

## New Chairmen in PICES

### Science Board

*In 2006, to facilitate the continuity of Science Board affairs, the Governing Council established a Science Board Chairman-elect position to allow the election of the Science Board Chairman 1 year before the official change of the chairmanship. At PICES -2009, Dr. Sinjae Yoo (Korea) was unanimously elected for this position.*



Sinjae Yoo was born in Daegu, a city located in the south-eastern province of Korea, in 1955. During his junior high and high school years, Sinjae was interested in history and biology. He was also fascinated by various hand-on experiments, including launching home-brewed rockets. After entering the College of Natural Sciences of Seoul National University, he came across a drama group with which he spent more time than with other activities. During his college years, he participated in six productions with this group as an actor and later as a director. After receiving his B.Sc. in oceanography, Sinjae hesitated about his future direction for a while, but finally chose to continue studying sciences. In the graduate school of Seoul National University, he studied the spatial distribution of phytoplankton in the southern Yellow Sea. Reading G. E.

Hutchinson, in particular, “*The ecological theater and evolutionary play*”, changed his thinking forever. Eager to learn more about biological evolution, Sinjae moved to the Department of Ecology and Evolution in the State University of New York at Stony Brook in 1982. He did theoretical and experimental studies to explain the evolutionary mechanisms of gamete dimorphism, with which he received his Ph.D. in 1987. After returning to Korea in 1988, he has been a research scientist with KORDI (Korea Ocean Research and Development Institute), which is based in Ansan. There, Sinjae studied primary production and phytoplankton dynamics in Korean waters. In the early 1990s, he became fascinated by the synoptic views provided by remote sensing and began to use satellite data to study phytoplankton. Recently, Sinjae has changed his research direction to the theoretical study of ecological interactions.

He regularly lectures at various universities and has been involved in many research projects, including the Yellow Sea Large Marine Ecosystem. He was a panel member of IOCCG (International Ocean Colour Coordinating Group) and CGOOS (Coastal Ocean Observing System). He also served on the Advisory Committee for the Korea Science and Engineering Foundation. He is now on the Scientific Steering Committee of the International IMBER (Integrated Marine Biogeochemistry and Ecosystem Research) Project. Over the years, Sinjae has been involved in PICES activities, serving on the MODEL Task Team of the CCCC (Climate Change and Carrying Capacity) Program, the Biological Oceanography Committee, and the Science Board, for the last two years as its Vice-Chairman.

### Marine Environmental Quality Committee

*At PICES-2009, Drs. Steven S. Rumrill (U.S.A.) and Mitsutaku Makino (Japan) were elected as Chairman and Vice-Chairman of the Marine Environmental Quality (MEQ), respectively, to replace Drs. Glen Jamieson (Canada) and Hak-Gyoon Kim (Korea). PICES thanks Drs. Jamieson and Kim for their dedicated service as leaders of MEQ since 2006. They will continue to contribute to PICES as members of the Committee.*

Steven Rumrill was raised along the spectacular coastlines of central California and Hawaii, where he cultivated a deep sense of adventure and curiosity about the marine environment and the people that live along the shore. As a youngster, he took up skim-boarding, body-surfing, and climbing coconut trees on Oahu. After moving to Monterey Bay, Steve donned a wetsuit to enjoy surfing,

scuba diving, and spear-fishing in the colder waters as he explored the reefs, kelp beds, tide-pools and boulder fields.

Steve received his B.Sc. in Biology (1981) and M.Sc. in Marine Biology (1983) from the University of California at Santa Cruz, where he worked under the mentorship of Drs. John Pearse, Todd Newberry, and Andrew Cameron. His

early-career introduction to marine sciences led to publications on the larval abundance and recruitment of sand-dollars, larval settlement and metamorphosis of chitons, and a broad-scale comparison of the reproductive biology and life-history traits of intertidal and sub-tidal brittle stars. Steve moved north to Edmonton (Alberta) and Vancouver Island (British Columbia) for further graduate studies, where he worked with Dr. Fu-Shiang Chia to complete his dissertation on differential mortality during the embryonic and larval lives of Pacific coast echinoderms (University of Alberta; Ph.D. 1987). He migrated temporarily to the Atlantic coast for post-doctoral studies with Dr. Mary Rice (Smithsonian Institution; trans-oceanic dispersion of asteroid larvae) and Dr. Robert Woollacott (Harvard University; delay of metamorphosis in sea urchins), before returning to the Pacific coast in 1990, to take a permanent position with the South Slough National Estuarine Research Reserve (NERR; Charleston, Oregon), a 5,000 acre special-use area that is dedicated to long-term research, monitoring, and education about the estuarine environment. Steve concurrently holds academic appointments at the University of Oregon – Oregon Institute of Marine Biology (Associate Professor: Department of Biology) and at Oregon State University (Graduate Faculty: College of Oceanic and Atmospheric Sciences – Marine Resource Management Program).

