKTON ECOPHYSIOLOGY |
| 10:15 | <u>Abe, O.</u> ; <u>Fujiki, T.</u> ; <u>Mino, Y.</u> : PRIMARY PRODUCTIVITY AT NORTHWESTERN PACIFIC ESTIMATED BY H ₂ ¹⁸ O SPIKE METHOD |
| 13:30 | <u>Kromkamp, J. C.</u> ; <u>Silsbe, G.</u> : PRODUCTIVITY TOOLS |
| 13:45 | <u>Silsbe, G. M.</u> ; <u>Kromkamp, J. C.</u> ; <u>Simis, S.</u> ; <u>Smythe-Wright, D.</u> ; <u>Röttgers, R.</u> : PHOTOPHYSIOLOGICAL OPTIMIZATION OF PHOTOSYNTHESIS IN EUROPEAN COASTAL WATERS |
| 14:00 | <u>Laney, S. R.</u> : USING ACTIVE FLUORESCENCE TO ASSESS RAPID PHOTOSYNTHETIC RESPONSES TO CHANGES IN LIGHT IN A MARINE DIATOM |
| 14:15 | <u>Saeck, E. A.</u> ; <u>O'Brien, K. R.</u> ; <u>Burford, M. A.</u> : PHOTOSYNTHETIC YIELD RESPONSE MODEL: A NEW METHOD FOR QUANTIFYING NUTRIENT LIMITATION OF PHYTOPLANKTON COMMUNITIES |
| 14:30 | <u>Sato-Takabe, Y.</u> ; <u>Hamasaki, K.</u> ; <u>Suzuki, K.</u> : ENHANCED PHOTOSYNTHETIC ACTIVITY OF MARINE AEROBIC ANOXYGENIC PHOTOTROPHIC BACTERIA UNDER ORGANIC SUBSTRATE LIMITATION |
| SS21 LONG-TERM ECOSYSTEM AND BIODIVERSITY DYNAMICS: TIME-SERIES AND PALEOECOLOGICAL STUDIES | |
| <i>Chair(s):</i> Moriaki Yasuhara, moriakiyasuhara@gmail.com Narumi K. Tsugeki, narumi.tsugeki@gmail.com | |
| <i>Location:</i> Room 305-Piazzo Omi | |
| 09:45 | <u>Gregory-Eaves, I.</u> : AQUATIC BIODIVERSITY AND ECOSYSTEM DYNAMICS DURING THE ANTHROPOCENE * |

^T represents Tutorial presentations

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| 10:00 | <u>White, K. N.</u> ; Obuchi, M.; Tachihara, K.; Tamura, M.; Jenke-Kodama, H.; Yang, S. Y.; Asami, R.; Sakamaki, T.; Fujita, K.; Reimer, J. D.: 40 YEARS LATER: EFFECTS OF THE KAICHI DORO LEEWAY ON BIODIVERSITY IN OKINAWA, JAPAN | 14:45 | <u>Bauer, B.</u> ; Sommer, U.; Gaedke, U.: HIGH PREDICTABILITY OF SPRING PHYTOPLANKTON BIOMASS IN MESOCOSMS AT THE SPECIES, FUNCTIONAL GROUP AND COMMUNITY LEVEL |
| 10:15 | <u>Yasuhara, M.</u> ; Breitburg, D.; Hunt, G.; Tsujimoto, A.; Katsuki, K.: HUMAN-INDUCED MARINE ECOLOGICAL DEGRADATION: MICROFOSSIL PERSPECTIVES | 15:00 | <u>Melack, J. M.</u> ; Jellison, R.: ANALYSIS OF RESPONSES OF SALINE MONO LAKE TO ENVIRONMENTAL VARIATIONS |
| 13:30 | <u>Harada, N.</u> ; Kimoto, K.; Onodera, J.; Oguri, K.; Hagino, K.; Okazaki, Y.; Katsuki, K.; Tsuji, Y.; Shin, K. H.; Tadai, O.; Saitoh, S. I.; Narita, H.; Konno, S.; Jordan, R. W.; Shiraiwa, Y.; Grebmeier, J.: RESPONSE OF PRIMARY PRODUCERS TO THE CATASTROPHIC ENVIRONMENTAL CHANGE IN THE ARCTIC REGION* | 15:15 | <u>Tsagaraki, T. M.</u> ; Pitta, P.; Petihakis, G.; Karakassis, I.: FLOWING THROUGH AND CHANGING: PLANKTON COMMUNITY COMPOSITION CHANGES IN RESPONSE TO NUTRIENT ENRICHMENT |
| 13:45 | <u>Toyofuku, T.</u> ; de Nooijer, L. J.; Nomaki, H.; Tsuchiya, M.; Oguri, K.; Kitazato, H.: FORAMINIFERAL INTRACELLULAR ENVIRONMENTAL OBSERVATION – PERSPECTIVE FOR BIOMINERALIZATION, GEOCHEMICAL PROXY FOR PAST TIME OCEAN AND OCEAN ACIDIFICATION | 16:00 | <u>Dakos, V.</u> ; Veraart, A.; van Nes, E. H.; Scheffer, M.: PROBING THE RESILIENCE OF COMPLEX ECOSYSTEMS BY SIMPLE PERTURBATION EXPERIMENTS |
| 14:00 | <u>Iida, T.</u> ; Mizobata, K.; Saitoh, S. I.: THE SWICHING MECHANISMS OF PHYTOPLANKTON BLOOM BETWEEN COCCOLITHOPHORE AND DIATOM IN THE BERING SEA SHELF | 16:15 | <u>Suzuki, K.</u> ; Yoshida, T.: ECOLOGICAL RESILIENCE OF POPULATION CYCLES IN THREE-SPECIES MODELS |
| 14:15 | <u>Kamenir, Y.</u> ; Dubinsky, Z.: ROBUST LUMPS IN SPECIES SIZE DISTRIBUTION OF LACUSTRINE PHYTOPLANKTON | 16:30 | <u>Wang, H.</u> ; Hsieh, C.; Sugihara, G.; Gibson, J.; Juanes, F.: EXPLORE THE INTER- AND INTRA-STOCK DYNAMICS OF ATLANTIC SALMON USING NONLINEAR FORECASTING |
| 14:30 | <u>Nomura, R.</u> ; Takata, H.: WATER-LEVEL RISE AND SALINITY IMPACTS ON MEIOBENTHIC FORAMINIFERA FROM THE 1980S ONWARD IN LAKES NAKAUMI AND SHINJI WATER SYSTEM | 16:45 | <u>Sui, P.</u> ; Iwasaki, A.; Saavedra, O.; Yoshimura, C.: DEVELOPMENT OF BASIN-SCALE FISH DISTRIBUTION MODEL AND ITS APPLICATION TO SAGAMI RIVER IN JAPAN FOR HABITAT ASSESSMENT |
| 14:45 | <u>Tsugeki, K. N.</u> ; Agusa, T.; Ueda, S.; Kuwae, M.; Oda, H.; Tanabe, S.; Tani, Y.; Toyoda, K.; Wang, W.; Urabe, J.: EUTROPHICATION AND INCREASING METAL DEPOSITION OF MOUNTAIN LAKES IN EAST ASIA DUE TO ANTHROPOGENICALLY-PRODUCED DUST | 17:00 | <u>Wiik, E.</u> ; Sayer, C. D.; Davidson, T. A.; McGowan, S.; Bennion, H.: LARGE-SCALE AND SYNCHRONOUS EUTROPHICATION-DRIVEN CHANGE IN THE BIOLOGICAL STRUCTURE OF A SMALL CALCIAREOUS LAKE, CUNSWICK TARN, UK |
| SS23 ECOSYSTEM CHANGE AND PREDICTABILITY OF AQUATIC ECOSYSTEMS | | 17:15 | <u>Carini, S.</u> ; Lisa, J.; Duernberger, K.; Tobias, C.; Song, B.: IMPACT OF SEA LEVEL RISE ON SEDIMENTARY NITROGEN CYCLING PROCESSES IN A TIDAL FRESHWATER ECOSYSTEM |
| <i>Chair(s): Elisa Benincà, e.beninca@uva.nl Vasilis Dakos, vasileios.dakos@wur.nl Chih-hao Hsieh, chsieh@ntu.edu.tw</i> | | 17:30 | <u>Weitere, M.</u> ; Becker, G.; Fink, P.; Norf, H.: INVASION SUCCESS OF <i>CORBICULA FLUMinea</i> IN TWO LARGE RIVERS STANDS IN CONTRAST TO ITS GROWTH RATE RESPONSE TO FOOD QUANTITY AND QUALITY |
| <i>Location: Theatre-Biwako Hall</i> | | 17:45 | <u>Lean, L. M.</u> ; Jinggut, T.; Raub, S. C.: IMPACTS OF INFRASTRUCTURE ON ECOSYSTEM FUNCTIONING OF A TROPICAL PEAT SWAMP FOREST IN PENINSULAR MALAYSIA |
| 13:30 | <u>Sugihara, G.</u> ; Ye, H.; Deyle, E.; Perretti, C.; Hsieh, C.; Munch, S.; Fogarty, M.; Sandin, S.; Sugihara, P.: PREDICTION, COUPLING AND CAUSATION ^T | SS42 NEW FRONTIERS OF ISOTOPE TOOLS FOR BIOGEOCHEMISTRY, ECOLOGY AND ENVIRONMENTAL SCIENCES | |
| 14:00 | <u>Perretti, C. T.</u> ; Munch, S. B.; Deyle, E. R.; Ye, H.; Sugihara, G.: A COMPARISON OF MODEL-FREE AND MECHANISTIC FORECASTING METHODS UNDER ECOLOGICALLY REALISTIC CONDITIONS | <i>Chair(s): Ichiro Tayasu, tayasu@ecology.kyoto-u.ac.jp Naohiko Ohkouchi, nohkouchi@jamstec.go.jp Carsten Schubert, carsten.schubert@eawag.ch Matthew McCarthy, mccarthy@pmc.ucsc.edu</i> | |
| 14:15 | <u>Adrian, R.</u> ; Gerten, D.; Huber, V.; Wagner, C.; Schmidt, S. R.: WINDOWS OF OPPORTUNITIES: THE ROLE OF TEMPORAL SCALE IN CLIMATE IMPACT RESEARCH | <i>Location: Room 1-Collabo Shiga</i> | |
| 14:30 | <u>Benincà, E.</u> ; Dakos, V.; van Nes, E. H.; Huisman, J.; Scheffer, M.: RESONANCE OF PLANKTON COMMUNITIES WITH TEMPERATURE FLUCTUATIONS | 09:00 | <u>McCarthy, M. D.</u> ; Sherwood, O.; Ruiz-Cooley, I.; Vokhshoori, N.; Guilderson, T.: NITROGEN ISOTOPES OF AMINO ACIDS: A NOVEL APPROACH TO TRACKING SHIFTS IN ECOSYSTEM ^{15}N VALUES FROM SEASONS TO MILLENNIA. ^T |

WEDNESDAY

* represents Invited presentations

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| 09:30 | <u>Chikaraishi, Y.</u> ; Ogawa, N. O.; Takano, Y.; Tsuchiya, M.; Ohkouchi, N.: ESTIMATION OF TROPHIC POSITION OF ORGANISMS BASED ON STABLE NITROGEN ISOTOPIC COMPOSITION OF AMINO ACIDS ^T | 17:15 | <u>Nakagawa, M.</u> ; Ueno, Y.; Hattori, S.; Umemura, M.; Yagi, A.; Takai, K.; Koba, K.; Sasaki, Y.; Makabe, A.; Yoshida, N.: SEASONAL CHANGE IN MICROBIAL SULFUR CYCLING IN MONOMICHTIC LAKE FUKAMI-IKE, JAPAN |
| 10:00 | <u>Ohkouchi, N.</u> ; Ogawa, N. O.; Chikaraishi, Y.: TROPHIC POSITION ESTIMATES OF FORMALIN-FIXED SAMPLES WITH NITROGEN ISOTOPIC COMPOSITIONS OF AMINO ACIDS: AN APPLICATION TO GOBIID FISH (ISAZA) IN LAKE BIWA | 17:30 | <u>Suzuki, K.</u> ; Sugimoto, R.; Mia, M. Y.; Ueno, M.; Kasai, A.; Yamashita, Y.: INFLUENCE OF SALT-WEDGE INTRUSION ON PARTICULATE ORGANIC MATTER DYNAMICS IN A MICROTIDAL ESTUARY IN JAPAN |
| 10:15 | <u>Ogawa, N. O.</u> ; Chikaraishi, Y.; Wada, E.; Ohkouchi, N.: TROPHIC POSITIONS OF PELAGIC AND BENTHIC FAUNA IN LAKE BAIKAL: RESULTS FROM NITROGEN ISOTOPIC ANALYSIS OF AMINO ACIDS | 17:45 | <u>Suzuki, K. W.</u> ; Nakayama, K.; Tanaka, M.: FOOD SOURCES FOR OLIGOHALINE COPEPODS IN THE ESTUARINE TURBIDITY MAXIMUM, ARIAKE SEA, SOUTHWESTERN JAPAN |
| 13:30 | <u>Carstens, D.</u> ; Hofstetter, T.; <u>Schubert, C. J.</u> : AMINO ACID NITROGEN ISOTOPIC COMPOSITION PATTERNS IN LACUSTRINE SEDIMENTING MATTER | SS45 DOM DYNAMICS AND TRANSPORT FROM LAND TO THE OCEAN, THROUGH RIVERS, LAKES AND GROUND WATERS | |
| 13:45 | <u>Yamaguchi, Y. T.</u> ; Takano, Y.; Chikaraishi, Y.; Ogawa, N. O.; Suga, H.; Yokoyama, Y.; Ohkouchi, N.: CONSTRAINTS ON BIOGEOCHEMICAL DYNAMICS OF ORGANIC MATTER IN MARINE SEDIMENTS FROM NITROGEN ISOTOPE ANALYSIS OF AMINO ACIDS | <i>Chair(s):</i> Kortelainen Pirkko, pirkko.kortelainen@ymparisto.fi Nobuhito Ohte, nobu@fr.a.u-tokyo.ac.jp Yuko Sugiyama, sugiyama@shse.u-hyogo.ac.jp | |
| 14:15 | <u>Kato, Y.</u> ; Ishikawa, N. F.; Togashi, H.; Yoshimura, M.; Itoh, M.; Osaka, K.; Okuda, N.; Ohte, N.; Yoshimizu, C.; Tayasu, I.: FOOD WEB ANALYSIS BASED ON NITROGEN ISOTOPIC RATIO OF AMINO ACIDS IN RIVER ECOSYSTEM | <i>Location:</i> Room 2-Collabo Shiga | |
| 14:30 | <u>Veuger, B.</u> ; van Oevelen, D.; Middelburg, J. J.: FATE OF MICROBIAL N, C, PROTEINS, CARBOHYDRATES, AND LIPIDS IN SEDIMENT | 09:00 | <u>Striegl, R. G.</u> ; Aiken, G. R.; Spencer, R. G.; Wickland, K. P.: SOURCES, VARIABILITY, AND CHEMICAL COMPOSITION OF CARBON EXPORTS BY THE YUKON RIVER SYSTEM ^T |
| 14:45 | <u>Nomaki, H.</u> ; Chikaraishi, Y.; Tsuchiya, M.; Toyofuku, T.; Ohkouchi, N.; Kitazato, H.: NITRATE UTILIZATION IN SHALLOW-WATER BENTHIC FORAMINIFERAL CELLS UNDER ANOXIC ENVIRONMENTS REVEALED BY 15N-LABELLING EXPERIMENTS | 09:30 | <u>Bianchi, T. S.</u> ; Garcia-Tigreros, F.; Yvon-Lewis, S.; Shields, M.; Grossman, E.; DiMarco, S. F.; Mills, H.; Raymond, P.; Quigg, A.; Walker, N.; Osburn, C.; Shank, C.: THE 2011 MISSISSIPPI RIVER FLOOD: REGIONAL CO ₂ SOURCES AND IMPLICATIONS FOR CLIMATE CHANGE |
| 15:00 | <u>Takano, Y.</u> ; Chikaraishi, Y.; Ogawa, N. O.; Ohkouchi, N.: MICROBIAL FOOD WEB AND ENERGETIC LINKAGE BETWEEN PLANKTONIC ARCHAEA AND DEEP-SEA BENTHIC ARCHAEA: INSIGHT FROM 13C-SIGNATURES IN MEMBRANE LIPIDS | 09:45 | <u>Reader, H. E.</u> ; Ekström, S. M.; Stedmon, C.; Kritzberg, E. S.: THE ROLE OF FLOW IN CONTROLLING WATER COLOUR AND ORGANIC MATTER QUALITY TRENDS |
| 15:15 | <u>Fujiwara, T.</u> ; Kobayashi, S.; Hasegawa, K.; Yamada, Y.; Fujiwara, Y.: HIGH NITROGEN ISOTOPIC RATIO IN ESTUARIES AND COASTAL EMBAYMENTS | 10:00 | <u>Golsby-Smith, L.</u> ; Maher, D.; Santos, I.; Makings, U.; Gleeson, J.; Eyre, B.: MODELLING CARBON SOURCES DRIVING DE-OXYGENATION IN AN IMPACTED SUBTROPICAL ESTUARY (EASTERN AUSTRALIA) USING STABLE CARBON ISOTOPES |
| 16:00 | <u>Longnecker, K.</u> ; Kujawinski, E. B.: NEW ANALYSIS TOOLS FOR ULTRAHIGH RESOLUTION MASS SPECTROMETRY DATA | 10:15 | <u>Kortelainen, P.</u> ; Mattsson, T.; Lepistö, A.; Räike, A.: RIVERINE DOC TRANSPORT TO THE SEA IN CHANGING CLIMATE UNDER VARIABLE LAND USE PATTERNS |
| 16:15 | <u>Ishikawa, N. F.</u> ; Uchida, M.; Shibata, Y.; Tayasu, I.: EVIDENCE OF AGED CARBON SUBSIDIZATION TO STREAM FOOD WEBS APPROACHED BY C-14 NATURAL ABUNDANCE METHOD | 13:30 | <u>Kawasaki, N.</u> ; Imai, A.; Komatsu, K.; Kohzu, A.; Satou, T.; Hamasaki, K.; Tada, Y.; Kushairi, M. R.: BACTERIAL CONTRIBUTION OF ORGANIC MATTER TO AQUATIC ENVIRONMENTS* |
| 16:30 | <u>Dettman, D. L.</u> : RECONSTRUCTION OF PRE-HUMAN-IMPACT RIVERINE ENVIRONMENTS: STABLE ISOTOPE RECORDS PRESERVED IN MOLLUSCAN SHELL | 13:45 | <u>Vähätalo, A. V.</u> ; Aarnos, H.; Paolucci, E. M.; Musibono, D. E.; Khan, S. R.; Gelinas, Y.; Shantz, A.; Huang, Q.; Schneider, W.; Rezende, C. E.; Petrescu, E.; Reader, H. E.: PHOTOCHEMICAL AND MICROBIAL TRANSFORMATION OF DISSOLVED ORGANIC CARBON FROM THE CONTINENTS IN THE COASTAL OCEAN |
| 16:45 | <u>Yokoo, Y.</u> ; Tabata, A.; Shin, K.; Nakano, T.: STRONTIUM AND LEAD ISOTOPE SIGNATURE IN RIVER SEDIMENTS AROUND THE ABANDONED MINE | 14:00 | <u>Ahmed, T.</u> ; Maruo, M.: OPTICAL CHARACTERISTICS AND MOLECULAR SIZE DISTRIBUTION OF WHOLE NOM IN LAKE BIWA AND OTHER FRESHWATER SYSTEMS-AN INDICATION OF NOM SOURCES AND SPECIATION |
| 17:00 | <u>Tsunogai, U.</u> ; Tadenuma, Y.; Ohyama, T.; Komatsu, D. D.; Nakagawa, F.; Umeda, M.; Tanaka, A.: QUANTIFYING NITRATE DYNAMICS IN HYDROSPHERE USING THE TRIPLE OXYGEN ISOTOPES AS TRACERS | | |

