

PRESIDENT'S WELCOME MESSAGE



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It is my great pleasure to welcome you to the 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBS). Our Annual Conference (known as EMBC) is a premier international conference in biomedical engineering, and has been strategically held in different locations around the world, for example, in San Diego (USA), Boston (USA), Buenos Aires (Argentina), Minneapolis (USA), Vancouver (Canada), Lyon (France), New York City (USA), and Shanghai (China) over the last 8 years.

This year's meeting is being held in the beautiful city of Osaka, Japan. Under the able leadership of Dr. Kenji Sunagawa (Conference Chair), Dr. Christian Roux (Conference Co-Chair), Dr. Toshiyo Tamura (Program Chair), and Dr. Nigel Lovell (Program Co-Chair), the organizing committee has developed an exciting inter-disciplinary program. This program includes tutorial courses offering continuing medical education credits to clinicians; panel sessions discussing important biomedical engineering issues with academic researchers, clinicians, and research and development engineers; and lunchtime sessions to further promote students' interest in biomedical engineering. The organizers have also successfully recruited an all-star roster of keynote speakers, including Nobel Laureate Dr. Shinya Yamanaka (Center for iPS Cell Research and Application), Dr. Yoonchae Cheong (Sr. VP, Samsung), John Halamka (Harvard), and Dr. Hiroaki Kitano (Okinawa Institute of Science and Technology and Sony Computer Science Laboratories).

Of special note is the outstanding collaboration with the Japanese Society for Medical and Biological Engineering (JSMBE), led by Dr. Masaaki Makikawa (JSMBE Conference Chair) and Drs. Masaru Sugimachi and Masaki Yoshida (JSMBE Conference Co-Chairs). We warmly welcome and appreciate the scientific and organizational strength that JSMBE brings to the conference.

The continued growth of our meeting is an indication of its high quality and impact. This year, we received over 2,600 submissions. All the submitted papers were subject to peer review by the EMBS Conference Editorial Board (CEB), consisting of an international panel of experts in all areas of biomedical engineering. Special thanks go to, Nigel Lovell, Editor-in-Chief of the CEB, all the editors and reviewers of the CEB, and all the staff of the EMBS Executive Office (Laura Wolf, Jessica Lotito, Alicia Tomaszewski & Dana Bernstein,) for their outstanding service and contributions toward making this meeting possible.

EMBS continues to strive to provide a unique, effective platform for biomedical engineers to publish, to present, to network, and to advance their careers. The next two EMBS Annual Conferences will be held in Chicago, Illinois, USA (2014) and Milan, Italy (2015) and we look forward to your participation at future EMBS conferences.

Again, welcome to EMBC'13. I appreciate your participation and hope you will find this meeting stimulating and rewarding.



Dear Colleagues,

On behalf of the EMB'13 Organizing Committee, it is our singular pleasure to welcome you to the 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society and the 54th Annual Conference of the Japanese Society for Medicine and Biological Engineering. EMBC'13 continues the series of annual conferences that have become a key meeting ground for the international bioengineering community, bringing together academic experts, clinicians, industry representatives, and students in the broad spectrum of areas that constitute biomedical engineering. This year's theme, "Inspiring Sustainable Healthcare through Technology," resonates well with the positive, forward-looking vibe that accompanies the setting of EMBC'13 and JSMBE'13 in Osaka – a city known for its oldest Japanese cultural center, breathtaking beauty surrounded by world heritage, and highly accessible location to major cities such as Kyoto, Nara and Kobe in the west of Japan. Aside from its lure as an international travel destination, the Osaka and Kansai area are home to world-class academic and research institutions such as Osaka University, Kyoto University, Kobe University, The National Cardiovascular Research Center, RIKEN and Japan Synchrotron Radiation Research Institute (Spring-8). The Kansai area houses many headquarters of pharmaceutical companies, biomedical research institutions and industries.

The program this year includes a diverse array of approximately 3,000 papers and talks in topic areas that range from stem cell biology to neuroprosthetics to international biomedical education. These papers will be presented in the form of platform talks and posters, and in various kinds of sessions that include workshops, tutorials, regular oral/poster sessions, minisymposia and special sessions. We continue to have two new types of sessions first introduced in EMBC'12, i.e, poster sessions featuring late-breaking research papers and poster sessions featuring research or design projects carried out by undergraduate students. We are proud to note the introduction of many clinically-oriented, disease/patient-centered special sessions including latest developments in diagnosis and treatment presented by expert clinicians. We have organized these sessions to provide a unique opportunity for EMBS members to be exposed first-hand to state-of-the-art advances in clinical research and leaders in the field. Such a program will be rewarding in terms of networking with clinical societies and help individuals pursue future careers in biomedical engineering. EMBC'13 will be preceded (on Monday July 3) by Workshops and tutorials on various subjects. We are excited to present plenary keynote addresses during the conference itself by Shinya Yamanaka, a Nobel Laureate in Physiology and Medicine in 2012, John Halamka, Professor of Medicine, Harvard Medical School, Takeshi Kitano, Professor of Okinawa Institute of Science and Technology, CEO of Sony Computing and Yoonchae Cheong, Vice-President of Samsung Electronics Co. Ltd.. In addition to these plenary sessions, the conference will also be highlighted by specialized theme keynote lectures presented by other world-renowned experts in the various EMBC scientific themes.

While the scientific program promises to be an outstanding experience, we hope that you will also enjoy all that the city of Osaka and Kansai area have to offer in the days before or after the conference.

Once again, welcome to Osaka and welcome to EMBC'13!

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