As the Chief Scientist and Research Program Coordinator for the South Slough NERR, Steve has focused his scientific interests over the past two decades on the dynamics of estuarine ecosystems located at the interface between the land and sea. He conducts ongoing investigations of physical and biotic interactions between Oregon estuaries and the nearshore Pacific Ocean, and is a contributing member of the science team that studies upwelling and hypoxia along the Oregon continental shelf. Steve worked with his colleagues throughout the United States to initiate the NERR System-Wide Monitoring Program (SWMP; 1995–2009+) to document short-term variability and long-term changes in estuarine conditions, including nutrient loading, seasonal changes in oceanic and watershed delivery systems, and detection of eutrophication.

He has conducted numerous investigations of the ecology and restoration of eelgrass beds (*Zostera marina*) and their associated communities in Pacific Northwest estuaries, and he collaborates with commercial shellfish growers and natural resource agencies to determine the best management practices for mariculture of Pacific oysters in eelgrass habitats. Steve recently started a new program to restore and recover populations of native Olympia oysters (*Ostrea*



*lurida*) in Coos Bay and other Oregon estuaries, and to document interactions between the oysters and non-indigenous invertebrates. He has participated as a member of numerous graduate student thesis advisory committees, and he currently serves on the West Coast Governors' Integrated Ecosystem Assessment Action Team (Chairman), the NERR System-Wide Monitoring Program Guidance Committee (Chairman), the Governing Council to the Northwest Association of Networked Ocean Observing Systems, the California Marine Life Protection Act Science Advisory Team, the Pacific Estuarine Research Society (President), and the Oregon International Port of Coos Bay Technical Advisory Committee (Chairman). Steve recently helped to complete a synthesis of marine science needs along the coastlines of Washington, Oregon, and California, and he is a co-author of the U.S. West Coast Marine Research and Information Plan (2009).

Steve has been a member of PICES MEQ Committee since 2007. As the new Chairman, he looks forward to the opportunity to work with his PICES colleagues to promote and coordinate interdisciplinary studies on the ecology of harmful algal blooms, to investigate the environmental aspects of finfish and shellfish mariculture operations, to investigate the transport and ecological impacts of non-indigenous species introductions, to document the sources and fates of contaminants in North Pacific marine ecosystems, and to help advance international collaborations and progress toward ecosystem-based management. Steve foresees that work-tasks on the immediate horizon for MEQ include a revision of the MEQ Action Plan adopted in 2006, and coordination of studies of coastal anthropogenic influences throughout the northern Pacific Ocean that will add to the Science Plan of the PICES integrative science program, FUTURE.

Mitsutaku Makino was born in 1973 in a small coastal village near Karatsu on Kyushu Island, Japan. His father worked in a pearl farming company, and Mitsutaku's early life in this local fisheries community formed a part of his personality as well as his professional interests today.

Entering the Department of Fisheries at Kyoto University in 1992, he studied fisheries oceanography, resource management, and fisheries economics. After getting an M.Sc. degree from the University of Cambridge in 2000, he received his Ph.D. for the institutional and economic

analyses on the snow crab fisheries in Japan from Kyoto University in 2003.

During his student days in Kyoto, he leaned to play the Shakuhachi flute, which is a Zen Buddhist's ascetic training instrument made of bamboo. He was conferred mastership from his Shakuhachi mentor and got a musician name "Taku-Sui (琢水)", in which one Chinese character is inherited from his mentor's name "Ro-Sui (蘆水)". Also, he found his better half, Mikako, at a student concert of Japanese traditional music. She plays Koto, a Japanese harp.

Mitsutaku began his professional career at the Yokohama National University as a post-doc researcher. Then, in 2005, he joined the Fisheries Research Agency of Japan and was assigned to the Fisheries Management Section at the National Research Institute of Fisheries Science at Yokohama. His research subjects range from the small-scale artisanal fisheries collecting sea cucumber to the large-scale offshore purse seiners catching sardine and mackerels. Also, he has been an active member of the Scientific Committee of the Shiretoko World Natural Heritage, and has contributed to the planning process for the ecosystem-based management in the heritage area. Based on this experience, he became a member of the PICES Working Group on *Ecosystem-based Management Science and its Application to the North Pacific* (WG 19) and a member of MEQ. Mitsutaku is also appointed to chair a new Study Group on *Human Dimensions*, which is expected to review the role of social sciences practices in ecosystem-based management.