* represents Tutorial presentations

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| 14:15 | <u>Kellerman, A.</u> ; Kothawala, D. N.; Dittmar, T.; Gudasz, C.; Tranvik, L. J.: THE CHEMICAL COMPOSITION OF DOM IN LAKES ACROSS LANDSCAPES: THE MOLECULAR BACKGROUND OF ABSORBANCE AND FLUORESCENCE INDICES ANALYZED BY MASS SPECTROMETRY | 16:15 | <u>Wright, S. W.</u> ; Strutton, P. G.; van den Enden, R. L.; Johnson, R.; Woolridge, C.; Scott, F. J.; Davidson, A. T.: CHANGES IN PHYTOPLANKTON POPULATIONS ALONG A LONG-TERM TRANSECT ACROSS THE SOUTHERN OCEAN (140 EE) OBSERVED VIA SATELLITE, HPLC CHEMTAX AND MICROSCOPY* | | |
| 14:30 | <u>Ekström, S. M.</u> ; Sandahl, M.; Kritzberg, E. S.: DIFFERENCES IN REACTIVITY OF DISSOLVED ORGANIC MATTER FROM ACIDIFIED AND NON-ACIDIFIED SOILS | 16:30 | <u>Takao, S.</u> ; Hirawake, T.; Suzuki, K.: PHOTOSYNTHETIC PHYSIOLOGY AND PRIMARY PRODUCTIVITY OF PHYTOPLANKTON IN THE AUSTRALIAN SECTOR OF THE SOUTHERN OCEAN* | | |
| 14:45 | <u>Lapierre, J. F.</u> ; Guillemette, F.; Berggren, M.; del Giorgio, P. A.: ORGANIC CARBON PROCESSING IN INLAND WATERS: POTENTIAL FEEDBACK BETWEEN BROWNING AND CLIMATE | 16:45 | <u>Yang, H. H.</u> ; Ho, T. Y.: PHYTOPLANKTON COMMUNITY STRUCTURE IN THE NORTHERN SOUTH CHINA SEA: THE ENVIRONMENTAL CONTROLS ON THE SEASONAL AND SPATIAL VARIABILITY* | | |
| 15:00 | <u>Prairie, Y. T.</u> ; Lapierre, F.; Lapierre, J. F.: DOC MINERALIZATION FROM HYDROXYL RADICAL PRODUCTION IN BOREAL AQUATIC SYSTEMS | 17:00 | <u>Huang, B.</u> ; Wang, L.; Xie, Y.: SEASONAL VARIATIONS OF PHYTOPLANKTON COMMUNITY STRUCTURE AND ITS RELATIONSHIP WITH POC FLUX IN THE CHINA MARGINAL SEAS* | | |
| 15:15 | <u>Tipping, E.</u> ; Carter, H. T.; Hamilton-Taylor, J.; Koprivnjak, J. F.; Miller, M. P.: FRESHWATER DOM QUANTITY AND QUALITY FROM A TWO-COMPONENT MODEL OF UV ABSORBANCE | 17:15 | <u>Endo, H.</u> ; Yoshimura, T.; Sugie, K.; Suzuki, K.: RESPONSES OF PHYTOPLANKTON ASSEMBLAGES TO CHANGES IN PCO_2 LEVEL DURING THE SPRING BLOOM IN THE OYASHIO REGION* | | |
| SS48 TRACE ELEMENT BIOGEOCHEMISTRY | | | | | |
| <i>Chair(s): Celine Gueguen, celinegueguen@trentu.ca Claude Fortin, Claude.Fortin@ete.inrs.ca</i> | | | | | |
| <i>Location: Room 2-Collabo Shiga</i> | | | | | |
| 16:00 | <u>Tipping, E.</u> ; Carter, H. T.; Hamilton-Taylor, J.; Koprivnjak, J. F.; Miller, M. P.: THE CHEMICAL SPECIATION OF METALS IN AQUATIC SYSTEMS | 17:30 | <u>Isada, T.</u> ; Hirawake, T.; Suzuki, K.; Saitoh, S.: OPTICAL DISCRIMINATION OF DIATOMS IN COASTAL WATERS AND IMPLICATIONS FOR OCEAN COLOR REMOTE SENSING* | | |
| 16:30 | <u>Mueller, K. K.</u> ; Fortin, C.; Campbell, P. G.: IMPROVING TRACE METAL SPECIATION PREDICTIONS IN NATURAL AQUATIC SYSTEMS BY TAKING INTO ACCOUNT DOM SPECTROSCOPIC QUALITY | 17:45 | <u>Hooker, S. B.</u> : UNCERTAINTIES IN THE DETERMINATION OF HPLC PIGMENT DATA PRODUCTS FROM FIVE INTERNATIONAL ROUND-ROBIN ANALYSES* | | |
| 16:45 | <u>Slaveykova, V. I.</u> : SIZE DISTRIBUTIONS OF METAL - COLLOIDAL ORGANIC MATTER COMPLEXES AND METAL AVAILABILITY TO AQUATIC PHYTOPLANKTON* | | | | |
| 17:00 | <u>Church, T. M.</u> ; Sedwick, P. N.; Sholkovitz, E. R.: TRACE ELEMENT DEPOSITION TO SURFACE WATERS OF THE OCEAN | | | | |
| 17:15 | <u>Gao, H.</u> ; Zhang, T.; Shi, J.; Yao, X.: ATMOSPHERIC DEPOSITION OF AEROSOL WITH SOLUBLE IRON TO THE YELLOW SEA | | | | |
| 17:30 | <u>Hirose, K.</u> : ECOLOGICAL ROLES OF ORGANIC LIGANDS IN MARINE ENVIRONMENT | | | | |
| 17:45 | <u>Ho, T. Y.</u> ; Chu, T. H.; Lu, M. C.: INTERRELATED INFLUENCE OF NI AND LIGHT ON TRICHODESMIUM GROWTH | | | | |
| SS49 RECENT ADVANCES IN PHYTOPLANKTON PIGMENT STUDIES IN OCEANOGRAPHY | | | | | |
| <i>Chair(s): Stanford B. Hooker, stanford.b.hooker@nasa.gov Koji Suzuki, kojis@ees.hokudai.ac.jp Takafumi Hirata, tahi@ees.hokudai.ac.jp S. W. Wright, Simon.Wright@aad.gov.au</i> | | | | | |
| <i>Location: Room 207-Piazzo Omi</i> | | | | | |
| 16:00 | <u>Lin, C. H.</u> ; Shiah, F. K.; Ho, T. Y.: INTERANNUAL VARIABILITY OF SUMMER PHYTOPLANKTON COMMUNITY STRUCTURE IN A SUBTROPICAL OLIGOTROPHIC RESERVOIR | 16:00 | <u>Pond, D. W.</u> : THE FUNCTIONAL SIGNIFICANCE OF LIPIDS AND THEIR ROLE IN CONTROLLING THE DISTRIBUTION OF ZOOPLANKTON IN THE OCEANS† | | |
| 16:30 | | 16:30 | <u>Saito, H.</u> : THE UNIQUE FATTY ACID COMPOSITION MIX OF N-3, N-4, AND N-6 POLYUN-SATURATED FATTY ACIDS IN THE DEEP-SEA VENT CRAB, SHINKAIA CROSNIERI | | |
| 16:45 | | 16:45 | <u>Ndhlovu, R. T.</u> ; Richoux, N. B.: TROPHIC BIOMARKERS AND TIME: GRAZERS VERSUS SUSPENSION-FEEDERS IN THE ROCKY INTERTIDAL | | |
| 17:00 | | 17:00 | <u>Brett, M. T.</u> ; Kainz, M. J.; Taipale, S. J.; Martin, K. A.: A PROTOTYPE ALGORITHM TO REVERSE-ENGINEER ZOOPLANKTON DIETS BASED ON THEIR FATTY ACID COMPOSITION | | |
| 17:15 | | 17:15 | <u>Kainz, M. J.</u> ; Marshall, J.; Jardine, T.; Woods, R.; Valdez, D.; Lobegeiger, J.: DIETARY BIOMARKERS IN FOOD WEBS OF SEMI-ARID, TURBID WATERHOLES: COMBINED ASSESSMENT OF STABLE ISOTOPES AND FATTY ACIDS | | |

WEDNESDAY

* represents Invited presentations

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| 17:30 | Pree, B.; Vrede, T.; Kainz, M. J.; Lau, D. C.: EFFECTS OF FOOD QUANTITY, DIETARY FATTY ACIDS AND TEMPERATURE ON DAPHNIA PERFORMANCE | SS73 COASTAL PROCESSES AND MIXING |
| 17:45 | Budge, S. M.; Aucoin, L. R.; Ziegler, S. E.; Lall, S. P.: FRACTIONATION OF STABLE CARBON ISOTOPES OF ESSENTIAL FATTY ACIDS IN ATLANTIC POLLOCK (POLLACHIUS VIRENS) | <i>Chair(s):</i> Hidekatsu Yamazaki, hide@kaiyodai.ac.jp J. Hwan Hwang, jinhwang@dongguk.edu |
| | SS60 INFLUENCE OF CLIMATIC AND ENVIRONMENTAL CHANGE ON INLAND WATER BODIES | <i>Location:</i> Room 3-Collabo Shiga |
| | <i>Chair(s):</i> Michio Kumagai , kumagai-m@lberi.jp David M. Livingstone, living@eawag.ch Charles R. Goldman , crgoldman@ucdavis.edu Rolf Kipfer, kipfer@eawag.ch | |
| | <i>Location:</i> Theatre-Biwako Hall | |
| 09:00 | Kipfer, R.; Peeters, F.; Livingstone, D. M.: THE INFLUENCE OF CLIMATIC AND ENVIRONMENTAL CHANGE ON INLAND WATER BODIES [*] | 09:00 <u>Monismith, S. G.</u> : INTERNAL WAVES AND STRATIFIED TURBULENCE IN THE NEARSHORE COASTAL OCEAN ^T |
| 09:30 | Tomonaga, Y.; Brennwald, M. S.; Kipfer, R.: NOBLE GASES IN THE SEDIMENT PORE WATER AS PROXIES FOR PHYSICAL TRANSPORT PROCESSES AND PAST ENVIRONMENTAL CONDITIONS IN LAKE VAN (TURKEY) | 09:30 <u>Tandon, A.</u> ; Mahadevan, A.: SUBMESOSCALE PROCESSES IN THE COASTAL OCEAN ^T |
| 09:45 | Vogel, N.; Brennwald, M. S.; Fleitmann, D.; Figura, S.; Wieler, R.; Kipfer, R.: PALEOCLIMATE RESEARCH ON MICROSCOPIC INLAND WATER BODIES – ABSOLUTE TEMPERATURE INFORMATION FROM STALAGMITE FLUID INCLUSIONS | 10:15 <u>Venayagamoorthy, S. K.</u> ; Ku, H.: LATERAL MIXING AROUND OBSTACLES IN COASTAL FLOWS* |
| 10:00 | Figura, S.; Livingstone, D. M.; Kipfer, R.: CLIMATE CHANGE IMPACTS ON SWISS GROUNDWATER: INSIGHTS FROM HISTORICAL RECORDS | 13:30 <u>Masunaga, E.</u> ; Yamazaki, H.; Nagai, T.: DEVELOPMENT OF A NEW TO-YO INSTRUMENT TO OBSERVE DETAILED RIVER PLUME STRUCTURE |
| 10:15 | Rimmer, A.; Givati, A.; Samuels, R.; Alpert, P.: USING ENSEMBLE OF CLIMATE MODELS TO EVALUATE FUTURE WATER AND SOLUTES BUDGETS IN LAKE KINNERET, ISRAEL | 13:45 <u>Jang, D.</u> ; <u>Hwang, J. H.</u> ; Kim, Y. H.: VARIATIONS OF BOTTOM SALT INTRUSION UNDER A RIVER DEPENDING ON THE MORPHOLOGIC AND HYDROLOGIC CHANGES IN THE BAY |
| | | 14:00 <u>Gross, E. S.</u> ; MacWilliams, M. L.; Holleman, C. D.: SAN FRANCISCO BAY SALT FLUX ANALYSIS |
| | | 14:15 <u>Holleman, R. C.</u> ; Stacey, M. T.: TRANSIENT DISPERSIVE PROCESSES IN CHANNEL-SHOAL ESTUARIES |
| | | 14:30 <u>Yajima, H.</u> ; <u>Yamada, Y.</u> ; Masuki, S.; Toshima, K.: EFFECT OF TIDAL AND WIND CURRENTS ON AN OXYGENATION EXPERIMENT IN CHIBA PORT, TOKYO BAY BY FIELD DATA AND MODELLING |
| | | 14:45 <u>Hasegawa, D.</u> ; Sheng, J.: HOW THE TIDAL ENERGY EXTRACTION AFFECTS ON THE TIDAL CIRCULATION AND THE MIXING IN THE BAY OF FUNDY AND THE GULF OF MAINE |
| | | 15:00 <u>Han, A. Q.</u> ; Dai, M. H.; Kao, S. J.; Gan, J. P.; Li, Q.; Wang, L. F.; Zhai, W. D.; Wang, L.: NUTRIENT DYNAMICS AND BIOLOGICAL CONSUMPTION IN A LARGE CONTINENTAL SHELF SYSTEM UNDER THE INFLUENCE OF BOTH A RIVER PLUME AND COASTAL UPWELLING |
| | | 15:15 <u>Strickler, J. R.</u> ; Jiang, H.: THE NEAR-FIELD OF THE FEEDING CURRENTS IN HERBIVOROUS CALANOID COPEPODS |

Thursday Oral Talks

GS07 BENTHOS BIOLOGY AND ECOLOGY

Chair(s): Shigeki Wada, swadasbm@kurofune.shimoda.tsukuba.ac.jp
 Luca A Van Duren, luca.vanduren@deltares.nl
 Iris E. Hendriks, iris@imedea.uib-csic.es

Location: Room 305-Piazzo Omi

- 13:30 Wada, S.; Komori, M.; Hama, T.: ECOLOGICAL ROLE OF BOTTOM-DRIFTING ALGAE. -DETACHMENT OF A KELP SPECIES, *ECKLONIA CAVA* KJELLMAN, AND SUPPLY OF ORGANIC CARBON TO COASTAL ECOSYSTEMS--.
- 13:45 Olsen, Y.S.; Potouroglou, M.; Duarte, C. M.: TEMPERATURE AFFECTS SUSCEPTIBILITY OF MEDITERRANEAN SEAGRASSES *POSIDONIA OCEANICA* AND *CYMODOCOEA NODOSA* TO INFECTION BY *LABYRINTHULA*
- 14:00 Miyake, Y.; Sugihara, T.: EFFECTS OF LIGHT INTENSITY AND PERIPHYTE BIOMASS ON COLONIZATION PATTERNS OF STREAM INVERTEBRATES
- 14:15 Ikeda, H.; Kawahara, M.; Ohtsu, K.; Uye, S.: ASEXUAL REPRODUCTION OF THE GIANT JELLYFISH *NEMOPILEMA NOMurai*: PODOCYST PRODUCTION, DORMANCY AND EXCYSTMENT
- 14:30 Nukazawa, K.; Shiraiwa, J.; Kazama, S.: ESTIMATION OF SEASONAL HABITAT TRANSITIONS OF AQUATIC ANIMALS USING A HABITAT SUITABILITY INDEX MODEL BASED ON HYDROLOGICAL AND THERMAL SIMULATIONS
- 14:45 Mei, M. X.: BENTHIC OOLITES WITHIN STROMATOLITES, AN EXAMPLE FROM THE CAMBRIAN GUSHAN FORMATION AT THE XIWEIDIAN SECTION IN THE WESTERN SUBURB OF BEIJING
- 15:00 Montserrat, F.; Van Colen, C.; van Prooijen, B. C.; Ysebaert, T.; Herman, P.: ESTUARINE ECOSYSTEM ENGINEERING: BIOGEOmorphological INTERACTIONS IN THE ESTUARINE INTERTIDAL
- 15:15 van Duren, L. A.; de Ronde, J. G.; Ysebaert, T.; Troost, T. A.; Mulder, J. P.: ECOSYSTEM ENGINEERS AGAINST SEDIMENT STARVATION: FOOD FOR THOUGHT
- 16:00 Garcia-Robledo, E.; Papaspyrou, S.; Corzo, A.; Bibbo, F.; Lederc, H.; Aguera, A.: NUTRIENTS POOLS IN MARINE SEDIMENTS: THE UNKNOWN DOMINANCE OF INTRACELLULAR POOLS
- 16:30 Shull, D. H.; Devol, A. H.: BIOIRRIGATION, SILICA AND NUTRIENT CYCLING IN BERING SEA SEDIMENTS
- 16:45 de Lucas Pardo, M. A.; Winterwerp, J. C.; van Kessel, T.: ERODIBILITY OF SOFT FRESH WATER SEDIMENTS: THE ROLE OF BIOTURBATION BY MEIOFAUNA
- 17:00 Schwarz, C.; Ysebaert, T.; Temmerman, S.; Zhang, L.; Herman, P. M.: INFLUENCES OF VEGETATION AND SEDIMENT TYPE ON TIDAL CHANNEL INITIATION AND ITS CONSEQUENCES FOR LANDSCAPE DEVELOPMENT

- 17:15 Umek, J. W.; Chandra, S.; Henery, R.; Buktenica, M.; Girdner, S.: NEARSHORE ECOLOGY OF THE CONSUMER, THE SIGNAL CRAYFISH, IN TWO LARGE OLIGOTROPHIC LAKES

- 17:30 Hendriks, I. E.; Basso, L.; Marba, N.; Jordà, G.; Tenan, S.; Duarte, C. M.: WILL THE PEN SHELL *PINNA NOBILIS* SURVIVE TO THE END OF THE CENTURY? - AN OVERVIEW OF ITS VULNERABILITY TO GLOBAL CHANGE

- 17:45 Bui, H. H.; Lee, S. Y.: CHARACTERISATION OF CELLULASE ACTIVITY IN THE DETRITIVOROUS MANGROVE GRAPSID CRAB *PARASESARMA ERYTHRODACTYLA*

