

**OFFICERS**

- President: Bruno Siciliano,  
*Università di Napoli Federico II (Italy)*
- President-Elect: Kazuhiro Kosuge,  
*Tohoku University (Japan)*
- Past President: Richard A. Volz,  
*Texas A&M University (USA)*
- Founding President: George Saridis
- Vice President, Publications Activities: Peter Luh,  
*University of Connecticut (USA)*
- Vice President, Conference Activities: John Hollerbach,  
*University of Utah (USA)*
- Vice President, Financial Activities: Ian Walker,  
*Clemson University (USA)*
- Vice President, Industrial Activities: Alexander Zelinsky,  
*CSIRO (Australia)*
- Vice President, Member Activities: Alicia Casals,  
*Universitat Politècnica de Catalunya (Spain)*
- Vice President, Technical Activities: Kenneth Goldberg,  
*University of California-Berkeley (USA)*
- Treasurer: Xiaoping Yun,  
*Naval Postgraduate School (USA)*
- Secretary: Frank Park,  
*Seoul National University (Korea)*
- IEEE Division X Director: William A. Gruver,  
*Simon Fraser University (Canada)*
- Editor-in-Chief, *IEEE Trans. on Automation Science & Engineering*  
Nukala Viswanadham, *Indian School of Business (India)*
- Editor-in-Chief, *IEEE Transactions on Robotics*  
Alessandro De Luca, *Università di Roma "La Sapienza" (Italy)*
- Editor-in-Chief, *IEEE Robotics & Automation Magazine*  
Stefano Stramigioli, *University of Twente (The Netherlands)*
- IEEE International Conference on Robotics and Automation  
General Chair, ICRA 2008  
Maja J. Mataric, *University of Southern California (USA)*
- General Co-Chair, ICRA 2008  
Paul Schenker, *JPL (USA)*
- Program Chairs, ICRA 2008  
Stefan Schaal and Gaurav Sukhatme, *University of Southern California (USA)*
- General Chair, ICRA 2009  
Kazuhiro Kosuge, *Tohoku University (Japan)*
- Program Chair, ICRA 2009  
Katsushi Ikeuchi, *University of Tokyo (Japan)*

**ADMINISTRATIVE COMMITTEE**

- Terms ending in 2008
- Aude Billard *EPFL (Switzerland)*
- Pierre Dupont *Boston University (USA)*
- Hideki Hashimoto *University of Tokyo (Japan)*
- Seth Hutchinson *University of Illinois (USA)*
- Katsushi Ikeuchi *University of Tokyo (Japan)*
- Kevin Lynch *Northwestern University (USA)*
- Terms ending in 2009
- Hajime Asama *University of Tokyo (Japan)*
- Rüdiger Dillmann *Universität Karlsruhe (Germany)*
- Toshio Fukuda *Nagoya University (Japan)*
- Vijay Kumar *University of Pennsylvania (USA)*
- Jean-Paul Laumond *LAAS-CNRS (France)*
- Roland Siegwart *ETHZ (Switzerland)*
- Terms ending in 2010
- Peter Corke *CSIRO (Australia)*
- Alessandro De Luca *Università di Roma "La Sapienza" (Italy)*
- Lynne Parker *University of Tennessee-Knoxville (USA)*
- Stefano Stramigioli *University of Twente (The Netherlands)*
- Shigeki Sugano *Waseda University (Japan)*
- Satoshi Tadokoro *Tohoku University (Japan)*

**Here Comes RAS 2.0**

After the productive IEEE Robotics and Automation Society (RAS) meetings at the 4th IEEE Conference on Automation Science and Engineering (CASE) in Washington, DC, last August, I am writing this column while attending the IEEE/Robotics Society of



Japan (RSJ) International Conference on Intelligent Robots and Systems (IROS) (22–26 September) along the magnificent scenery of the Côte d’Azur!