## FUTURE Program

*Following the adoption of the Implementation Plan for the new PICES integrative science program on "Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Marine Ecosystems" (FUTURE), three Advisory Panels: Anthropogenic Influences on Coastal Ecosystems (AICE-AP), Climate, Oceanographic Variability and Ecosystems (COVE-AP) and Status, Outlooks, Forecasts, and Engagement (SOFE-AP) were established to provide continuing direction, leadership, coordination, and synthesis within PICES toward attaining the FUTURE goal. At PICES-2009, Dr. Thomas Therriault (Canada), Dr. Hiroaki Saito (Japan) and Mr. Robin Brown (Canada) were appointed as Chairmen of AICE-AP, COVE-AP and SOFE-AP, respectively.*

Thomas Therriault was born and raised in southwestern Ontario, Canada. Pursuing his interest in biological sciences, Tom received his B.Sc. in Biology from Wilfrid Laurier University in 1993, where his honour's thesis explored the ecology and distribution of the introduced Chinese mystery snail (*Cipangopaludina chinensis malleata*). In 1996, he completed his M.Sc. at the Memorial University of Newfoundland in St. John's, where his research was focused on modelling the mercury concentration increase in fish species of differing trophic levels following reservoir impoundment. He earned his Ph.D. in 2000 from McMaster University. His doctoral thesis was on environmental and temporal determinants of community variability using natural aquatic microcosms, research that was conducted at



Recently, Mitsutaku became interested in seafood cooking. Almost every weekend, he stands in the kitchen after finding fresh seafood at a local seafood market or Yokohama Fisheries Cooperative Association. He is now trying to learn how to prepare seafood from cookbooks. His dishes are not very delicious at the moment, but his wife likes them very much.

the Discovery Bay Marine Laboratory in Jamaica. Upon earning a Natural Sciences and Engineering Research Council (NSERC) postdoctoral fellowship, Tom shifted his research focus to invasion biology, and worked as a post-doc at the University of Windsor's Great Lakes Centre for Environmental Research. There, he developed and applied different molecular techniques to better understand invasion dynamics. In 2002, Tom moved to the Fisheries and Oceans Canada's Pacific Biological Station in Nanaimo, British Columbia. His initial projects dealt with characterizing and understanding the ecological role of several forage fish species, including Pacific herring, eulachon and surf smelt. More recently, his research shifted to non-indigenous (invasive) species. Through the

Department of Fisheries and Oceans (DFO), he has several on-going projects related to risk assessment, research on priority species (e.g., European green crab, tunicates, including *Didemnum vexillum*), monitoring new and existing introductions, and development of rapid response plans. Tom is also an active researcher and scientific committee member of the Canadian Aquatic Invasive Species Network (CAISN) and DFO's Centre of Expertise for Aquatic Risk Assessment (CEARA).

Tom's involvement in PICES activities started in 2006 when the Working Group on *Non-indigenous Aquatic Species* (WG 21) was formed under the direction of Fishery Science (FIS) and Marine Environmental Quality (MEQ) Committees. With a voluntary contribution provided by the Government of Japan in 2007 for a PICES project entitled "*Development of the prevention systems for harmful organisms' expansion in the Pacific Rim*", Tom launched a Taxonomy Initiative to better characterize and understand the distribution and dynamics of non-native species in the North Pacific. This initiative will help identify the taxonomic needs of each PICES member country and ultimately lead to the development of taxonomic information systems and tools that can be applied both within the PICES arena and beyond. Specific research

activities include rapid assessment surveys for native and non-native species, and collector surveys to characterize the distribution of fouling organisms.

During his non-working hours, Tom enjoys spending time with his wife and two children, and like any good Canadian curls in the winter.



Dr. Hiroaki Saito is the Chief of the Biological Oceanography Section at the Fisheries Research Agency's Tohoku National Fisheries Research Institute (TNFRI) in Shiogama, Japan. He received his B.Sc. and Ph.D. in Agriculture from the Tohoku University.

Hiroaki was born and raised in Fukushima, Japan. During his childhood, Hiroaki often went to the country where his grandparents lived, and enjoyed collecting insects, fishing carps and crawfish, harvesting rice and fruits, finding brilliant stones and fossils, and developed a unique eye for nature. During his undergraduate years in the mid-to-late

1980s, Hiroaki enjoyed the peculiar circumstances of the economic bubble in Japan, and spent many nights for parties, but finally tired of frolics. It was at that time when he received a course of lectures on oceanography from Professor Satoshi Nishizawa, and met friendly but quite hardworking graduate students in the Oceanography Laboratory at the Tohoku University. He learned a true attitude to science in this period.