GS08 COMMUNITY PROCESSES AND FOOD WEB

Chair(s): Takefumi Nakazawa, take.nkzw@gmail.com

Location: Rehearsal Room-Biwako Hall

- 16:00 Kasada, M.; Yoshida, T.: INTERACTION BETWEEN ECOLOGICAL AND EVOLUTIONARY DYNAMICS: EXPERIMENTAL STUDY OF A PREDATOR-PREY SYSTEM
- 16:15 Edwards, K. F.; Litchman, E.; Klausmeier, C. A.: FUNCTIONAL TRAITS PREDICT PHYTOPLANKTON COMMUNITY STRUCTURE AND SEASONAL DYNAMICS IN THE ENGLISH CHANNEL
- 16:30 Johansson, K.; Trigal, C.; Vrede, T.; van Rijswijk, P.; Goedkoop, W.; Johnson, R. K.: EFFECTS OF *GONYOSTOMUM SEMEN* BLOOMS ON BOREAL LAKE FOOD WEBS
- 16:45 Ljungberg, P.; Nilsson, P. A.; Persson, A.: HABITAT AND ENVIRONMENTAL DEPENDENT PROCESSES AFFECTS TOP PREDATORY FISH IN TEMPERATE COASTAL ZONES
- 17:00 Emmrich, M.; Pedron, S.; Brucet, S.; Winfield, I. J.; Jeppesen, E.; Volta, P.; Argillier, C.; Lauridsen, T. L.; Holmgren, K.; Hesthagen, T.; Mehner, T.: ENVIRONMENTAL TEMPERATURE IS THE DOMINANT PREDICTOR OF THE SIZE STRUCTURE OF EUROPEAN LAKE FISH ASSEMBLAGES
- 17:15 Lemmens, P.; De Meester, L.; Declerck, S.: DIRECT AND INDIRECT EFFECTS OF PREDATION BY CORMORANTS ON FOOD WEB STRUCTURE IN SHALLOW LAKES
- 17:45 Scharnweber, K.; Syväranta, J.; Hilt, S.; Mehner, T.: CHANGES IN THE LITTORAL FOOD WEB OF CLEAR AND TURBID SHALLOW LAKES AFTER EXPERIMENTAL SUBSIDY OF PARTICULATE ORGANIC CARBON

SS04 FOOD-WEB EFFECTS ON OCEAN BIOGEOCHEMICAL PROCESSES: ENVIRONMENTAL CONTROL AND INTERACTIONS

Chair(s): Louis Legendre, legendre@obs-vlfr.fr
 Richard B. Rivkin, rrivkin@mun.ca
 Toshi Nagata, nagata@aori.u-tokyo.ac.jp

Location: Rehearsal Room-Biwako Hall

- 09:00 Nagata, T.; Hasumi, H.: EMBEDDING MICROBIAL FOOD WEBS TO OCEAN BIOGEOCHEMICAL MODELS: A GLOBAL SYNTHESIS*
- 09:30 Butenschön, M.; Polimene, L.; Allen, J. I.: THE IMPACT OF BACTERIA ON THE GLOBAL OCEAN CARBON CYCLE: A MODELLING STUDY

THURSDAY

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| 09:45 | <u>Miki, T.</u> : TROPHIC INTERACTIONS MEDIATED BY NON-RANDOM FORAGING BEHAVIOR AND AGGREGATED DISTRIBUTION OF MICROBES ARE IMPORTANT FOR MODELING MARINE PELAGIC FOOD WEBS | 17:00 | <u>Lopez-Laseras, P.</u> ; Casas, J. P.; Pompeo, M.; Armengol, J.: ORGANIC PARTICLE SIZE RELATED TO CARBON AND NITROGEN CONTENT IN SEDIMENTS OF CATALANIAN RESERVOIRS |
| 10:00 | Lawrence, C. M.; Menden-Deuer, S.: WHAT FACTORS DRIVE PREDATOR-INDUCED PHYTOPLANKTON MORTALITY RATES? | 17:15 | <u>Gunnell, J. R.</u> ; McKee, B. A.: NEON CARBON: PATTERNS OF LAND CREATION AND CARBON SEQUESTRATION AT THE NEWPORT RIVER, N.C. |
| 10:15 | Sakka Hlaili, A.; Niquil, N.; <u>Legendre, L.</u> : PLANKTONIC FOOD WEB TYPOLOGY REVISITED: REANALYSIS OF RESULTS OF MARINE AND FRESHWATER INVERSE MODELS | 17:30 | <u>Vihermaa, L. E.</u> ; Waldron, S.: TEMPORAL VARIATION IN FLUVIAL CO ₂ FLUXES IN THE WESTERN AMAZONIAN BASIN |
| 13:30 | <u>Glibert, P. M.</u> : ANTHROPOGENICALLY CHANGING NUTRIENT LOADS AND STOICHIOMETRY: REINFORCING FEEDBACK EFFECTS ON FOOD WEBS* | 17:45 | Grinham, A.; Dunbabin, M.; Gale, D.: EXTREME EBULLITIVE METHANE EMISSIONS FROM THE SUBTROPICAL RESERVOIR LITTLE NERANG DAM |
| 13:45 | <u>Mourino-Carballido, B.</u> ; Pahlow, M.; Oschlies, A.: HIGH SENSITIVITY OF ULTRA-OLIGOTROPHIC MARINE ECOSYSTEMS TO ATMOSPHERIC NITROGEN DEPOSITION | SS06 INTERACTION OF PHYSICAL, CHEMICAL AND BIOLOGICAL PROCESSES IN AQUATIC ECOSYSTEMS: PAST, PRESENT, AND FUTURE | |
| 14:00 | <u>Motegi, C.</u> ; Yang, Y.; Uchiyama, M.; Fukuda, H.; Ogawa, H.; Nagata, T.: VIRAL HOT SPOT IN THE UPPER LAYER OF THE WESTERN NORTH PACIFIC | <i>Chair(s):</i> Prof. Ilia Ostrovsky, ostrovsky@ocean.org.il Prof. Michio Kumagai, kumagai-m@lberi.jp Prof. S. Geoffrey Schladow, gschladow@ucdavis.edu Prof. Sally MacIntyre, sally@icess.ucsb.edu | |
| 14:15 | <u>Galí, M.</u> ; Simó, R.; Ruiz-González, C.; Vila-Costa, M.; Saló, V.: SHEDDING LIGHT ON DMS PRODUCTION: MICROBIAL PROCESSES AND ECOSYSTEM BUDGETS | <i>Location:</i> Room 2-Collabo Shiga | |
| 14:30 | <u>Yang, Y.</u> ; Yokokawa, T.; Motegi, C.; Nagata, T.: VIRAL GRADIENT ALONG THE MERIDIONAL OVERTURNING CIRCULATION | 09:00 | <u>Blauw, A. N.</u> ; Benincà, E.; Laane, R.; Greenwood, N.; Huisman, J.: DANCING WITH THE TIDES: HIGH-RESOLUTION TIME SERIES REVEAL STRONG SIGNATURES OF THE TIDAL CYCLE IN COASTAL PHYTOPLANKTON* |
| 14:45 | <u>Anderson, M. R.</u> ; Rivkin, R. B.; Ziegler, S.: MICROBIAL COMMUNITY FUNCTION IN A LARGE NORTHERN ESTUARY | 09:15 | <u>Peltomaa, E. T.</u> ; Ojala, A. K.: PHYSICS REGULATES THE DYNAMICS OF AUTOTROPHIC PICOPLANKTON* |
| 15:00 | <u>Rynearson, T. A.</u> ; Casas, M.; Durbin, E. G.: NEW APPROACHES TO UNDERSTANDING TROPHIC TRANSFER AND FOOD WEB CONNECTIONS: A PEEK UNDER SEA ICE IN THE NORTHERN BERING SEA. | 09:30 | <u>Chung, S. W.</u> ; Hipsey, M. R.; Lee, H. S.: THE INTERACTION OF HYDRODYNAMICS AND BUOYANT CONTROL OF MICROCYSTIS AERUGINOSA DURING A SURFACE BLOOM EVENT IN A STRATIFIED RESERVOIR* |
| 15:15 | <u>Alcaraz, M.</u> ; Almeda, R.; Calbet, A.; Saiz, E.; Duarte, C. M.: TEMPERATURE AND ARCTIC ZOOPLANKTON: METABOLIC RATES AND STOICHIOMETRY OF THE EXCRETION PRODUCTS * | 09:45 | <u>Ostrovsky, I.</u> ; Yacobi , Y. Z.: SEDIMENTATION OF ALGAL SIGNATURE PIGMENTS: ROLE OF LIFE STRATEGIES OF ALGAE AND AMBIENT CONDITIONS |
| SS05 CARBON STORAGE AND EVASION IN NATURAL WETLANDS AND FRESHWATER RESERVOIRS | | 10:00 | <u>McLaughlin, R. M.</u> ; Arnosti, C.; Camassa, R.; Falcon, C.; Khatri, S.; Prairie, J.; White, B.; Yu, S.: DETERMINING THE MECHANISMS DRIVING DELAYED SETTLING OF MARINE SNOW PARTICLES AT SHARP DENSITY TRANSITIONS* |
| <i>Chair(s):</i> John Melack, john.melack@lifesci.ucsb.edu Marco Aurelio dos Santos, aurelio@ppe.ufrj.br | | 10:15 | <u>Buhvestova, O.</u> ; Laugaste, R.; Panksep, K.; Kangur, K.: WIND-INDUCED SEDIMENT RESUSPENSION AS A FACTOR BEHIND EUTROPHICATION OF LARGE SHALLOW LAKE* |
| <i>Location:</i> Room 1-Collabo Shiga | | 13:30 | <u>Komatsu, K.</u> : STRUCTURE AND VARIABILITY OF THE KUROSHIO NUTRIENT STREAM* |
| 16:00 | <u>Pacheco, F. S.</u> ; Roland, F.; Downing, J.: EUTROPHICATION REVERSES CARBON PROCESSING IN LAKES | 13:45 | <u>Kunz , M. J.</u> ; Senn, D. B.; Wuest, A.: DAM WITHDRAWAL OPTIMIZATION FOR RESTORING DOWNSTREAM WATER QUALITY IN WETLANDS – A CASE STUDY ON THE SPECTACULAR KAFUE FLATS * |
| 16:15 | <u>Jones, J. R.</u> ; Obrecht, D. V.; Balmer, M. B.; Graham, J. L.; Gurung, T. B.; Downing, J. A.: SEASONAL CO ₂ INFUX AND EFFLUX IN MESO- TO EUTROPHIC IMPOUNDMENTS | 14:00 | <u>Fujimura, A. G.</u> ; Reniers, A. J.; Paris, C. B.; Shanks, A. L.; MacMahan, J. H.; Morgan, S. G.: NUMERICAL SIMULATION OF PLANKTON DISTRIBUTION IN SURF ZONE* |
| 16:30 | <u>Verspagen, J.</u> ; Van de Waal, D. B.; Visser, P. M.; Van Donk, E.; Huisman, J.: THE IMPACT OF RISING CO ₂ ON THE COUPLING BETWEEN INORGANIC CARBON CHEMISTRY AND PHYTOPLANKTON GROWTH | 14:15 | <u>D'souza, N. A.</u> ; Kawarasaki, Y.; Lee, R. E.; Beall, B. F.; Bullerjahn, G. S.; <u>McKay, R. M.</u> : BACTERIAL EPIPHYTES OF DIATOMS PROMOTE ICE NUCLEATION IN LARGE LAKES* |
| 16:45 | <u>Heathcote, A. J.</u> ; Downing, J. A.: CHANGES IN ORGANIC AND INORGANIC CARBON BURIAL IN THIRTY-THREE NATURAL LAKES OVER A 150 YEAR HISTORY OF EUTROPHICATION | | |

† represents Tutorial presentations

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| 14:30 | <u>Song, K.</u> ; Buttle, J. M.; Marsalek, J.; Pick, F. R.; Xenopoulos, M. A.; Frost, P. C.: SHORT TERM THERMAL STRATIFICATION PATTERNS IN URBAN PONDS AND THEIR RELATIONSHIPS WITH VERTICAL NUTRIENT GRADIENTS* | 16:45 | <u>Malkin, S. Y.</u> ; Seitaj, D.; Meysman, F. J.: MICROBIAL SULPHIDE OXIDATION BY LONG DISTANCE ELECTRON TRANSPORT FINDS A NICHE IN MARINE HYPOXIC ZONES | | |
| 14:45 | <u>Rahm, L.</u> : HOW EFFICIENT IS BALTIC'S NEW INVASIVE SPECIES IN RECYCLING DISSOLVED FE, MN AND P IN THEIR RECOLONIZATION OF PREVIOUS ANOXIC BOTTOMS? * | 17:00 | <u>Matabos, M.</u> ; Tunnicliffe, V.; Dean, C.; Juniper, S. K.: OBSERVING A YEAR OF BENTHIC COMMUNITY RESPONSES TO FLUCTUATING HYPOXIC CONDITIONS THROUGH THE VENUS CABLED NETWORK | | |
| SS10 RIVER SYSTEMS – ECOLOGICAL SITUATION AND HUMAN DIMENSION | | | | | |
| <i>Chair(s):</i> Takashi Asaeda, asaeda@mail.saitama-u.ac.jp Thomas Hein, thomas.hein@boku.ac.at | | | | | |
| <i>Location:</i> Piazza Hall-Piazzzo Omi | | | | | |
| 09:00 | <u>Asaeda, T.</u> ; Rashid, M. H.: SOIL NUTRIENT BUDGET DURING VEGETATION COLONIZATION IN SEDIMENT BARS OF A REGULATED RIVER | 17:15 | <u>Oguri, K.</u> ; Glud, R.; Wenzhoefer, F.; Stahl, H.; Middelboe, M.; Nomaki, H.; Kitazato, H.: MICROSCALE DYNAMICS IN THE DEEP-SEA: TEN DAYS OF CONTINUOUS BENTHIC O ₂ IMAGING IN SURFACE SEDIMENTS (OFF HATSUSHIMA, SAGAMI BAY, JAPAN). | | |
| 09:15 | <u>Ikeda, H.</u> ; Kameda, R.; Asaeda, T.: FUNDAMENTAL SURVEY ON SETTLEMENT AND DEVELOPMENT OF COMMUNITY OF ROBINIA PSEUDOACACIA L. ON A SAND BAR IN WATARASE RIVER | 17:30 | <u>Chang, N. N.</u> ; Shiao, J. C.; Gong, G. C.: LINKAGE BETWEEN CHANGJIANG RIVER DISCHARGE AND THE EAST CHINA SEA ECOSYSTEM: IMPLICATION FOR EUTROPHICATION AND HYPOXIA | | |
| 09:30 | <u>Oliver, R. L.</u> ; Lorenz, Z.: IRRIGATION FLOWS, DROUGHTS AND FLOODING RAINS: THE WASH-UP FROM METABOLISM MEASUREMENTS IN THE MURRAY RIVER, SOUTH AUSTRALIA | 17:45 | <u>Kononets, M.</u> ; <u>Tengberg, A.</u> ; Atamanchuk, D.; Hansson, D.; Waldmann, C.; Behnken, A.; Hall, P. O.: HYPOX KOLJOE FJORD OBSERVATORY: MODEL IMPROVEMENTS, DATA QUALITY AND TESTING OF NEW SENSORS | | |
| 09:45 | <u>Yagisawa, J.</u> ; Yamafuji, M.; Tanaka, N.: EFFECT OF FLOOD DISTURBANCE FREQUENCY AND INTENSITY ON THE AREAL DIVERSITY OF VEGETATION TYPE IN RIVERS | SS30 THE IMPACTS OF TSUNAMI AND THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANTS ON OCEANS AND COASTAL ENVIRONMENTS | | | |
| 10:00 | <u>Gabel, F.</u> ; Brauns, M.; Pusch, M. T.; Garcia, X. F.: SHIP-INDUCED WAVES ALTER THE COMMUNITY COMPOSITION OF BENTHIC INVERTEBRATES AND FAVOUR NEOZOA | <i>Chair(s):</i> Mitsuo Uematsu, uematsu@aori.u-tokyo.ac.jp Ken Buesseler, kbuesseler@whoi.edu Alice Newton, anewton@ualg.pt Masumi YAMAMURO, yamamuro@k.u-tokyo.ac.jp | | | |
| 10:15 | <u>Tanaka, N.</u> ; Yagisawa, J.; Chirantha, K.: MODIFICATION METHOD OF RIVER SECTION FOR PREVENTING FORESTATION IN RIVERS USING TWO INDICES THAT REPRESENT THE BREAKAGE AND WASH-OUT CONDITIONS OF TREES | <i>Location:</i> Ensemble Hall-Biwako Hall | | | |
| SS11 BIOGEOCHEMICAL AND ECOLOGICAL IMPACTS OF EXPANDING OXYGEN MINIMUM ZONES | | | | | |
| <i>Chair(s):</i> Damian Grundle, dgrundle@uvic.ca Deborah Bronk, bronk@vims.edu Mark Altabet, maltabet@umassd.edu | | | | | |
| <i>Location:</i> Room 3-Collabor Shiga | | | | | |
| 16:00 | <u>Meysman, F.</u> ; Meire, L.; Soetaert, K.: HOW STRONGLY DOES CLIMATE CHANGE INCREASE THE RISK OF HYPOXIA IN THE CENTRAL NORTH SEA? | 09:15 | <u>Newton, A.</u> ; Icely, J. D.: LESSONS LEARNED FROM TSUNAMIS FOR VULNERABLE COASTAL POPULATIONS* | | |
| 16:15 | <u>Grundle, D. S.</u> ; Maranger, R.; Juniper, S. K.; Bronk, D. A.; Altabet, M. A.: UPPER WATER COLUMN NITROUS OXIDE IN THE SUBARCTIC PACIFIC: PRESENT DISTRIBUTIONS AND FUTURE DIRECTIONS | 09:30 | <u>Glavovic, B. C.</u> : THE ECOLOGY OF COASTAL DISASTERS: LESSONS FROM KATRINA, THE INDIAN OCEAN TSUNAMI, CHRISTCHURCH EARTHQUAKES AND THE JAPANESE TSUNAMI | | |
| 16:30 | <u>Kong, L.</u> ; Kataoka, T.; Buchwald, C.; Jing, H.; Liu, H.: PHYLOGENETIC DIVERSITY AND SPATIAL DISTRIBUTION OF HYDRAZINE OXIDOREDUCTASE (HZO) GENE IN THE OMZ OFF COSTA RICA | 09:45 | <u>Tabayashi, Y.</u> ; Tamura, M.; Takahashi, M.; Ajima, K.; Mimura, N.: EVACUATION FROM 3.11 EARTHQUAKE AND TSUNAMI IN IBARAKI: LESSONS LEARNED FROM TIME AND SPATIAL ANALYSIS FROM INTERVIEWS AND QUESTIONNAIRES | | |
| THURSDAY | | | | | |
| 10:00 | <u>Michida, Y.</u> ; Koie, T.; Tanaka, K.; Kaga, S.: POST-TSUNAMI CHANGES IN CIRCULATION AND WATER QUALITY IN THE KAMAISHI BAY | 10:00 | <u>Watanabe, T.</u> ; Tsuchiya, N.; Inoue, C.; Yamada, R.; Yamasaki, S.; Hirano, N.; Okamoto, A.; Ogawa, Y.; Nara, F. W.; Nunohara, K.: RISK ASSESSMENT OF ARSENIC IN TSUNAMI SEDIMENTS FROM NORTHEAST JAPAN AFTER THE 2011 OFF THE PACIFIC COAST OF TOHOKU EARTHQUAKE | | |
| 10:15 | | 10:15 | <u>Uematsu, M.</u> ; Narita, Y.; Sueki, K.; Higaki, S.; Buesseler, K. O.: TEMPORAL AND SPATIAL DISTRIBUTION OF ATMOSPHERIC CS-137 RELEASED FROM THE FUKUSHIMA NUCLEAR PLANT ACCIDENT MEASURED ON BOARD SHIP OVER THE NORTH PACIFIC ^T | | |
| 13:30 | | 13:30 | <u>Nagao, S.</u> ; Kanamori, M.; Tomihara, S.; Ochiai, S.; Iwata, M.; Inoue, M.; Yamamoto, M.: EXPORT OF CS-134 AND CS-137 IN THE FUKUSHIMA RIVER SYSTEMS AT THE HEAVY RAIN EVENT IN SEPTEMBER 2011 | | |
| 14:00 | | 14:00 | | | |