Below you will read about the bustling activities and new initiatives from our boards, mostly based on the outcome of our Fall Administrative Committee (AdCom) meeting. Thanks to the hard work of many colleagues and recently a few students too, I feel our Society has now upgraded to 2.0, along the footsteps of version 2 of our Web site (see my message in the June issue). Look in <http://www.ieee-ras.org> for new features and services of a versatile, robust, user-friendly,

and high-tech portal. The new database structure helps members in searching information and archiving historical data and supports volunteers in their work and even in the online management of all Society meetings, such as the series held here in Nice.

The multimedia library is now live. A great historical archive of video contributions of the last 15 years’ editions of the IEEE International Conference on Robotics and Automation (ICRA) (1991–2006, 2007 and 2008 soon to come) is now available for streaming to all RAS members once they log into our new Web site. If you also want to have a three-dimensional (3-D) experience in watching and browsing videos, you can consider installing the CoolIRIS plugin. This project is yet another effort of our Society to serve its members with high-quality technical services. The project has been realized, thanks to the great work of Paul Oh and coworkers digitalizing all videos that were available on tapes and DVDs, with the help of Rosalyn Snyder. Then the files had to be transferred to the Electronic Products and Services Board (EPSB) of the Society chaired by Stefano Stramigioli. EPSB has taken care of creating a cool interface to be able to stream videos and even allow viewers to vote on their favorites. This meritorious technical work has been carried out by Olaf van Zandwijk and Hubert Flisijn, who are the real gurus behind the many features of the new Web site. Please check it out and enjoy!

**Conference Activities Board (CAB)**

- ◆ CAB meets three times per year to handle the steady stream of RAS conference business: at ICRA, IROS, and an additional

summer meeting for which there is a separate travel budget. In the past, the one-and-a-half-day summer meeting was held annually at a San Francisco Airport Hotel to save on travel costs. On 24 August 2008, the summer meeting was held for the first time in conjunction with CASE 2008 in Washington, DC. Continuing the idea that CAB should locate its summer meeting strategically in conjunction with RAS' major conferences, the next CAB meeting will be held on 28 January 2009 at Micro Electro Mechanical Systems (MEMS) 2009 in Sorrento, Italy. The meeting in January is hardly a "summer" meeting but fills in the eight-month gap between IROS 2008 and ICRA 2009. The AdCom approved a budget increase in view of the increased travel costs to such meetings.

- ◆ We are pleased to announce the hiring of Janet Liddiard as the RAS Conference Assistant, effective from 1 October 2008. At the Spring 2008 meeting, the AdCom approved the budget for this part-time position, whose statement of work is to assist with conference approvals, conference closings, and other details of managing the RAS conference portfolio. Janet has been working part time as the treasurer for ten IEEE Instrument and Measurement Society conferences and workshops, and we are fortunate to have someone of her experience and expertise to assist the conference activities. Janet has a budget, approved at the Fall 2008 AdCom meeting, to travel to three CAB meetings per year, beginning with the CAB's meeting at MEMS 2009. She will be a regular attendee at ICRA and IROS as well.
- ◆ RAS fully sponsors ten conferences, cosponsors 17 conferences, and technically cosponsors 26 more. The Steering Committee for Technical Programs (SCTP), chaired by Vijay Kumar, has begun a review of all RAS-sponsored conferences to provide increased oversight for conference technical programs besides just ICRA and IROS. The Conference Editorial Board has just begun the review of ICRA 2009 papers, under the new Editor-in-Chief Antonio Bicchi. Associate editors and editors were reorganized to some extent.

### Financial Activities Board (FAB)

- ◆ The 2009 RAS budget has moved through its second pass at the IEEE, with the final budget to be approved in late 2008.
- ◆ At the Fall 2008 AdCom meeting in Nice, the Society took advantage of the opportunity (new since 2007) to spend up to 50% of the previous year's surplus to authorize the transfer of sufficient funds to the IEEE Foundation to endow five Society Awards (Early Academic Career Award, Early Government or Industry Career Award, George Saridis Leadership Award, IEEE TRO Best Paper Award, IEEE TASE Best Paper

Award) at US\$1,000 each annually. This endowment needs to be approved by the IEEE, and this process is expected to take several months.