Hiroaki started his career at the Hokkaido National Fisheries Research Institute in Kushiro, working for the resource management of squid for 3 years, and then moved to the Biological Oceanography Section as a research scientist. He is one of the establishing members of the A-line monitoring programme and has been serving this line for over 20 years. In Hokkaido, he studied mainly biology and ecology of copepods and their roles in fish population dynamics.

After his Hokkaido period, interrupted for a year by stay at the Danish Institute for Fisheries Research as a guest scientist to join the PROVESS (Processes of Vertical Exchange in Shelf Sea) project, Hiroaki moved to Shiogama in 2001. Although he studied various scientific issues on nutrient and plankton dynamics in marine ecosystems, all these studies are related to his interest on the role of organisms in the marine ecosystem and biogeochemical dynamics. Since moving to TNFSI, he has led extensive research projects, such as DEEP (Deep Sea Ecosystem Exploitation programme, 2002–2006), SPINUP (Study for Plankton and Iron Dynamics in the western

Subarctic Pacific, 2003), and SUPRFISH (Studies on Prediction and Application of Fish Species Alternation, 2007–2012). He was also a core member of a series of meso-scale iron fertilization experiments in the subarctic Pacific, Subarctic Pacific Iron Experiment for Ecosystem Dynamics Study (SEEDS-I and SEEDS-II) and Subarctic Ecosystem Response to Iron Enrichment Study (SERIES), which were recommended by the PICES Advisory Panel on *Iron Fertilization Experiment in the Subarctic Pacific Ocean*.

Hiroaki has been involved in IMBER (Integrated Marine Biogeochemistry and Ecosystem Research), an IGBP/SCOR core project, from the planning stage, and served as a member of the IMBER Scientific Steering Committee and the Chairman of IMBER-JAPAN from 2004–2008. He began his association with PICES in 1994, attending the

Third PICES Annual Meeting in Nemuro, Japan. Later, Hiroaki served as a member of the MODEL Task Team, Advisory Panel on *Iron Fertilization Experiment in the Subarctic Pacific Ocean*, Study Group on *Future Integrative Scientific Program(s)* and the FUTURE Science Plan Writing Team, and as Co-Chairman of the FUTURE Implementation Plan Writing Team. He is also an active member of the Biological Oceanography Committee and Working Group on *Iron Supply and its Impact on Biogeochemistry and Ecosystems in the North Pacific Ocean*. At PICES-2009, Hiroaki was appointed Chairman of COVE-AP. He is very excited at starting the new PICES science program as FUTURE's science largely overlaps with his research interests, and because he believes serious effort to answer the key questions of FUTURE is one of the obligations for scientists in the Anthropocene.



Robin Brown is the Manager of the Ocean Science Division of the Fisheries and Oceans Canada's Science Branch, located at the Institute of Ocean Sciences in Sidney, British Columbia. This is the institution that is

usually referred to informally as "Club Fed", due to its picturesque location on Patricia Bay. Robin is really old and has been at the ocean science game in various jobs for 32 years. In his attempt to find steady work, he has worked in biological, chemical and physical oceanography, studying marine bugs, water properties, currents, waves and sea ice. He has worked in the North Pacific, the Arctic and the North Atlantic. Along the way, he has dabbled in remote sensing and data management. In 1999, he was declared unfit for any real productive work and immediately promoted to management. He is responsible for a team of 70 scientists and technicians whose work is focused on the coastal waters of British Columbia, the North Pacific and the Arctic.

Robin has been involved in PICES activities since the inception of the Organization and served as a member and Chairman of the Technical Committee on Data Exchange, Chairman of the Study Group on *Ecosystem Status Reporting*, and a member of the Finance and Administration Committee.

## PICES Interns



We offer sincere thanks to Mr. Yongling Zhu (left), the 2009 PICES intern from the Second Institute of Oceanography of the State Oceanic Administration (Hangzhou, PR China), who will complete his term at the PICES Secretariat in February. We appreciate his dedicated work during this past year and wish him a successful career.

We are glad to announce that Ms. Tatiana Semenova (right) will join the Secretariat in March as the 2010 PICES Intern. She graduated from the Institute of International Studies at the Far Eastern State University and has worked at the International Department of the Pacific Research Fisheries Centre (TINRO-Centre) in Vladivostok, Russia, since 2007. We look forward to her involvement in PICES activities.