* represents Invited presentations

THURSDAY

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| 14:15 | <u>Yosuke, Y.</u> : NUMERICAL SIMULATION OF RADIONUCLIDES TRANSPORT THROUGH SUSPENDED MATERIAL INTO THE TOKYO BAY | SS33 FRESHWATER BIODIVERSITY: MONITORING, FORECASTING, AND MANAGEMENT STRATEGIES |
| 14:30 | <u>Zheng, J.</u> ; Aono, T.; Uchida, S.; Zhang, J.; Honda, M. C.: PLUTONIUM ISOTOPES IN MARINE SEDIMENTS AFTER THE FUKUSHIMA DNPP ACCIDENT | <i>Chair(s):</i> Klement Tockner, tockner@igb-berlin.de Takehito Yoshida, cty@mail.ecc.u-tokyo.ac.jp <i>Location:</i> Piazza Hall-Piazzo Omi |
| 14:45 | <u>Buesseler, K. O.</u> ; Jayne, S. R.; Fisher, N. S.; Rypina, I. I.; Nishikawa, J.: FUKUSHIMA-DERIVED RADIONUCLIDES IN THE OCEAN OFF JAPAN | 13:30 <u>Dudgeon, D.</u> : THE TRAGEDY OF THE FRESHWATER COMMONS: GLOBAL THREATS TO RIVERINE BIODIVERSITY IN THE ANTHROPOCENE ^T |
| 15:00 | <u>Casacuberta, N.</u> ; Masqué, P.; Garcia-Orellana, J.; Kenna, T. C.; Garcia-Tenorio, R.; Pike, S.; Buesseler, K. O.: RELEASES AND DISTRIBUTION OF SR-90, SR-89 AND PU ISOTOPES IN SEAWATER OFF JAPAN AS A CONSEQUENCE OF THE FUKUSHIMA DAI-ICHI NUCLEAR ACCIDENT | 14:00 <u>Nakano, S.</u> : BIODIVERSITY ASSESSMENT OF FRESHWATER ECOSYSTEMS: EFFORTS BY JAPANESE FRESHWATER RESEARCHERS* |
| 15:15 | <u>Nishikawa, J.</u> ; Baumann, Z.; Fisher, N. S.; Miyamoto, H.; Baumann, H.; Buesseler, K. O.; Tsuda, A.; Uematsu, M.: FUKUSHIMA-DERIVED RADIONUCLIDES IN MARINE ZOOPLANKTON AND THEIR RELATION TO THE COMMUNITY STRUCTURES | 14:15 <u>Okuda, N.</u> ; Kato, Y.; Komiya, T.; Okuzaki, Y.; Hori, M.; Tayasu, I.; Nagata, T.: BIOLOGICAL SPECIMENS TELL US A CENTURIAL HISTORY OF ECOSYSTEM ALTERATIONS IN THE ANCIENT LAKE BIWA |
| 16:00 | <u>Ishimaru, T.</u> ; Kanda, J.; Ito, Y.; Aono, T.; Watanabe, Y. W.; Aoyama, M.; Hamajima, Y.; Tsuda, A.; Uematsu, M.; Igarashi, S.: CURRENT STATUS OF RADIO CESIUM CONTAMINATION OF MARINE ECOSYSTEM OFF THE COAST OF FUKUSHIMA | 14:45 <u>Nishihiro, J.</u> : TOWARD THE RESTORATION OF AQUATIC MACROPHYTES: RESEARCHES AND PRACTICES IN TWO JAPANESE LAKES |
| 16:15 | <u>Bailly du Bois, P.</u> ; Laguionie, P.; Garreau, P.; Fiévet, B.; Boust, B.; Theetten, S.: MARINE SOURCE-TERM FOLLOWING FUKUSHIMA DAI-ICHI ACCIDENT DEDUCED FROM SEAWATER MEASUREMENTS: SIMULATION OF SUBSEQUENT MARINE DISPERSION | 15:00 <u>Takamura, N.</u> : THE ROLE OF IRRIGATION PONDS IN FRESHWATER BIODIVERSITY CONSERVATION IN JAPAN |
| 16:30 | <u>Estournel, C.</u> ; Marsaleix, P.; Ulses, C.: ASSESSMENT OF THE AMOUNT OF CESIUM 137 RELEASED TO THE PACIFIC OCEAN AFTER THE FUKUSHIMA ACCIDENT AND ANALYSIS OF ITS DISPERSION IN THE JAPANESE COASTAL WATERS | 15:15 <u>Watanabe, K.</u> ; Garcia, X. E.; Takemon, Y.; Tockner, K.; Monaghan, M. T.: DNA TAXONOMY REVEALS SPECIES DIVERSITY AND HABITAT SPECIALIZATION OF CHIRONOMIDAE (DIPTERA) IN THE TAGLIAMENTO RIVER, ITALY |
| 16:45 | <u>Yoshida, S.</u> ; Jayne, S. R.; Rypina, I.; Buesseler, K.: CIRCULATION AND EDDY VARIABILITY OBSERVED SOUTH OF FUKUSHIMA | 16:00 <u>Tanabe, A. S.</u> ; Toju, H.: HIGH ACCURACY AND HIGH PRECISION TAXONOMIC IDENTIFICATION OF HOST ORGANISMS OF BARCODE DNA SEQUENCES |
| 17:00 | <u>Aoyama, M.</u> ; <u>Tsumune, D.</u> ; Uematsu, M.; Gamo, T.; Kondo, F.; Hamajima, Y.: TEMPORAL VARIATION OF RADIOCAESIUM ACTIVITY ALONG THE COAST LINE NEAR FUKUSHIMA DAI-ICHI NPP ACCIDENT: OBSERVATIONS AND MODEL SIMULATION | 16:15 <u>Chan, H.</u> ; Karraker, N. E.; Thomas, D. C.; Kusrini, M.: ARE WE LOSING COMMON AND WIDESPREAD SPECIES? IMPLICATIONS FROM THE PHYLOGEOGRAPHY OF THE FLOATING FROG (OCCIDOZYGA LIMA) |
| 17:15 | <u>Choi, Y.</u> ; Kida, S.; Takahashi, K.: DISPERSION OF RADIONUCLIDES RELEASED FROM THE FUKUSHIMA DAIICHI NUCLEAR POWER PLANTS | 16:30 <u>Striebel, M.</u> ; Schabköhl, S.; Hingsamer, P.; Weigelhofer, G.; Hein, T.; Weigert, A.: TEMPERATURE AND SPECIES RICHNESS EFFECTS IN PHYTOPLANKTON COMMUNITIES |
| 17:30 | <u>Ikeda, M.</u> : INITIAL RESULTS OF MODEL INTER-COMPARISON PROJECT FOR RADIONUCLIDE DISTRIBUTIONS FROM FUKUSHIMA-1 | 16:45 <u>Tarvainen, M.</u> ; Ventelä, A. M.; Kirkkala, T.: NATURE CONSERVATION STRENGTHENS LAKE RESTORATION IN SW FINLAND |
| 17:45 | <u>Tsumune, D.</u> ; Tsubono, T.; Aoyama, M.; Hirose, K.: LONG-TERM SIMULATION FOR DISTRIBUTION OF ¹³⁷ CS FROM THE FUKUSHIMA DAIICHI NUCLEAR POWER PLANT BY A REGIONAL OCEAN MODEL* | 17:00 <u>Sommerwerk, N.</u> ; Tockner, K.; Hering, D.; Freyhof, F.; Wolter, C.: EUROPEAN FRESHWATER BIODIVERSITY: PATTERNS, STRESSORS AND CONSERVATION PRIORITIES AT THE CATCHMENT SCALE |
| | | 17:15 <u>Nakamura, F.</u> : SEDIMENT REGIME: ANOTHER IMPORTANT PARADIGM FOR RIVER MANAGEMENT |
| | | 17:30 <u>Tockner, K.</u> : EUROPEAN RIVERS UNDER PRESSURE |
| | | 17:45 <u>Yoshida, T.</u> : INTEGRATIVE RESEARCH FOR ECOLOGICAL RESTORATION: A CASE STUDY IN LAKE MIKATA (FUKUI, JAPAN) |

SS37 TERRESTRIAL SUBSIDIES AND THE RESILIENCE OF AQUATIC ECOSYSTEMS

Chair(s): Michael J. Vanni, vannimj@muohio.edu
 Michael L. Pace, mlp5fy@virginia.edu
 Sabine Hilt, hilt@igb-berlin.de

Location: Room 3-Collabo Shiga

- 13:30 Hilt, S.; Attermeyer, K.; Brauns, M.; Brothers, S.; Gaedke, U.; Kosten, S.; Lischke, B.; Mooij, W. M.; Scharnweber, K.; Svaranta, J.; Vanni, M. J.; Janse, J.; Casper, P.; Grossart, H. J.; Lewandowski, J.; Kohler, J.; Mehner, T.: LINKING TERRESTRIAL CARBON SUBSIDIES TO SHALLOW LAKES' RESILIENCE^{*}
- 14:00 Lischke, B.; Hilt, S.; Janse, J. H.; Mehner, T.; Mooij, W. M.; Gaedke, U.: TERRESTRIAL ORGANIC MATTER AFFECTS THE RESILIENCE OF SHALLOW LAKES – A MODELING STUDY
- 14:15 Jones, S. E.; Lennon, J. T.: IMPLICATIONS OF "BROWNING" FOR AQUATIC ECOSYSTEM STABILITY
- 14:30 Guillemette, F.; McCallister, S. L.; del Giorgio, P. A.: SELECTIVE CONSUMPTION AND DIFFERENTIAL ALLOCATION TO BIOMASS AND RESPIRATION OF ALGAL VERSUS TERRESTRIALLY-DERIVED C IN FRESHWATER BACTERIOPLANKTON
- 14:45 del Giorgio, P. A.; Berggren, M.; Ziegler, S.: LARGE-SCALE PATTERNS IN BACTERIOPLANKTON ALLOCHTHONY ACROSS BOREAL LAKES: EVIDENCE FROM FATTY ACID MARKERS
- 15:00 Morales-Williams, A. M.; Downing, J. A.: SUSTAINED ATMOSPHERIC CO₂ UPTAKE IN ANTHROPOGENICALLY EUTROPHIC LAKES
- 15:15 Halbedel, S.; Büttner, O.; Schade, S.; Weitere, M.: COUPLING OF CARBON TURNOVER, MICROBIAL COMMUNITY STRUCTURE AND ENVIRONMENTAL FACTORS IN CENTRAL EUROPEAN MOUNTAIN STREAMS

SS46 CLIMATE AND GLOBAL ENVIRONMENTAL CHANGES IN AQUATIC ECOSYSTEMS

Chair(s): Bo Qiu, bo@soest.hawaii.edu
 Dr. Takeshi Okunishi, okunishi@affrc.go.jp
 Yu-Heng Tseng, yhtseng@as.ntu.edu.tw
 Yu-San Han, yshan@ntu.edu.tw

Location: Theatre-Biwako Hall

- 09:00 Qiu, B.; Chen, S.: INTERANNUAL-TO-DECadal VARIABILITY IN THE BIFURCATION OF THE NORTH EQUATORIAL CURRENT OFF THE PHILIPPINES^{*}
- 09:30 Deyle, E. R.; Sugihara, G.; Fogarty, M. J.; Hsieh, C. H.; Kaufman, L.; MacCall, A. D.; Munch, S. B.; Perretti, C. T.; Ye, H.; Walker, P.: A NEW TOOL FOR ECOSYSTEM BASED MANAGEMENT ILLUMINATES CLIMATE EFFECTS IN PACIFIC SARDINE
- 09:45 Sugisaki, H.; Ichikawa, T.; Hirota, Y.; Kuriyama, M.; Hidaka, K.: LONG TERM VARIATION OF COPEPOD COMMUNITIES IN KUROSHIO WARM CURRENT AREA OFF SOUTHERN JAPAN
- 10:00 Tu, C.; Tian, Y.; Hsieh, C.: CLIMATE EFFECTS ON SPATIAL-TEMPORAL VARIATION OF DEMERSAL FISH ASSEMBLAGES IN THE TSUSHIMA WARM CURRENT REGION OF THE JAPAN SEA

- 13:30 Stips, A. K.; Lilover, M. J.: RECENT CLIMATE CHANGE: PASSING AN ABRUPT TRANSITION?
- 13:45 Tominaga, K.; Finstad, A. G.; Kaste, Ø.; Andersen, T.: FUTURE CLIMATE CHANGE IMPACT ON LAKES IN FENNOSCANDIA: A DYNAMIC MECHANISTIC MODELLING APPROACH
- 14:00 Kirkkala, T.; Tarvainen, M.; Ventelä, A. M.: CLIMATIC VARIATION AFFECTS THE SEASONALITY OF THE RIVER FLOWS
- 14:15 Taranu, Z. E.; Gregory-Eaves, I.: HAVE CYANOBACTERIA BECOME MORE ABUNDANT OVER THE PAST ~200 YEARS?
- 14:30 García Molinos, Jorge, J.; Viana, Mafalda; Jackson, A.; Donohue, I.: EFFECTS OF GLOBAL CLIMATE CHANGE AND LOCAL HUMAN PRESSURES ON THE WATER LEVEL REGIMES OF NATURAL LAKES
- 14:45 Koinig, K. A.; Ilyashuk, E.; Psenner, R.: THE NICKEL CONUNDRUM OF ALPINE LAKES
- 15:00 Han, Y.: DISPERSAL OF THE LARVAL JAPANESE EEL (*ANGUILLA JAPONICA*) IN EAST ASIA: TEMPERATURE AND OCEANIC CURRENT-DEPENDENT RECRUITMENT
- 15:15 Pohlon, E.; Fandino, A.; Marxsen, J.: EFFECTS OF DROUGHT AND REWETTING ON THE MICROBIAL COMMUNITY IN STREAMBED SEDIMENTS

SS51 NITROGEN LIMITATION IN FRESHWATER - IS NITROGEN REDUCTION ECOLOGICALLY MEANINGFUL AND ECONOMICALLY FEASIBLE?

Chair(s): Claudia Wiedner, wiedner@tu-cottbus.de
 Roxane Maranger, r.maranger@umontreal.ca
 Tobias Vrede, tobias.vrede@slu.se

Location: Room 207-Piazzo Omi

- 13:30 Wurtsbaugh, W. A.; Paerl, H. W.; Lewis, Jr., W. M.: NITROGEN CONTROL OF ALGAL PRODUCTION IN LINKED FRESHWATER-MARINE ECOSYSTEMS: IS IT WORTH IT?^{*}
- 14:00 Schindler, D. W.; Hecky, R. E.: REVERSING EUTROPHICATION OF LAKES: CONTROL PHOSPHORUS, NITROGEN OR BOTH?*
- 14:15 Dolman, A. M.; Wiedner, C.: MODELLING PHYTOPLANKTON BIOVOLUME AS A WEIGHTED FUNCTION OF BOTH NITROGEN AND PHOSPHORUS IMPROVES PREDICTIONS AND PROVIDES ESTIMATES OF CRITICAL N:P RATIOS*
- 14:30 Kolzau, S.; Dolman, A. M.; Rücker, J.; Wiedner, C.: SEASONAL PATTERN OF NITROGEN AND PHOSPHORUS LIMITATION IN FOUR DIFFERENT LAKES DETERMINED BY NUTRIENT ENRICHMENT BIOASSAYS*
- 14:45 Burford, M. A.; Davis, T. W.; Muhid, P.; Prentice, M. J.: NUTRIENT UTILIZATION STRATEGIES FOR PHYTOPLANKTON IN STRATIFIED SUBTROPICAL RESERVOIRS*
- 15:00 Maranger, R.; Monchamp, M. E.; Botrel, M.; Pick, F.; Beisner, B.; Villemur, R.: CYANOBACTERIAL TOXICITY AND N FIXATION: DO THEY CO-OCCUR UNDER HIGH P AND LOW DIN CONDITIONS?*
- 15:15 Fischer, H.; Ritz, S.: NITROGEN TURNOVER IN A LARGE RIVER - ASSIMILATION VS. DENITRIFICATION?*

THURSDAY

SS55 LINKING ORGANISMS' SMALL-SCALE PROCESSES AND THEIR ENVIRONMENTS TO GLOBAL EFFECTS

- Chair(s):* Soeren Ahmerkamp, sahmerka@mpi-bremen.de
Dr. Eva-Maria Zetsche, ezetsche@vub.ac.be
Prof. Dr. Arzhang Khalili, akhalili@mpi-bremen.de
- Location:* Room 2-Collabo Shiga
- 16:00 Seuront, L.; Chapperon, C.; Stanley, H. E.: BEHAVIORALLY-MEDIATED IMPACT OF ANTHROPOGENIC FORCING AND CLIMATE CHANGE: A CASE FROM THE DOWNSIDE^T
- 16:30 Menden-Deuer, S.; Harvey, E. L.; Graff, J. R.: ORGANISMAL MOVEMENT BEHAVIORS, CELL-CELL INTERACTIONS AND THE FUNCTIONING OF MARINE MICROBIAL FOOD WEBS
- 16:45 Kremien, M.; Shavit, U.; Mass, T.; Genin, A.: WHY DO SOME CORALS PULSATE?
- 17:00 Ahmerkamp, S. H.; Kindler, K.; Kuypers, M.; Khalili, A.: HINDERED SETTLING AND SCALAR TRANSPORT BY GENERIC MARINE AGGREGATES IN A STRATIFIED AMBIENT
- 17:15 Simó, R.; Alacid, E.; Garcés, E.; Petrou, K. L.; Ruiz-González, C.; Saló, V.: ROLE OF DIMETHYLATED SULFUR IN TROPHIC TRANSFER AND CHEMICAL SIGNALLING AMONG PLANKTONIC EUKARYOTES
- 17:30 Jiang, H.; Katija, K.; Lawson, G. L.; Wiebe, P. H.: THE FLOW FIELD GENERATED BY THE COPEPOD /CALANUS FINMARCHICUS/ DURING SWIMMING AND JUMPING
- 17:45 Zetsche, E.; Dubois, F.; Yourassowsky, C.; El Mallahi, A.; Meysman, F.: VISUALIZING THE "INVISIBLE" – USING DIGITAL HOLOGRAPHIC MICROSCOPY TO QUANTIFY BIOLOGICALLY PRODUCED EXOPOLYMERS