### Industrial Activities Board (IAB)

- ◆ IAB membership has been expanded through the appointment of two new members:
  - ◆ Jeanne Dietsch, CEO, Mobile Robots Inc.
  - ◆ Raj Madhavan, Intelligent Systems Division, National Institute of Standards Technology (NIST).Both Jeanne and Raj bring considerable experience to IAB. Jeanne will assist in our industrial outreach to high-technology robotics companies, while Raj will help in the standardization work undertaken by the Society.
- ◆ A regular one-page column will be provided by IAB for *IEEE Robotics and Automation Magazine (RAM)*. The first "Industrial Activities" column appears in this issue. It is focused upon reporting on the joint forum that has been run by the IEEE and the International Federation of Robotics (IFR) for the last four years to promote new robotic products and technologies. The IEEE-IFR award for Invention and Entrepreneurship has become a highly prestigious award in the robotics field. Covered in the column are also new products and technologies, in view of a technology watch to be maintained by IAB.
- ◆ IAB is collecting information of behalf of the international robotics community on technology road-mapping activities from around the world. Why is our Society undertaking this work? Road maps are a good way to inform the public, government, and industry about the trajectory of the robotics field. An often asked question is where will our field be in five years, ten years, or 20 years? There are several classes of road maps, those which have been developed by the following:
  - ◆ government and industry (company)
  - ◆ research (new technology) and industrial (new products).A number of countries have been active in the road-mapping area. These include Korea, Japan, European countries, and the United States (emerging). IAB is in the process of gathering material, which will be published on the RAS Web site.
- ◆ IAB is leading efforts in our Society to help developing robotics standards. Why is our Society undertaking this work? Standards are important ways to help drive industry forward and develop new products. Interoperability standards allow components to be interlinked to form robotic systems. It is interesting to note that robots are being used in public spaces, yet we do not have any agreed robot safety standards! IAB will be working with standards organizations such as IEEE Standards and International Standards Organization (ISO). The focus of our work will be on the following:
  - ◆ develop interfaces and interoperability for robotics software

◆ lead community efforts to develop mobile robot safety. Erwin Prassler, IAB associate vice president, is the Society lead for this activity.

### Member Activities Board (MAB)

- ◆ The Student Activities Committee has launched a Wiki page aimed at sharing experiences of past robotics contests. This page is designed to provide examples and experiences as robotics competitions are quite different from each other. The Robotics Competition Starter Kit should help new organizers successfully hold a robotics competition. The page, which is expected to be completed by the robotics community, is already available at <http://wiki.ieee-ras.org/mab/competition/index>.
- ◆ Being aware of the importance of students' participation in robotic activities, several initiatives have been launched in the last ICRA and IROS conferences. These aim at continuing in the future (hosted by these two big conferences) to promote student networking and help them in their first career steps. The scope of the activities are both technical (mentoring program, workshop, and other future activities) and playful (student party, pub crawl).

- ◆ An effort is being made to keep the RAS robotics competitions as a permanent activity to be held in conjunction with ICRA conferences: the ICRA Robot Challenge, which started with a workshop in ICRA 2007 and resulted in a successful competition in ICRA 2008. A new competition is planned for ICRA 2009.
- ◆ In an effort to reach areas where robotics and automation or the RAS presence is very low, RAS is supporting an initiative of the Latin American Robotics Council to promote local and regional robotics activities. MAB will also support the RAS Long Range Planning Committee's initiative to create a Distinguished Ambassadors Program to disseminate information about robotics and automation and our Society in such areas. It is expected that from these initiatives the gradual increase of RAS members can be steeper in the future.