SS58 NITROGEN BIOGEOCHEMISTRY AND PERTURBATION IN TERRESTRIAL - FRESHWATER SYSTEMS

- Chair(s):* Keisuke Koba, keikoba@cc.tuat.ac.jp
Muneoki Yoh, yoh@cc.tuat.ac.jp
Yoshiyuki Inagaki, yinagaki@affrc.go.jp
- Location:* Room 207-Piazzo Omi
- 16:00 Yoh, M.: NITROGEN BIOGEOCHEMISTRY AND PERTURBATION IN TERRESTRIAL - FRESHWATER SYSTEMS: A BROAD OVERVIEW OF THE TOPIC^T
- 16:30 Fujii, K.; Hayakawa, C.; Funakawa, S.; Kosaki, T.: PROTON CYCLES OF BROAD-LEAVED FORESTS IN JAPAN AND ITS IMPLICATION FOR SOIL ACIDIFICATION*
- 16:45 Fang, Y.; Koba, K.; Zhou, G.; Makabe, A.; Suzuki, K.; Zhang, D.; Yoh, M.: DIRECT EXPORT OF ATMOSPHERIC NITRATE TO STREAM IN A NITROGEN-SATURATED TROPICAL FOREST OF SOUTHERN CHINA QUANTIFIED BY TRIPLE OXYGEN ISOTOPES OF NITRATE*
- 17:00 Osaka, K.; Komaki, N.; Murata, T.; Nakamura, T.; Nishida, K.; Nagafuchi, O.: ATMOSPHERIC NITRATE DISCHARGE PROCESSES FROM FORESTED WATERSHEDS*

- 17:15 Yan, B. X.; Zhu, H.: THE TRANSPORT OF NITROGEN FROM PADDY FIELD TO RIVERS: A CASE STUDY IN SANJIANG PLAIN, NORTHEAST CHINA*
- 17:30 Liu, X. Y.; Koba, K.; Makabe, A.; Li, X. D.; Yoh, M.; Liu, C. Q.: ISOTOPIC INTERPRETATION OF N LOADS AND ALTERED N BIOGEOCHEMICAL CYCLES ALONG A CITY RIVER RECEIVING HIGH SEWAGE N INPUTS IN SOUTHWESTERN CHINA*
- 17:45 Onodera, S.; Onishi, K.; Saito, M.; Shimizu, Y.; Yoshikawa, M.: SPATIAL DISTRIBUTION CHARACTERISTIC OF DISSOLVED N₂O IN THE UNCONFINED GROUNDWATER OF AN AGRICULTURAL CATCHMENT AFFECTED BY SIGNIFICANT FERTILIZER APPLICATION*
- SS60 INFLUENCE OF CLIMATIC AND ENVIRONMENTAL CHANGE ON INLAND WATER BODIES**
- Chair(s):* Michio Kumagai , kumagai-m@lberi.jp
David M. Livingstone, living@eawag.ch
Charles R. Goldman , crgoldman@ucdavis.edu
Rolf Kipfer, kipfer@eawag.ch
- Location:* Theatre-Biwako Hall
- 16:00 Goldman, C. R.: THE LIMNOLOGICAL CHALLENGE: UNDERSTANDING AND MITIGATING IMPACTS OF CLIMATIC CHANGE AND GLOBAL WARMING.*
- 16:15 Chandra, S.; Trowbridge, W.; Henery, R.; Goldman, C. R.: DOES CLIMATE TRUMP FISH OR FISH TRUMP CLIMATE? LONG-TERM (>52 YEAR) ECOLOGICAL DYNAMICS OF ZOOPLANKTON COMMUNITY STRUCTURE IN SUBALPINE CASTLE LAKE
- 16:30 Ginter, K.; Kangur, K.; Kangur, A.; Kangur, P.; Haldna, M.: FACTORS AFFECTING THE SUCESS OF PIKEPERCH POPULATION IN LARGE SHALLOW LAKES OF ESTONIA
- 16:45 Ventelä, A. M.; Tarvainen, M.; Kirkkala, T.; Sarvala, J.: CLIMATE RELATED CHALLENGES OF LONG TERM BIOMANIPULATION OF LAKE SKKYLN PYHJJRRVI (SW FINLAND)
- 17:00 Harrison, J. A.; Frings, P.; Beusen, A. H.; Conley, D. J.; McCrackin, M.: REGIONAL AND GLOBAL CONTROLS AND POTENTIAL SIGNIFICANCE OF DISSOLVED SILICA RETENTION IN LAKES AND RESERVOIRS
- 17:15 MacKenzie, R. A.; Giardina, C. P.; Strauch, A. M.; Tingley III, R. W.; Foulk, P.; Bruland, G. L.; Heider, C.; Salminen, E.: THE HILO-HAMAKUA COAST, HAWAII: A MODEL ECOSYSTEM TO EXAMINE IMPACTS OF CLIMATE CHANGE AND INVASIVE SPECIES ON TROPICAL STREAMS
- 17:30 Foulk, P. B.; Strauch, A. M.; Tingley, R. W.; MacKenzie, R. A.: TOP-DOWN AND BOTTOM-UP CONTROLS ON BIOFILM GROWTH IN HAWAIIAN STREAMS
- 17:45 Li, E.; Chung, N.; Bae, M. J.; Kwon, Y.; Park, Y. S.: POTENTIAL VULNERABILITY AND DISTRIBUTION OF BENTHIC INSECTS (EPHEMEROPTERA, ODONATA, PLECOPTERA, TRICHOPTERA, AND COLEOPTERA) TO EFFECTS OF GLOBAL WARMING

* represents Tutorial presentations

SS64 CHANGES IN THE BIOGEOCHEMISTRY AND PRIMARY PRODUCTIVITY OF THE WESTERN ARCTIC AND SUBARCTIC SEAS: REGIONAL PROCESSES AND LARGE-SCALE CONNECTIVITY

Chair(s): Eiji Watanabe

Jean-Éric Tremblay, jean-eric.tremblay@bio.ulaval.ca
 Kevin Arrigo, arrigo@stanford.edu
 Roxane Maranger, r.maranger@umontreal.ca

Location: Room 1-Collabo Shiga

- 09:00 Bronk, D. A.; Sipler, R.; Baer, S.; Roberts, Q.; Connelly, T.; Sines, K.; Tait, Z.; Frischer, M.; Yager, P.: COMPETITION BETWEEN PHYTOPLANKTON AND BACTERIA FOR NITROGEN IN THE COASTAL CHUKCHI SEA^{*}
- 09:30 Tremblay, J. E.; Lefouest, V.; Martin, J.: NUTRIENT CYCLING AND PRIMARY PRODUCTIVITY IN THE BEAUFORT SEA: LARGE-SCALE AND REGIONAL CONSIDERATIONS
- 09:45 Blais, M.; Tremblay, J. E.; Jungblut, A. D.; Lovejoy, C.: NITROGEN FIXATION AND IDENTIFICATION OF POTENTIAL DIAZOTROPHS IN THE CANADIAN ARCTIC
- 10:15 Matsuno, K.; Yamaguchi, A.; Imai, I.: ANNUAL AND SPATIAL CHANGES IN COPEPOD COMMUNITY STRUCTURE AND BODY CHEMICAL CONTENTS IN THE WESTERN ARCTIC OCEAN DURING SUMMERS OF 2008 AND 2010
- 14:00 Itoh, M.; Pickart, R.; Arrigo, K.; Vagle, S.; Zhang, J.; Ashjian, C.; Okkonen, S.: WATER MASSES AND PROPERTY FLUXES IN THE BARROW CANYON DURING SUMMER 2010: RESULTS FROM THE DBO REPEAT TRANSECT
- 14:15 Watanabe, E.; Kishi, M. J.; Ishida, A.; Aita, M. N.: CAN BEAUFORT SHELF-BREAK EDDIES ALTER BIOLOGICAL REGIMES IN THE WESTERN ARCTIC BASIN ?
- 14:30 Matsuoka, A.; Hooker, S. B.; Bricaud, A.; Gentili, B.; Babin, M.: ESTIMATING CONCENTRATIONS OF DISSOLVED ORGANIC CARBON FOR SOUTHERN BEAUFORT SEA WATERS USING SATELLITE OCEAN COLOR REMOTE SENSING
- 14:45 Xie, H.; Bélanger, S.; Song, G.; Benner, R.; Tremblay, J. É.; Babin, M.: PHOTOAMMONIFICATION IN THE SOUTHEASTERN BEAUFORT SEA AND ITS BIOGEOCHEMICAL IMPLICATIONS

15:00 Garcia-Martin, E. E.; Serret, P.; Dumont, E.; McNeill, S.; Lordsmith, S. L.; Brand, T. D.; Leakey, R. J.: PRIMARY PRODUCTIVITY, COMMUNITY RESPIRATION AND BACTERIAL RESPIRATION IN ARCTIC ICE-COVERED WATERS DURING SUMMER 2010

15:15 Martin, J.; Tremblay, J. E.: RECENT ADVANCES IN OUR UNDERSTANDING OF THE SUBSURFACE CHLOROPHYLL MAXIMUM IN THE ARCTIC OCEAN

SS69 UNDERWATER IMAGING AND SENSING WITH INNOVATIVE TECHNOLOGIES

Chair(s): Blair Thornton, blair@iis.u-tokyo.ac.jp

Toshihiro Maki, maki@iis.u-tokyo.ac.jp
 Tamaki Ura, ura@iis.u-tokyo.ac.jp
 Adrian Bodenmann, adrian@iis.u-tokyo.ac.jp

Location: Room 305-Piazzo Omi

- 09:00 Kim, K.; Ura, T.; Ooyabu, Y.; Nakane, K.; Obata, T.; Koyama, H.; Kojima, J.: DEVELOPMENT AND DEPLOYMENT OF A MISSION-ADAPTIVE TRANSFORMABLE AUV FOR MULTIMODAL UNDERSEA APPLICATIONS
- 09:15 Schofield, O. M.; Jones, C.; Webb, D.; Kohut, J.; Glenn, S.: ANCHORING SCIENCE DISCOVERY IN HURRICANES AND POLAR SEAS USING ROBOTIC NETWORKS
- 09:30 Bodenmann, A.; Thornton, B.; Nakatani, T.; Ura, T.: INTRODUCTION OF A 3D SEAFLOOR MAPPING METHOD AND ITS APPLICATION TO HYDROTHERMALLY ACTIVE SITES
- 09:45 Kumagai, M.; Aota, Y.; Ura, T.: HYDROTHERMAL VENTS IN LAKE BIWA DETECTED BY AUV "TANTAN"
- 10:00 Maki, T.; Uta, T.; Sakamaki, T.; Kume, A.; Kondo, H.: LARGE-AREA MAPPING OF BENTHIC HABITATS THROUGH AUTONOMOUS ROBOTIC SURVEYS
- 10:15 Contreira, L.; Le Bris, N.: AUTONOMOUS VOLTAMMETRIC SENSOR FOR MEASURING SULFIDE VARIABILITY IN DEEP SEA CHEMOSYNTHETIC HABITATS

THURSDAY

Thursday Posters

GS05 CHEMICAL PROCESSES IN AQUATIC ECOSYSTEMS

Chair(s): Gustavo Martinez, tavomarti2011@gmail.com

Location: Biwako Hall Foyer

- 149 Shiraishi, F.: CHEMICAL CONDITIONS FAVORING PHOTOSYNTHESIS-INDUCED STROMATOLITE FORMATION
- 150 Okumura, T.: VARIATION OF THE MICROBIAL PROCESSES FORMING DAILY LAMINATION IN ARAGONITE TRAVERTINES
- 151 Tate, Y.; Takeda, H.; Ara, Z.; Nakagawa, K.; Maki, T.; Hasegawa, H.: EFFECT OF SIZE-FRACTIONATED HUMIC SUBSTANCES ON THE BIOAVAILABILITY OF IRON SPECIES IN COASTAL SEAWATER
- 152 Sawai, H.; Chao, L.; Begum, Z. A.; Maki, T.; Mizutani, S.; Hasegawa, H.: DETERMINATION AND PARTITIONING OF CESIUM IN SUSPENDED SEDIMENTS ORIGINATED FROM SOILS
- 153 Nakamura, A.; Yamamuro, M.; Hirano, S.; Tatarazako, N.: BEHAVIOR ANALYSIS OF TITANIUM DIOXIDE NANOPARTICLES IN WATER USING DYNAMIC LIGHT SCATTERING METHOD
- 154 Leote, C.; Epping, E.: PHOSPHORUS IN THE WADDEN SEA: THE SEDIMENT'S CONTRIBUTION TO OVERALL PRIMARY PRODUCTION
- 155 Ginger, L. J.; Zimmer, K. D.; Hanson, M. A.; Herwig, B. R.: WATERSHED VERSUS WITHIN-LAKE CHARACTERISTICS AS PREDICTORS OF N:P RATIOS IN SHALLOW LAKES
- 156 Kubo, A.; Maeda, Y.; Kanda, J.: TOKYO BAY AS A SIGNIFICANT NET SINK FOR CARBON DIOXIDE
- 157 Hashihama, F.; Kinouchi, S.; Kanda, J.: DISTRIBUTION OF ENZYMATICALLY LABILE DISSOLVED ORGANIC PHOSPHORUS IN THE OLIGOTROPHIC WESTERN NORTH PACIFIC
- 158 Yamada, N.; Fukuda, H.; Ogawa, H.; Saito, H.; Suzumura, M.: ACTIVITIES OF ECTOENZYMES AND BACTERIA IN SINKING PARTICULATE MATTER IN THE WESTERN NORTH PACIFIC OCEAN
- 159 Tada, K.; Yamaguchi, S.; Yamaguchi, H.; Kayama, M.; Harada, K.; Tanda, M.; Fujiwara, M.; Ichimi, K.; Honjo, T.: DECREASE OF NUTRIENT FLUX FROM THE SEDIMENT REDUCED THE SURFACE WATER NUTRIENT CONCENTRATION IN THE SETO INLAND SEA

GS07 BENTHOS BIOLOGY AND ECOLOGY

Chair(s): Shigeki Wada, swadasbm@kurofune.shimoda.tsukuba.ac.jp
Luca A Van Duren, luca.vanduren@deltares.nl
Iris E. Hendriks, iris@imedea.uib-csic.es

Location: Biwako Hall Foyer

- 160 Ishida, N.; Mitamura, O.: PHYSIOLOGICAL RESPONSE OF EPILITHIC ALGAE TO NUTRIENT ENRICHMENT AT THE LITTORAL AREA IN THE NORTH BASIN OF LAKE BIWA, JAPAN

- 161 Yutani, K.: THE EFFECT OF FEEDING AND NESTING BEHAVIOR OF SMALL SAND CRABS ON THE COMMUNITY FORMATION OF *SUADEA MARITIMA*
- 162 Sentoku, A.; Ezaki, Y.: MODULAR INCREASE BY MEANS OF BUDDING AND RESULTANT COLONIAL GROWTH IN *SCLERACTINIA DENDROPHYLLIA*
- 163 Tokuda, Y.; Ezaki, Y.: INNOVATIVE ATTACHMENT STRUCTURES *INRHIZOTROCHUS* (SCLERACTINIA): THEIR EVOLUTIONARY SIGNIFICANCE IN TERMS OF THE INVASION INTO HARD SUBSTRATES
- 164 Liu, E. Y.; Lin, H. L.; Shiao, J. C.: VERTICAL MIGRATION OF DEEP-SEA DEMERSAL CUSK-EELS REVEALED BY OTOLITH MICROSTRUCTURE AND STABLE ISOTOPE COMPOSITION
- 165 Nishihara, G. N.: OXYGEN DYNAMICS AND PHOTOSYNTHESIS RATES IN A SEAGRASS MEADOW
- 166 Abe, H.; Teramoto, W.; Kondoh, T.; Sato-Okoshi, W.; Nishitani, G.; Endo, Y.: SWIMMING BEHAVIOR OF SPOON WORM, *URECHIS UNICINCTUS* (ECHIURA)
- 167 Fadel, F. R.; Sigl, R.; Laforsch, C.: CONTRIBUTION OF MIGRATION TO *ACANTHASTER PLACI* OUTBREAKS: A DATASET SURVEY OF THE GREAT BARRIER REEF

GS08 COMMUNITY PROCESSES AND FOOD WEB

Chair(s): Takefumi Nakazawa, take.nkzw@gmail.com

Location: Biwako Hall Foyer

- 168 Nakazawa, T.; Ushio, M.; Kondoh, M.: SCALE DEPENDENCE OF PREDATOR-PREY MASS RATIO: DETERMINANTS AND APPLICATIONS
- 169 Li, L.: DIATOM COMMUNITY SUCCESSION IN THE RECENT HISTORY OF A EUTROPHIC YUNNAN PLATEAU LAKE, LAKE DIANCHI IN THE SUBTROPICAL CHINA
- 170 Katayama, S.; Kudo, T.: FOOD SELECTION OF YOUNG RED SEA BREAM IN *ZOSTERA* BED BY CAGE EXPERIMENT
- 171 Sanseverino, A. M.; Bastviken, D.; Sundh, I.; Pickova, J.; Enrich-Prast, A.: METHANE CARBON SUPPORTS AQUATIC FOOD WEBS TO THE FISH LEVEL

SS04 FOOD-WEB EFFECTS ON OCEAN BIOGEOCHEMICAL PROCESSES: ENVIRONMENTAL CONTROL AND INTERACTIONS

Chair(s): Louis Legendre, legendre@obs-vlfr.fr
Richard B. Rivkin, rrivkin@mun.ca
Toshi Nagata, nagata@aori.u-tokyo.ac.jp

Location: Biwako Hall Foyer

- 173 Sukigara, C.; Mino, Y.; Kawakami, H.; Honda, M.; Fujiki, T.; Matsumoto, K.; Wakita, M.; Kitamura, M.; Saino, T.; Ishizaka, J.: SEASONAL VARIATIONS OF SETTLING VELOCITY OF PARTICULATE MATTERS IN THE SUBARCTIC AND SUBTROPICAL REGIONS OF THE WESTERN NORTH PACIFIC
- 174 Hamasaki, K.; Watanabe, K.; Tada, Y.; Takahashi, K.; Saito, H.; Miki, T.: BACTERIAL COMMUNITY STRUCTURES IN RELATION TO MULTIPLE ENVIRONMENTAL FACTORS IN THE KUROSHIO-OYASHIO TRANSITION OF THE WESTERN NORTH PACIFIC

^T represents Tutorial presentations

- 175 Uchimiya, M.; Fukuda, H.; Hamasaki, K.; Honda, M.; Ogawa, H.; Nagata, T.: LARGE SEASONAL VARIATION OF HETEROTROPHIC PROKARYOTE PRODUCTION IN THE MESOPELAGIC LAYER OF THE SUBTROPICAL PACIFIC
- 176 Yosuke, Y.; Hideki, F.; Katsuyuki, I.; Kazuhiro, K.; Toshi, N.: ATTACHED BACTERIA REDUCE SETTLING VELOCITY OF ORGANIC AGGREGATES IN SEAWATER
- 178 Yokokawa, T.; Yang, Y.; Motegi, C.; Nagata, T.: LARGE-SCALE GEOGRAPHICAL VARIATION IN PROKARYOTIC ABUNDANCE AND PRODUCTION IN MESO- AND BATHYPELAGIC ZONES OF THE CENTRAL PACIFIC AND THE SOUTHERN OCEAN
- 179 Montani, S.; Sekiguchi, I.; Suga, N.; Kajihara, R.; Komorita, T.; Shibanuma, S.: ROLES OF MIGRATORY BIRDS ON THE PROCESS OF NITROGEN CYCLING DURING WINTER IN A SUB-ARCTIC BRACKISH LAGOON, HOKKAIDO, JAPAN
- 180 Fukuda, H.; Uchimiya, M.; Ogawa, H.; Nagata, T.: MICROBIAL FOOD WEB IN DEEP ARCTIC WATERS
- SS06 INTERACTION OF PHYSICAL, CHEMICAL AND BIOLOGICAL PROCESSES IN AQUATIC ECOSYSTEMS: PAST, PRESENT, AND FUTURE**
- Chair(s):* Prof. Ilia Ostrovsky, ostrovsky@ocean.org.il
Prof. Michio Kumagai, kumagai-m@lberi.jp
Prof. S. Geoffrey Schladow, gschladow@ucdavis.edu
Prof. Sally MacIntyre, sally@icess.ucsb.edu
- Location:* Biwako Hall Foyer
- 182 Viljanen, M.; Rahkola-Sorsa, M.; Voutilainen, A.; Jurvelius, J.; Lilja, J.: STORM BREAKS DOWN PLANKTON AND FISH SPATIAL STRUCTURES AND TEMPERATURE STRATIFICATION WITHIN A FEW HOURS – COMPLETE “RECOVERY” TAKES SEVERAL DAYS
- 183 Tanaka, Y.; Maie, N.; Nagasaki, M.; Oomizu, M.; Ebina, H.; Shima, E.: SEASONAL AND SPATIAL VARIATIONS OF FLUORESCENCE PROPERTIES OF DISSOLVED ORGANIC MATTER IN A COOL-TEMPERATE LAKE, JAPAN
- 184 Arai, H.; Fukushima, T.: IMPACTS OF LONG-TERM SILICON INCREASE ON DIATOM BLOOMS IN LAKE KASUMIGURA, JAPAN
- 185 Inoue, T.; Nakamura, Y.: EFFECTS OF VORTEX SHEDDING ON BENTHIC OXYGEN TRANSFER AT ROUGH SEDIMENT SURFACE
- SS21 LONG-TERM ECOSYSTEM AND BIODIVERSITY DYNAMICS: TIME-SERIES AND PALEOECOLOGICAL STUDIES**
- Chair(s):* Moriaki Yasuhara, moriakiyasuhara@gmail.com
Narumi K. Tsugeki, narumi.tsugeki@gmail.com
- Location:* Biwako Hall Foyer
- 186 Vande Castle, J. R.; Luecke, C.; Groffman, P.; Childers, D.; Ducklow, H.; Driscoll, C.; Schmitt, R.; Magnuson, J.; Siegel, D.; Cavanaugh, K.: KEY AQUATIC RESEARCH FINDINGS OF THE U.S. LONG TERM ECOLOGICAL RESEARCH PROGRAM
- 187 Takata, H.; Tanaka, S.; Seto, K.; Sakai, S.; Takayasu, K.; Khim, B. K.: CENTENNIAL-SCALE BIOTIC RESPONSES OF BENTHIC FORAMINIFERA TO CLIMATIC OSCILLATIONS IN ASO-KAI LAGOON, CENTRAL JAPAN
- 188 Lemon, D. D.; Borstad, G. A.; Brown, L. N.; Johnston, P. H.: MOORED MULTIPLE-FREQUENCY SONAR FOR LONG-TERM CONTINUOUS OBSERVATIONS OF ZOOPLANKTON AND FISH
- SS30 THE IMPACTS OF TSUNAMI AND THE FUKUSHIMA DAI-ICHI NUCLEAR POWER PLANTS ON OCEANS AND COASTAL ENVIRONMENTS**
- Chair(s):* Mitsuo Uematsu, uematsu@aori.u-tokyo.ac.jp
Ken Buesseler, kbuesseler@whoi.edu
Alice Newton, anewton@ualg.pt
Masumi YAMAMURO, yamamuro@k.u-tokyo.ac.jp
- Location:* Biwako Hall Foyer
- 190 Wu, J. W.; Zhou, K. B.; Dai, M. H.: IMPACTS OF FUKUSHIMA NUCLEAR ACCIDENT ON THE CHINA SEAS BASED ON ANTHROPOGENIC RADIONUCLIDE ^{137}Cs
- 191 Minghelli-Roman, A.; Charmasson, S.; Duffa, C.: STUDY OF PRE AND POST-TSUNAMI IMAGES OF THE FUKUSHIMA COAST USING SATELLITE SENSORS: AN HELP FOR A BETTER UNDERSTANDING OF THE RADIONUCLIDE RELEASES BEHAVIOR?
- 192 Katayama, A.; Ito, K.; Sasaki, K.; Katayama, S.: EFFECTS OF THE GREAT EARTHQUAKE AND TSUNAMI ON THE BRACKISH-WATER CLAM CORBICULA JAPONICA IN THE NATORI RIVER, MIYAGI, NORTHEASTERN JAPAN
- 193 Arnaud, M. Y.; Charmasson, S.; Parache, V.: TEMPORAL TRENDS OF RADIOCAESIUM IN BIOTA FROM THE COASTAL AREA IMPACTED BY THE FUKUSHIMA RADIOACTIVE RELEASES (ANALYSES OF JAPANESE AUTHORITIES DATA)
- SS32 HIGH LATITUDE AND ALTITUDE AQUATIC ECOSYSTEMS IN A CHANGING ENVIRONMENT**
- Chair(s):* Kazuhisa Chikita, chikita@mail.sci.hokudai.ac.jp
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John P. Smol, smolj@queensu.ca
Warwick F. Vincent, warwick.vincent@bio.ulaval.ca
- Location:* Biwako Hall Foyer
- 194 Kudoh, S.; Tanabe, Y.: VARIABILITIES OF OPTICAL PROPERTIES OF WATERS AND SPECTRAL ABSORPTION PATTERN OF PHYTOBENTHOS COMMUNITIES IN ANTARCTIC LAKES.
- 195 Forsström, L. J.: RESPONSES OF BENTHIC AND PLANKTONIC ALGAE TO COMBINED EFFECT OF INCREASED TEMPERATURE AND ALLOCHTHONOUS CARBON IN A SUBARCTIC LAKE
- 196 Tanabe, Y.; Hori, M.; Yamamoto, M.; Kudoh, S.: NUTRIENTS AND HYDROGEN SULFIDE DISTRIBUTION IN ANTARCTIC LAKE SEDIMENTS.
- 197 Hori, M.; Tanabe, Y.; Kudoh, S.; Yamamoto, M.: NUTRIENT FLOW IN ANTARCTIC LAKES ESTIMATED BY MEANS OF SEDIMENT ANALYSIS

THURSDAY

THURSDAY

- 198 Mizuno, A. N.; Sasaki, A.: MATHEMATICAL MODEL FOR COLOR PATTERN AND COMMUNITY STRUCTURE OF MAT-FORMING PHYTOBENTIC IN SHALLOW ANTARCTIC LAKES**
- 199 Beaudoin, A.; Rolland, N.; Pienitz, R.: PALEOCLIMATE OF THE NETTILLING LAKE (BAFFIN ISLAND, NUNAVUT, CANADA) AREA: A COMPARATIVE ANALYSIS OF LAKE SEDIMENT AND ICE CORE RECORDS.**
- SS33 FRESHWATER BIODIVERSITY: MONITORING, FORECASTING, AND MANAGEMENT STRATEGIES**
- Chair(s): Klement Tockner, tockner@igb-berlin.de
Takehito Yoshida, cty@mail.ecc.u-tokyo.ac.jp*
- Location: Biwako Hall Foyer*
- 200 Yoichi, O.; Bunkei, M.; Takehiko, F.; Jun, N.; Noriko, T.: USE OF VEGETATION INDICES TO DETECT AQUATIC MACROPHYTES FROM MULTISPECTRAL SATELLITE DATA**
- 201 Takahara, T.; Doi, H.; Minamoto, T.; Yamanaka, H.; Kawabata, Z.: DETECTION AND QUANTIFICATION OF FISH PRESENCE/BIOMASS IN PONDS USING ENVIRONMENTAL DNA**
- 202 Shibata, J.; Karube, Z.; Sakai, Y.; Takeyama, T.; Tayasu, I.; Satoh, Y.; Yachi, S.; Nakano, S.; Okuda, N.: HISTORICAL AND GEOGRAPHICAL PATTERNS OF BIODIVERSITY IN THE ANCIENT LAKE BIWA, JAPAN**
- 203 Yamashita, T.; Sato, T.; Kano, Y.; Huang, L.; Shimatani, Y.: FISH DIVERSITY AND ITS THREATS IN MIDDLE REACHES OF THE TIAOXI RIVER, CHINA**
- 204 Kano, Y.; Sato, T.; Toyama, H.; Yamashita, T.; Huang, L.: FISH DIVERSITY AND FLUVIAL ENVIRONMENT, AND THEIR RECENT TRANSITION IN MAINSTREAM OF THE EAST TIAOXI RIVER, CHINA**
- SS41 MIXING AND INTERNAL MOTIONS IN LAKES, RESERVOIRS AND OCEANS**
- Chair(s): Hidekatsu Yamazaki, hide@kaiyodai.ac.jp
Takashi Hosoda, hosoda.takashi.4w@kyoto-u.ac.jp
Alfred Wueest, Alfred.Wueest@eawag.ch
Michio Kumagai, kumagai-m@lberi.jp*
- Location: Biwako Hall Foyer*
- 205 Engelhardt, C.; Rizk, W.; Kirillin, G.: HOW TO PERFORM HIGH RESOLUTION PROFILING, IF THE LAKE ICE COVER IS TOO WEAK?**
- SS42 NEW FRONTIERS OF ISOTOPE TOOLS FOR BIOGEOCHEMISTRY, ECOLOGY AND ENVIRONMENTAL SCIENCES**
- Chair(s): Ichiro Tayasu, tayasu@ecology.kyoto-u.ac.jp
Naohiko Ohkouchi, nohkouchi@jamstec.go.jp
Carsten Schubert, carsten.schubert@eawag.ch
Matthew McCarthy, mccarthy@pmc.ucsc.edu*
- Location: Biwako Hall Foyer*
- 206 Doi, H.; Kato, S.: INDICATORS TO EVALUATE TROPHIC-NICHE AGGREGATION IN A FOOD WEB AND POPULATION USING STABLE-ISOTOPE BIPILOT SPACE**
- 207 Koshikawa, M. K.; Watanabe, M.; Shin, K.; Takamatsu, T.; Hayashi, S.; Nakano, T.: CONTRIBUTION OF VOLCANIC ASH ON BASE CATION CYCLES IN THE MT. TSUKUBA FOREST ECOSYSTEM OF KANTO, JAPAN AS INTERPRETED BY STRONTIUM ISOTOPES.**
- 208 Ogino, M.; Fujibayashi, M.; Osada, Y.; Aikawa, Y.; Nishimura, O.: ISOTOPIC FRACTIONATION OF ESSENTIAL FATTY ACIDS BY FEEDING ON A COMMERCIAL FOOD SOURCE IN ZEBRAFISH, DANIO RERIO**
- 209 Yoshimizu, C.; Tayasu, I.: ALTERATION OF NITROGEN ISOTOPIC COMPOSITION DURING MICROBIAL DECOMPOSITION OF SUSPENDED PARTICULATE ORGANIC MATTER IN LAKE BIWA**
- 210 Nakano, T.: USE OF MULTIPLE-ISOTOPE ANALYTICAL SYSTEM INTO AQUATIC ECOSYSTEM**
- 211 Abe, H.; Yoshikawa, C.; Aita, M. N.; Toyoda, S.; Yoshida, N.: A STUDY OF THE MARINE NITROUS OXIDE USING AN ECOSYSTEM MODEL INCLUDING NITROGEN ISOTOPES**
- 212 Tayasu, I.; Okuda, N.; Tokuchi, N.; Ohte, N.; Kondoh, M.: MULTIPLE ISOTOPE APPROACH FOR STUDYING MATERIAL FLOW AND FOOD WEB STRUCTURES OF STREAM ECOSYSTEMS IN LAKE BIWA WATERSHED**
- 213 Togashi, H.; Kato, Y.; Ishikawa, N. F.; Yoshimura, M.; Tokuchi, N.; Ohte, N.; Okuda, N.; Tayasu, I.: A DIFFERENCE IN FOOD WEB STRUCTURES WITH VARIOUS FOREST STAND AGES IN HEADWATER STREAMS IN CENTRAL JAPAN**
- 214 Akamatsu, F.; Kobayashi, S.; Yajima, Y.; Nakanishi, S.; Miwa, J.; Amano, K.: IMPLICATION OF POOL AND RIFFLE SEQUENCES AND NUTRIENTS FOR CARBON ISOTOPE ENRICHMENT IN RIFFLE PERiphyton**
- 215 Makabe, A.; Koba, K.; Yoshimizu, C.; Tayasu, I.; Ogawa, N. O.; Ohkouchi, N.; Toyoda, S.; Yoshida, N.; Nagata, T.: FATE OF ATMOSPHERIC NITRATE AND NITROGEN BIOGEOCHEMICAL PROCESSES IN LAKE BIWA ELUCIDATED BY MULTIPLE OXYGEN ISOTOPES**
- 216 Komatsu, D. D.; Sato, S.; Nakagawa, F.; Tsunogai, U.; Tanaka, A.: APPLYING DUAL ISOTOPIC FRACTIONATION OF METHANE AS SENSITIVE TRACERS FOR MICROBIAL OXIDATION**
- 217 Sakuma, H.; Minami, S.; Komatsu, D.; Nakagawa, F.; Tsunogai, U.: QUANTIFYING GROSS PRIMARY PRODUCTION IN OLIGOTROPHIC LAKES BY USING THE TRIPLE OXYGEN ISOTOPES OF DO AS TRACERS**
- SS44 RESEARCH FRONTIERS IN HARMFUL ALgal BLOOM PREDICTION, MITIGATION AND PREVENTION**
- Chair(s): Hak-Gyo Kim, hgkim7592@yahoo.co.kr
Ichiro Imai, imai1ro@fish.hokudai.ac.jp
Kanako Ishikawa, ishikawa-k@lberi.jp*
- Location: Biwako Hall Foyer*
- 218 Yoshida, T.; Tanaka, N.: CURRENT SITUATION ON HARMFUL ALgal BLOOMS IN THE NOWPAP REGION**

† represents Tutorial presentations

- 219 Kuroda, A.; Araki, K.; Kawasaki, S.; Watanabe, T.; Sakami, T.; Imai, I.: CHARACTERISTICS OF ALGICIDAL BACTERIA ISOLATED FROM EELGRASS BED
- 220 Yamamoto, Y.; Shiah, F. K.: MORPHOLOGICAL STRATEGIES OF BLOOM-FORMING CYANOBACTERIA IN SUBTROPICAL EUTROPHIC PONDS
- 221 Shimizu, T.; Oda, T.; Ito, H.; Imai, I.: ESTABLISHMENT OF AXENIC CLONE CULTURES OF THE NUISANCE CYANOBACTERIUM *ANABAENA CRASSA* AND ISOLATION OF ITS ALGICIDAL BACTERIA FROM A RESERVOIR
- 222 Fujii, S.; Tsukazaki, C.; Ishii, K.; Imai, I.: SPATIAL DISTRIBUTIONS OF DIATOM RESTING STAGE CELLS AND POTENTIAL DIATOM UTILIZATION FOR PREVENTING *CHATTONELLA* RED TIDES IN SOUTHWESTERN JAPAN
- 223 Takahashi, T.; Umehara, A.; Tsutsumi, H.: BLOOMING OF TOXIC CYANOBACTERIA IN THE ISAHAYA BAY RESERVOIR (KYUSHU, JAPAN) AND THE DIFFUSION OF MICROCYSTINS TO THE MARINE AND TERRESTRIAL ECOSYSTEMS
- 224 Fukuzaki, K.; Yoshioka, T.; Imai, I.: CHARACTERIZATION OF FLUORESCENT DISSOLVED ORGANIC MATTER EXUDED FROM RED TIDE ALGAE
- 225 Katano, T.; Yoshida, M.; Yoshino, K.; Yamaguchi, S.; Ito, Y.; Hayami, Y.: BLOOM DEVELOPMENT OF *CHATTONELLA* (RAPHIDOPHYCEAE) WITH REFERENCE TO THE NUTRIENT SOURCE IN THE ARIAKE SEA, JAPAN
- SS45 DOM DYNAMICS AND TRANSPORT FROM LAND TO THE OCEAN, THROUGH RIVERS, LAKES AND GROUND WATERS**
- Chair(s):* Kortelainen Pirkko, pirkko.kortelainen@ymparisto.fi
Nobuhito Ohte, nobu@fr.a.u-tokyo.ac.jp
Yuko Sugiyama, sugiyama@shse.u-hyogo.ac.jp
- Location:* Biwako Hall Foyer
- 226 Tsuda, K.; Takata, A.; Kozaki, K.; Shirai, H.; Kitano, F.; Hara, M.; Kozima, R.; Sugiyama, Y.; Hayakawa, K.; Fujitake, N.: DEVELOPMENT AND APPLICATION OF A METHOD FOR QUANTITATIVE ANALYSIS OF AQUATIC HUMIC SUBSTANCES IN CLEAR WATER
- 227 Ohte, N.; Takahashi, Y.; Itoh, M.; Katsuyama, M.; Fujimoto, M.; Matsuo, N.: DOC TRANSFORMATION IN A FORESTED CATCHMENT: TRACING USING STABLE CARBON ISOTOPE VALUES
- 228 Utsumi, R.; Sugiyama, Y.; Hayakawa, K.; Kitano, F.; Kojima, R.; Hara, M.; Takata, A.; Fujitake, N.: COMPARISON OF DISSOLVED ORGANIC MATTER (DOM) IN LAKE BIWA SEPARATED BY C18 AND DAX SOLID PHASE EXTRACTION.
- 229 Sugiyama, Y.; Hatcher, P. G.; Sleighter, R. L.; Wada, C.; Hashida, S.; Kumagai, T.; Mitamura, O.; Nakano, S.; Mimura, T.; Sato, Y.; Watanabe, Y.; Drucker, V. V.; Fialkov, V. A.; Sugiyama, M.: DISSOLVED ORGANIC MATTER DYNAMICS IN RIVER YENISEI STUDIED BY ULTRAHIGH RESOLUTION MASS SPECTROMETRY
- 230 Moritani, M.; Ohashi, M.; Hara, M.; Takahashi, K.; Ohte, N.; Fujitake, N.; Yamase, K.; Kumagai, T.; Sugiyama, Y.: DISSOLVED ORGANIC MATTER DYNAMICS IN A MANAGED JAPANESE CYPRESS FOREST
- 231 Hara, M.; Ohashi, M.; Piirainen, S.; Kortelainen, P.; Finér, L.; Kumagai, T.; Takahashi, K.; Sugiyama, Y.: CHANGES IN THE COMPOSITIONS OF DOM IN FOREST ECOSYSTEM IDENTIFIED BY USING THE FOURIER TRANSFORM ION CYCLOTRON RESONANCE MASS SPECTROMETRY (FT-ICR MS)
- 232 Sergio Ruiz Halpern, S.; Santos, I.; Maher, D.; Eyre, B.: POST-FLOOD ENHANCED CARBON RELEASE IN THE RICHMOND RIVER ESTUARY, NORTHERN NSW, AUSTRALIA
- SS46 CLIMATE AND GLOBAL ENVIRONMENTAL CHANGES IN AQUATIC ECOSYSTEMS**
- Chair(s):* Bo Qiu, bo@soest.hawaii.edu
Dr. Takeshi Okunishi, okunishi@affrc.go.jp
Yu-Heng Tseng, yhtseng@as.ntu.edu.tw
Yu-San Han, yshan@ntu.edu.tw
- Location:* Biwako Hall Foyer
- 233 Tzeng, W. N.; Tseng, Y. H.; Han, Y. S.; Hsu, C. C.; Chang, C. W.; Di Lorenzo, E.; Hsieh, C. H.; Chen, H. C.: EVALUATION OF MULTI-SCALE CLIMATE EFFECTS ON ANNUAL RECRUITMENT LEVELS OF THE JAPANESE EEL, *ANGUILLA JAPONICA*, TO TAIWAN
- 234 Yoneyama, Y.; Fujimori, T.; Taniai, G.; Kurihara, M.; Tamegai, H.; Hashimoto, S.: METHYL HALIDE PRODUCTION BY MARINE PROTEOBACTERIA
- 235 Ambiru, K.; Kurihara, M.; Hashimoto, S.: METHYL CHLORIDE PRODUCTION BY TWO MARINE CYANOBACTERIA: *SYNECHOCOCCUS* SP. (CCMP 1334) AND *SYNECHOCOCCUS* SP. (NIES 981)
- 236 Okunishi, T.; Ambe, D.; Ito, S.: A MODELING APPROACH TO EVALUATE GROWTH AND MOVEMENT FOR RECRUITMENT SUCCESS OF JAPANESE SARDINE IN THE WESTERN NORTH PACIFIC
- 237 Zdun, A.; Rozwadowska, A.: CLASSIFICATION OF THE AIR MASS TRAJECTORY ABOVE THE BALTIC SEA REGION (EUROPE)
- SS48 TRACE ELEMENT BIOGEOCHEMISTRY**
- Chair(s):* Celine Gueguen, celinegueguen@trentu.ca
Claude Fortin, Claude.Fortin@ete.inrs.ca
- Location:* Biwako Hall Foyer
- 238 Fortin, C.; Chen, Z.; Campbell, P. G.: INTERACTIONS OF HUMIC ACID AND SILVER AT THE SURFACE OF A GREEN ALGA
- 239 Gueguen, C.; Clarisse, O.: MONITORING OF HEAVY METALS IN MINING Affected ECOSYSTEM BY PASSIVE SAMPLERS
- 240 Fujii, M.; Otani, E.; Yoshimura, C.: EFFECT OF CHEMICAL PROPERTIES OF HUMIC SUBSTANCES ON PHOTOCHEMICAL GENERATION OF REACTIVE OXYGEN SPECIES

THURSDAY

SS49 RECENT ADVANCES IN PHYTOPLANKTON PIGMENT STUDIES IN OCEANOGRAPHY

- Chair(s):* Stanford B. Hooker, stanford.b.hooker@nasa.gov
 Koji Suzuki, kojis@ees.hokudai.ac.jp
 Takafumi Hirata, tahi@ees.hokudai.ac.jp
 S. W. Wright, Simon.Wright@aad.gov.au
- Location:* Biwako Hall Foyer
- 241 Nosaka, Y.; Suzuki, K.; Yamashita, Y.: CHARACTERISTICS OF TRANSPARENT EXOPOLYMER PARTICLE (TEP) DISTRIBUTION IN THE OYASHIO REGION OF THE NORTHWEST PACIFIC DURING THE SPRING DIATOM BLOOM 2011
- 242 Arakawa, Y.; Hirawake, T.; Suzuki, K.; Fujiwara, A.; Saitoh, S.: DISCRIMINATION OF PHYTOPLANKTON SIZE CLASSES IN THE NORTH PACIFIC
- 243 Liu, X.; Huang, B. Q.; Liu, Z. Y.; Wang, L.; Wei, H.; Li, C. L.; Haung, Q.: HIGH-RESOLUTION PHYTOPLANKTON DIEL VARIATIONS IN THE SUMMER STRATIFIED CENTRAL YELLOW SEA
- 244 Wang, L.; Huang, B.; Liu, X.: RESPONSE OF PHYTOPLANKTON COMMUNITY STRUCTURE TO MESOSCALE EDDIES IN THE SOUTH CHINA SEA (SCS)
- 245 Alou, E. A.; Mundy, C. J.; Roy, S.; Gosselin, M.; Agustí, S.: ICE ALGAE PIGMENT COMPOSITION IN THE CANADIAN BEAUFORT SEA
- 246 Takamura, T. R.; Odate, T.; Hashida, G.; Iida, T.; Fukuchi, M.: PIGMENT COMPOSITION OF A PHYTOPLANKTON BLOOM UNDER ANTARCTIC LAND-FAST ICE DURING THE AUSTRAL SUMMER

SS51 NITROGEN LIMITATION IN FRESHWATER - IS NITROGEN REDUCTION ECOLOGICALLY MEANINGFUL AND ECONOMICALLY FEASIBLE?

- Chair(s):* Claudia Wiedner, wiedner@tu-cottbus.de
 Roxane Maranger, r.maranger@umontreal.ca
 Tobias Vrede, tobias.vrede@slu.se

Location: Biwako Hall Foyer

- 247 Umehara, A.; Tsutsumi, H.; Takahashi, T.; Komorita, T.: ESTIMATION OF THE UPTAKE RATE OF NUTRIENTS AND THE PRODUCTION RATE OF MICROCYSTINS BY MICROCYSTIS BASED ON THE MASS BALANCE OF FIELD OBSERVATIONS

SS55 LINKING ORGANISMS' SMALL-SCALE PROCESSES AND THEIR ENVIRONMENTS TO GLOBAL EFFECTS

- Chair(s):* Soeren Ahmerkamp, sahmerka@mpi-bremen.de
 Dr. Eva-Maria Zetsche, ezetsche@vub.ac.be
 Prof. Dr. Arzhang Khalili, akhalili@mpi-bremen.de

Location: Biwako Hall Foyer

- 248 Ross, O. N.; Torrecilla, E.; Piera, J.: NEW METHODS OF AQUATIC HYPERSPECTRAL LIGHT FIELD ANALYSIS FOR THE CONCURRENT CHARACTERISATION OF PHYSICAL AND BIO-OPTICAL PROCESSES AT SMALL SCALES

SS56 DIETARY BIOMARKERS IN AQUATIC FOOD WEBS – TROPHIC TRANSFER AND STABILITY

- Chair(s):* Rana El-Sabaawi, rana@uvic.ca
 Hiroaki Saito, hiroakis@affrc.go.jp
 Martin J. Kainz, martin.kainz@donau-uni.ac.at
 Michael T. Brett, mtbrett@u.washington.edu
 Nicole Richoux, N.Richoux@ru.ac.za

Location: Biwako Hall Foyer

- 250 Kashiyama, Y.; Yokoyama, A.; Kinoshita, Y.; Miyashita, H.; Ishikawa, K.; Ishikawa, A.; Mizoguchi, T.; Tamiaki, H.: OCCURRENCE AND DISTRIBUTION OF CHLOROPHYLL CATABOLITES IN AQUATIC ENVIRONMENTS
- 251 Fujibayashi, M.; Miyaoka, Y.; Kawai, T.; Suzuki, S.; Nishimura, O.; Sakamaki, T.: FATTY ACID PROFILE IS A USEFUL INDICATOR OF INTER-SPECIFIC COMPETITION; AN ANALYSIS OF PREDATORY FISH IN CORAL REEFS OF OKINAWA ISLAND
- 252 Nishitani, G.; Endo, Y.: FOOD SOURCES OF PACIFIC OYSTER IN THE SANRIKU COASTS, NORTHEASTERN JAPAN

SS57 THE TEMPERATURE DEPENDENCE OF THE CARBON CYCLE IN AQUATIC ECOSYSTEMS

- Chair(s):* Gabriel Yvon-Durocher, g.yvon-durocher@qmul.ac.uk
 Mark Trimmer, m.trimmer@qmul.ac.uk
 Paul del Giorgio, del_giorgio.paul@uqam.ca

Location: Biwako Hall Foyer

- 253 Lai, C. C.; Shiah, F. K.: TEMPERATURE EFFECTS ON VARIATION OF COMMUNITY RESPIRATION
- 254 Bergström, I.; Mäkelä, S.; Kankaala, P.; Kortelainen, P.: VEGETATED BOREAL LAKE LITTORALS – METHANE EMISSION, TEMPERATURE, PLANT SPECIES AND LAKE SIZE
- 255 Shinmyo, K.; Hirawake, T.; Takao, S.: VARIABILITY IN OCEAN PRIMARY PRODUCTIVITY TO WATER TEMPERATURE FROM SPACE

SS58 NITROGEN BIOGEOCHEMISTRY AND PERTURBATION IN TERRESTRIAL - FRESHWATER SYSTEMS

- Chair(s):* Keisuke Koba, keikoba@cc.tuat.ac.jp
 Muneoki Yoh, yoh@cc.tuat.ac.jp
 Yoshiyuki Inagaki, yinagaki@affrc.go.jp

Location: Biwako Hall Foyer

- 256 Koba, K.; Fang, Y.; Mo, J.; Zhang, W.; Lu, X.; Liu, L.; Zhang, T.; Takebayashi, Y.; Toyoda, S.; Suzuki, K.; Yoh, M.; Senoo, K.: 15N DISTRIBUTION IN AN N-SATURATED, SUBTROPICAL FOREST IN CHINA*
- 257 Inagaki, Y.; Inagaki, M.; Hashimoto, T. M.; Kobayashi, M. Y.; Itoh, Y. T.; Kaneko, S.; Yoshinaga, S.; NITROGEN CYCLING IN CONIFEROUS FORESTED WATERSHEDS IN JAPAN'S KANTO REGION: A COMPARISON OF AREAS HAVING HIGH AND LOW N DEPOSITION

- 258 Tominaga, S.; Takai, N.; Koba, K.; Yoh, M.; Makabe, A.; Kuwae, T.; Sugimoto, T.; Yako, A.; Nakai, S.; Yoshihara, K.: THE TRANSPORTATION OF THE SEWAGE NITROGEN IN A SALT WEDGE TYPE RIVER
- 259 Shinomiya, Y.; Yamada, T.; Inagaki, Y.; Yoshinaga, S.; Torii, A.: INFLUENCE OF RAINFALL INCREASE ACCORDING TO HEAVY RAIN AND TYPHOON ON NITROGEN EXPORTS FROM A FORESTED CATCHMENT: A CASE STUDY IN THE SHIMANTO RIVER HEADWATERS
- 260 Kohzu, A.; Watanabe, M.; Hayashi, S.; Imai, A.; Nakajima, Y.; Osaka, K.; Miura, S.: NITRATE METABOLISM IN FOREST ECOSYSTEMS FROM THE ANALYSIS OF NITRATE ^{15}N AND ^{18}O NATURAL ABUNDANCES IN MOUNTAIN STREAMS AROUND MT. TSUKUBA, JAPAN
- 261 Tsushima, K.; Ueda, S.; Goto, K. T.; Mizuno, M. S.; Homma, K. S.; Matsunaga, Y.; Ogura, N.: DECLINE IN CONCENTRATION AND NITROGEN STABLE ISOTOPE RATIO OF NITRATE IN SPRING WATER IN AKIRU TERRACE, JAPAN
- 262 Tokuchi, N.; Hidaka, W.; Fujii, K.; Osada, N.; Koyama, L.; Ohte, N.; Shi, J.; Fujimaki, R.: CONSIDERATION OF PLANT N USE AND SOIL N DYNAMICS UNDER INCREASING N DEPOSITION; INTERACTION BETWEEN N AND C AS REVEALED BY NATURAL AND RADIO ISOTOPE EXPERIMENT
- 263 Ohyama, T.; Nakagawa, F.; Komatsu, D. D.; Tsunogai, U.; Kido, M.; Mizoguchi, T.: TRACING THE SOURCE AND FATE OF NITRATE IN GROUNDWATER USING ^{15}N , ^{17}O AND ^{18}O
- 264 Fukushima, K.; Suzuki, S.; Fukuzaki, K.; Ueno, M.; Tokuchi, N.; Yoshioka, T.: SPATIAL PATTERN AND ITS CONTROLLING FACTORS OF THE NITRATE CONCENTRATION IN RIVER WATER IN THE YURA RIVER BASIN, JAPAN
- 265 Takahashi, C.; Koba, K.; Makabe, A., A.; Hayashi, T.; Inagaki, Y.; Nakanishi, A.; Yoh, M., M.: NITRATE RETENTION IN FOREST ECOSYSTEMS ELUCIDATED BY STABLE ISOTOPE RATIOS OF NITRATE

SS60 INFLUENCE OF CLIMATIC AND ENVIRONMENTAL CHANGE ON INLAND WATER BODIES

Chair(s): Michio Kumagai , kumagai-m@lberi.jp
 David M. Livingstone, living@eawag.ch
 Charles R. Goldman , crgoldman@ucdavis.edu
 Rolf Kipfer, kipfer@eawag.ch

Location: Biwako Hall Foyer

- 266 Huebner, J. D.; Marushchak, O.; Loadman, N. L.; Wiegand, M. D.: IF YOU'RE A DAPHNIA, NOT ALL SUNSCREENS ARE THE SAME, AND UV RADIATION MAKES THEM WORSE
- 267 Tyroler, L.; Tomonaga, Y.; Brennwald, M. S.; Näher, S.; Schubert, C.; Kipfer, R.: MECHANISMS OF METHANE RELEASE FROM THE SEDIMENTS OF LAKE ROTSEE (SWITZERLAND)

SS64 CHANGES IN THE BIOGEOCHEMISTRY AND PRIMARY PRODUCTIVITY OF THE WESTERN ARCTIC AND SUBARCTIC SEAS: REGIONAL PROCESSES AND LARGE-SCALE CONNECTIVITY

Chair(s): Eiji Watanabe
 Jean-Éric Tremblay, jean-eric.tremblay@bio.ulaval.ca
 Kevin Arrigo, arrigo@stanford.edu
 Roxane Maranger, r.maranger@umontreal.ca

Location: Biwako Hall Foyer

- 268 Sampei, M.; Forest, A.; Fortier, L.: RAPID CONSUMPTION OF FRESH COPEPOD CARCASSES UNDER THE PYCNOCLINE IN THE SOUTHEASTERN BEAUFORT SEA (ARCTIC OCEAN)
- 269 Hirayama, S.; Zhang, J.; Aramaki, T.: WATER MASS STRUCTURE IN THE SEA OF OKHOTSK NEAR THE COAST OF EASTERN HOKKAIDO BY MULTI-GEOCHEMICAL TRACERS

SS66 LAKE POLLUTION AND RESTORATION

Chair(s): Rosa Galvez, rosa.galvez@gci.ulaval.ca
 Serge Leroueil, serge.leorueil@gci.ulaval.ca

Location: Biwako Hall Foyer

- 270 Huang, C.; Shiao, J. C.; Ložys, L.: EVALUATING LIFE HISTORY OF PERCH (PERCA FLUVIATILIS) IN A COOLING LAKE FOR THE NUCLEAR POWER PLANT BY OTOLITH MICROSTRUCTURES AND STABLE ISOTOPIC COMPOSITION
- 271 Gao, J.; Liu, Z.: RESTORATION OF A TROPICAL EUTROPHIC LAKE IN SOUTHERN CHINA: IMPLICATION FOR LAKE MANAGEMENT IN FUTURE WARMER CLIMATES

SS69 UNDERWATER IMAGING AND SENSING WITH INNOVATIVE TECHNOLOGIES

Chair(s): Blair Thornton, blair@iis.u-tokyo.ac.jp
 Toshihiro Maki, maki@iis.u-tokyo.ac.jp
 Tamaki Ura, ura@iis.u-tokyo.ac.jp
 Adrian Bodenmann, adrian@iis.u-tokyo.ac.jp

Location: Biwako Hall Foyer

- 272 Morrow, J. H.; Hooker, S. B.; Matsuoka, A.: A 1% AND 1 CM PERSPECTIVE LEADS TO A NOVEL CDOM ABSORPTION ALGORITHM
- 273 Okamura, K.; Noguchi, T.; Hatta, M.; Kimoto Hideshi; Suzue, T.: NEWLY DEVELOPED 128 CHANNEL MULTI WATER SAMPLER FOR AUV AND ROV OBSERVATION
- 274 Akamatsu, T.; Kato, N.: DESIGN OF A NEW TYPE OF SPILLED OIL TRACKING AUTONOMOUS BUOY

SS73 COASTAL PROCESSES AND MIXING

Chair(s): Hidekatsu Yamazaki, hide@kaiyodai.ac.jp
 J. Hwan Hwang, jinhwang@dongguk.edu

Location: Biwako Hall Foyer

- 275 Hasegawa, N.; Kumagai, M.; Okubo, T.: DENSITY CURRENT FROM ANE RIVER IN LAKE BIWA
- 276 Ji, H. W.; Hwang, J. H.: IMPACT ON SEAWATER FLOW BY COAST LINE CHANGE IN JAKARTA BAY

THURSDAY

Friday Oral Talks

GS05 CHEMICAL PROCESSES IN AQUATIC ECOSYSTEMS

Chair(s): Gustavo Martinez, tavomarti2011@gmail.com

Location: Room 3-Collabo Shiga

- 09:00 Oouchida, C.; Kubo, A.; Hashihama, F.; Kanda, J.: NITROGEN UPTAKE AND PHYTOPLANKTON COMMUNITY STRUCTURE IN THE ANTARCTIC MARGINAL ICE ZONE DURING AN AUSTRAL SUMMER
- 09:15 Hesse, O.; Laforsch, C.; Wolinska, J.: THE IMPACT OF ANTHROPOGENETIC STRESSORS AND SIMULTANEOUS PARASITE INFECTION ON *DAPHNIA*
- 09:30 Gebser, B.; Pohnert, G.: NEW INSIGHTS IN OSMOREGULATIVE FUNCTION OF DMSP AND OTHER ZWITTERIONIC SUBSTANCES
- 09:45 Imaoka, A.; Fujii, M.; Yoshimura, C.: EFFECT OF CHEMICAL STRUCTURE OF HUMIC SUBSTANCE ON COMPLEXATION WITH FERRIC IRON IN NATURAL WATERS
- 10:00 Ito, H.; Fujii, M.; Masago, Y.; Omura, T.: EFFECT OF PH ON LIGAND EXCHANGE REACTION BETWEEN ORGANICALLY COMPLEXED FE(III) AND SIDEROPHORE DESFERROXAMINE B
- 10:15 Martinez, G. A.; Myneni, S.; Mishra, B.: PHOSPHORUS SPECIATION IN SETTLING PARTICULATES AND SEDIMENT SAMPLES FROM TROPICAL RESERVOIRS

GS07 BENTHOS BIOLOGY AND ECOLOGY

Chair(s): Shigeki Wada, swadasbm@kurofune.shimoda.tsukuba.ac.jp
Luca A Van Duren, luca.vanduren@deltares.nl
Iris E. Hendriks, iris@imedea.uib-csic.es

Location: Room 2-Collabo Shiga

- 09:00 Yaegashi, S.; Watanabe, K.; Omura, T.: NUCLEAR INTROGRESSION BETWEEN DISTINCT MITHOCONDRIAL LINEAGES IN STREAM CADDISFLY *STENOPSYCHE MARMORATA* POPULATIONS INFERRED FROM BAYESIAN ADMIXTURE ANALYSIS
- 09:15 Sigl, R.; Imhof, H.; Settles, M.; Laforsch, C.: A NOVEL NON-INVASIVE AND IN VIVO METHOD TO CALCULATE ORGAN INDICES IN LARGE ASTEROIDS USING 3D-MODELS BASED ON MAGNETIC RESONANCE IMAGING (MRI)

SS29 HETEROSPECIFIC MATING INTERACTIONS

Chair(s): Syuhei Ban, ban@ses.usp.ac.jp
Wataru Makino, makinowataru@m.tohoku.ac.jp

Location: Room 207-Piazzo Omi

- 09:00 Nishida, T.: REPRODUCTIVE INTERFERENCE AS A KEY FRAMEWORK FOR COMMUNITY ECOLOGY: IMPLICATIONS FOR AQUATIC COMMUNITIES*
- 09:30 Noriyuki, S.; Nishida, T.: HETEROSPECIFIC MATING INTERACTIONS IN RELATION TO ECOLOGICAL SPECIALIZATION AND GENERALIZATION
- 09:45 Makino, W.: MAINTENANCE OF PARAPATRY IN FRESHWATER COPEPODS

- 10:00 Beyrend-Dur, D.; Dur, G.; Souissi, S.; Schmitt, F. G.; Hwang, J. S.: AVOIDANCE OF HETEROSPECIFIC MATING IN THE COPEPOD *PSEUDODIAPTOMUS ANNANDALEI*
- 10:15 Kyogoku, D.; Nishida, T.: HETEROSPECIFIC MALES GENERATE AN ALLEE EFFECT

SS35 FRONTIERS IN ORGANIC AND INORGANIC MATTER FLUX ACROSS ECOSYSTEMS: CONSEQUENCES TO TERRESTRIAL

Chair(s): Hiromitsu Kamauchi, kamauchi@fsc.hokudai.ac.jp
Tomoya Iwata, tiwata@yamanashi.ac.jp

Location: Rehearsal Room-Biwako Hall

- 09:00 Iwata, T.: RECIPROCAL SUBSIDIES IN RIVER NETWORKS—ENERGY AND NUTRIENT ARTERIES FOR WATERSHED CONSUMERS*
- 09:15 Stenroth, K.; Jonsson, M.: LAND-USE INFLUENCES ON RECIPROCAL SUBSIDIES ACROSS THE AQUATIC-TERRESTRIAL INTERFACE*
- 09:30 Salvarina, I.; Yohannes, E.; Gravier, D.; Rothaupt, K. O.: AQUATIC SUBSIDIES (EMERGING INSECTS) TO TERRESTRIAL CONSUMERS (BATS)*
- 09:45 Nagasaki, A.; Nagasaki, Y.: AQUATIC-TO-TERRESTRIAL SUBSIDIES BY SALMON RUNS IN NORTHERN JAPAN*
- 10:00 Koshino, K.; Qin, Q.; Kudo, K.; Kaeriyama, K.: DIFFERENCE OF TRANSPORT PATTERNS OF MARINE-DERIVED NUTRIENTS FROM PACIFIC SALMON BETWEEN TWO ECOSYSTEMS IN JAPAN
- 10:15 Hiromitsu, K.; Michinori, S.: SEA-FOG AND FOREST VEGETATION IN EASTERN HOKKAIDO, JAPAN.*

SS41 MIXING AND INTERNAL MOTIONS IN LAKES, RESERVOIRS AND OCEANS

Chair(s): Hidekatsu Yamazaki, hide@kaiyodai.ac.jp
Takashi Hosoda, hosoda.takashi.4w@kyoto-u.ac.jp
Alfred Wueest, Alfred.Wueest@eawag.ch
Michio Kumagai, kumagai-m@lberi.jp

Location: Piazza Hall-Piazzo Omi

- 09:00 Hosoda, T.; Malembeka, F. P.: SOME CONSIDERATIONS ON VERTICAL MIXING MECHANISM DUE TO THERMAL CONVECTION DURING COOLING PERIOD IN THE NORTHERN PART OF LAKE BIWA
- 09:15 Homma, H.; Yamazaki, H.; Nagai, T.; Hasegawa, N.; Kumagai, M.: WINTERTIME COOLING PROCESSES IN LAKE BIWA
- 09:30 Iimura, H.; Yamazaki, H.; Honma, H.; Nagai, T.; Kumagai, M.: AN OBSERVATION OF THERMAL INVERSION NEAR THE BOTTOM OF LAKE BIWA
- 09:45 Auger, G. A.; Yamazaki, H.; Nagai, T.; Kumagai, M.: HYPOLIMNETIC TURBULENCE ASSOCIATED TO LARGE-SCALE INTERNAL WAVE SUPERPOSITION IN A STRONGLY STRATIFIED LAKE BIWA
- 10:00 Henderson, S. M.; Deemer, B. R.; Harrison, J. A.: VERTICAL PROPAGATION OF LAKEWIDE INTERNAL WAVES

FRI 08

- 10:15 Pasour, V. B.; Miller, L. A.: MIXING CAUSED BY FLOW THROUGH FLEXIBLE, DEFORMING MACROPHYTES*

SS44 RESEARCH FRONTIERS IN HARMFUL ALgal BLOOM PREDICTION, MITIGATION AND PREVENTION

Chair(s): Hak-Gyo Kim, hgkim7592@yahoo.co.kr
Ichiro Imai, imai1ro@fish.hokudai.ac.jp
Kanako Ishikawa, ishikawa-k@lberi.jp

Location: Ensemble Hall-Biwako Hall

- 09:00 Agha, R.; Cirés , S.; Wörmer, L.; Domínguez, J. A.; Quesada, A.: FROM THE SATELLITE TO THE OLIGOPEPTIDE. MULTI-SCALE APPROACHES FOR THE MONITORING OF CYANOBACTERIAL BLOOMS
- 09:15 Kieber, R. J.; Avery, G. B.; Helms, J. R.; Mead, R. N.; Probst, E. E.; Skrabal, S. A.: PHOTOCHEMICAL TRANSFORMATIONS OF THE ALGAL TOXIN PBTX-2 ON RESUSPENDED SEDIMENTS IN COASTAL ECOSYSTEMS
- 09:30 Natsuike, M.; Yamamoto, K.; Nakajima, M.; Sawayama, S.; Imai, I.: LIMITING NUTRIENTS OF THE TOXIC DINOFLAGELLATE *ALEXANDRIUM TAMARENSE* AND THE NON-TOXIC DIATOM *SKELETONEMA SP.* IN OSAKA BAY, JAPAN
- 09:45 Verschoor, M.; McCabe, S.; Molot, L. A.; Li, G.; Watson, S. B.; Paterson, A. M.; Findlay, D.; Dillon, P. J.: THE PHOSPHORUS-FERROUS EUTROPHICATION MODEL: ROLE OF ANOXIA AND INTERNAL FE LOADING IN CYANOBACTERIA DOMINANCE IN SOFTWATER AND HARDWATER LAKES
- 10:00 Carter, M. L.; Deyle, E. R.; Fullam-Seger, K. D.; Hilbern, M.; McGowan, J. A.; Perretti, C. T.; Sugihara, G.; de Verneil, A.; Ye, H.; Fey, C.: NONLINEAR FORECASTING OF COASTAL ALgal BLOOMS
- 10:15 Imai, I.; Nakanishi, T.; Ishii, K.: SEDIMENT PERTURBATION AS A PREVENTION STRATEGY FOR HARMFUL ALgal BLOOMS IN COASTAL SEA: UTILIZATION OF DIATOMS THROUGH GERMINATION OF RESTING STAGE CELLS*

SS60 INFLUENCE OF CLIMATIC AND ENVIRONMENTAL CHANGE ON INLAND WATER BODIES

Chair(s): Michio Kumagai , kumagai-m@lberi.jp
David M. Livingstone, living@eawag.ch
Charles R. Goldman , crgoldman@ucdavis.edu
Rolf Kipfer, kipfer@eawag.ch

Location: Theatre-Biwako Hall

- 09:00 Schmid, M.; Hunziker, S.; Wüest, A.: LAKE SURFACE TEMPERATURES IN A CHANGING CLIMATE: ARE THEY SIMPLY FOLLOWING AIR TEMPERATURES?
- 09:15 Kirillin, G.; Gessner, M. O.: SUDDEN REGIME SHIFTS OF SEASONAL LAKE MIXING IN RESPONSE TO CLIMATE WARMING
- 09:30 North, R. P.; Livingstone, D. M.; North, R. L.: LONG-TERM CHANGES IN HYPOXIA IN THE LAKE OF ZURICH

- 09:45 Modenutti, B. E.; Balseiro, E. G.; Elser, J. J.; Bastidas Navarro, M. A.; Laspoumaderes, C.; Cuassolo, F.; Souza, M. S.: IMPACTS AND ONGOING RECOVERY OF PATAGONIAN LAKES FROM THE PUYEHUE-CORDNN CAULLE MEGA-ERUPTION.

- 10:00 Balseiro, E. G.; Modenutti, B. E.; Elser, J. J.; Bastidas Navarro, M. A.; Laspoumaderes, C.; Cuassolo, F.; Souza, M. S.: TESTING THE MECHANISMS OF IMPACT OF THE PUYEHUE-CORDNN CAULLE MEGA-ERUPTION ON PATAGONIAN LAKES.

- 10:15 Camarero, L.; Catalan, J.: ATMOSPHERIC PHOSPHORUS DEPOSITION MAY CAUSE LAKES TO REVERSE FROM PHOSPHORUS LIMITATION BACK TO NITROGEN LIMITATION

SS66 LAKE POLLUTION AND RESTORATION

Chair(s): Rosa Galvez, rosa.galvez@gci.ulaval.ca
Serge Leroueil, serge.leorueil@gci.ulaval.ca

Location: Room 1-Collabo Shiga

- 09:00 Immers, A. K.; Van der Wal, J. E.; Dorenbosch, M.; Bakker, E. S.: INVASIVE CRAYFISH REDUCE ESTABLISHMENT OF SUBMERGED MACROPHYTES IN AN IRON RESTORED PEAT LAKE *
- 09:15 Mozeto, A. A.; Yamada, T. M.; Sueitt, A. E.; Oliveira, A. F.; Nascimento, M. L.; Fadini, P. S.; Faria, B. M.: REMEDIATION OF EUTROPHIC SEDIMENTS BY ADDITION OF CALCIUM NITRATE AND PHOSLOCK®: LABORATORY AND *IN SITU* EXPERIMENTS *
- 09:30 Almogi-Labin, A.; Mischke, S.; Leichter, M.; Klein, M.: TRACING MAN-MADE CHANGES IN SALINITY AT BEREKHAT NUR, ISRAEL DURING THE LAST 60 YEARS USING CALCAREOUS FAUNA AND AERIAL PHOTOGRAPHY*
- 09:45 Maia-Barbosa, P. M.; Pujoni, D. G.; Morena, A. M.; Mozeto, A. A.; Fragozo, C. R.; Barbosa, F. R.: FROM *IN SITU* OLIGOTROPHICATION EXPERIMENTS TO N AND P LOADS MODELING TO IDENTIFY RESTORATION STRATEGIES OF A HYPEREUTROPHIC URBAN RESERVOIR.*
- 10:00 Galvez-Cloutier, R.; Triffault-Bouchet: PILOT TESTS AND ECO-COMPATIBILITY OF VARIOUS IN-LAKE RESTORATION TECHNIQUES FOR THE REHABILITATION OF EUTROPHIC LAKES IN QUEBEC*
- 10:15 Mulligan, C. N.: EVALUATION OF CONTAMINATED SEDIMENTS IN A HARBOUR AREA *

SS69 UNDERWATER IMAGING AND SENSING WITH INNOVATIVE TECHNOLOGIES

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Location: Room 305-Piazzo Omi

- 09:00 Kirf, M. K.; Schubert, C. J.; Wehrli, B.: SUBMICROMOLAR FINE STRUCTURE OF THE OXIC/ANOXIC INTERFACE IN THE WATER COLUMN OF LAKES RESOLVED WITH AMPEROMETRIC MICROSENSORS AND MICROOPTODES

FRIDAY

| | | | |
|-------|---|-------|--|
| 09:15 | Tsabarlis, C.; Prospathopoulos, A.; Patiris, D. L.; Dakladas, T.; Eleftheriou, G.; Kokkoris, M.; Vlastou, R.: IN-SITU INSTRUMENTATION AND SOFTWARE DEVELOPMENT FOR AUTOMATED RADIONUCLIDE CHARACTERIZATION IN UNDERWATER APPLICATIONS | 09:45 | Tamura, A.; Matsumoto, A.; Sakka, T.; Kumagai, M.; Fukami, K.; Ogata, Y. H.: NON-GATED UNDERWATER LASER-INDUCED BREAKDOWN SPECTROSCOPY WITH DOUBLE PULSE AND MULTI-PULSE LASER IRRADIATION |
| 09:30 | Thornton, B.; Sakka, T.; Takahashi, T.: APPLICATION OF LASER INDUCED PLASMA FOR IN SITU CHEMICAL ANALYSIS AT HIGH PRESSURE | 10:00 | Matsumoto, A.; Tamura, A.; Sakka, T.; Thornton, B.; Fukami, K.; Ogata, Y. H.: LASER-INDUCED BREAKDOWN SPECTROSCOPY IN WATER BY USING LONG-PULSE LASER ABLATION |

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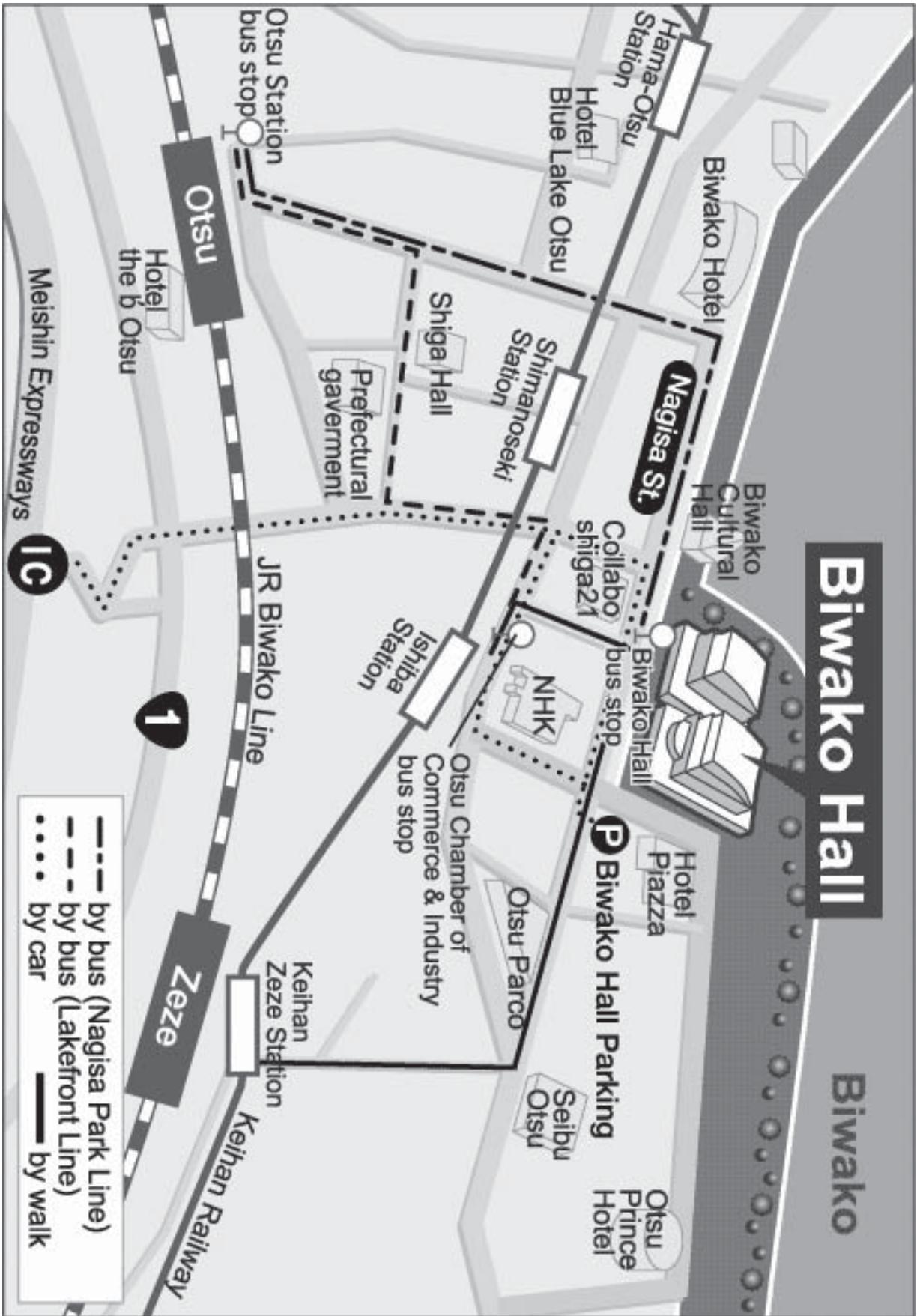
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