### Publications Activities Board (PAB)

- ◆ As reported previously, the 2007 impact factor for *IEEE Transactions on Robotics (T-RO)* from the *Journal of Citation Reports* was wrongly computed. Through the diligent effort by Alessandro De Luca, the editor-

**Riverhawk Company**

# BEYOND BEARINGS.

## FLEXURAL PIVOTS®

Where Tradition Meets Tomorrow.

If you can fold it, move it, or flex it, we can design a motion solution. Riverhawk Free-Flex® Pivots are Frictionless Bearings backed by over 50 years of reliable performance in over 4 million uses. In the precision-driven world of robotics and automation, the Riverhawk Free-Flex® Pivot delivers. From scanning mirrors in fighter jets, to antenna arms and solar panels in space, Riverhawk Free-Flex® Pivots are meeting the challenges. When the situation calls for a reliable, unique solution, consider Riverhawk Free-Flex® Pivots...Engineered Solutions.

- **FRictionLESS**
- **STiction-FREE**
- **NO LUBRICATION REQUIRED**
- **MAINTENANCE-FREE**
- **SHOCK RESISTANT**
- **INFINITE CYCLE LIFE**

**WWW.FLEXPIVOTS.COM**  
215 Clinton Road • New Hartford, NY 13413  
Voice: 315.768.4855 • Fax: 315.768.4941 • E-mail: [info@riverhawk.com](mailto:info@riverhawk.com)

in-chief of *T-RO*, the *Journal of Citation Reports* acknowledged the mistakes and will publish the revised impact factor 1.763 in its next update. This indicates that for each paper published in 2005 and 2006 in *T-RO*, it was cited by 2007 papers published in the journals in the ISI database 1.763 times on the average. This pushes *T-RO* to be number one again for the most cited journal in Robotics. Congratulations to *T-RO* and thanks for the effort by Alessandro! For *IEEE Transactions on Automation Science and Engineering (T-ASE)*, the 2007 impact factor is 1.229. For *RAM*, the 2007 impact factor is 0.892.

- ◆ After 14 1/2 years of dedicated service and extraordinary leadership to RAS publications, Alessandro De Luca just stepped down from the editor-in-chief position of *T-RO*. He first served as an associate editor and then editor of *IEEE Transactions on Robotics and Automation (T-RA)*. He then served as the editor-in-chief of both *T-RA* and *T-RO* when *T-RA* was bifurcated into *T-RO* and *T-ASE*. During his tenure as the editor-in-chief, we have observed the continuing reduction of the review cycle (average of the first review time is less than three months), the maintaining of the high quality and impact factor of the journal, the cultivating of the editorial board as an effective team, the successful moving of paper submission and review system to PaperCept. We want to thank Alessandro for a job well done! At the same time, Seth Hutchinson of University of Illinois at Urbana Champaign is now the new editor-in-chief. Seth has been with the *T-RO* editorial board for many years and served as an associate editor and editor for *T-RA* and editor for *T-RO*, and then editor-in-chief for RAS Conference Editorial Board (CEB). We look forward to working with him for the next five years. Please join me to welcome him.
- ◆ Finally, the first issue of the new *IEEE Transactions on Haptics (T-H)* just came out in September. *T-H* is a quarterly publication cosponsored by the RAS (45%), the IEEE Computer Society (45%), and the IEEE Consumer Electronics Society (10%). It is also technically cosponsored by the IEEE Engineering in Medicine and Biology Society. This journal addresses the science, technology, and applications associated with information acquisition and object manipulation through touch, and the editor-in-chief is J. Edward Colgate of Northwestern University. Please visit <http://www.computer.org/th> for more information.

## Technical Activities Board (TAB)

- ◆ TAB met at CASE for the first time in August. After briefly discussing the Disney-Pixar film *Wall-E*, a terrific story about the little robot that could, and its resemblance to National Aeronautics and Space Administration's (NASA) Mars Explorer, we reviewed the results of the first Triennial Review of Technical Committees (TCs). To

make room for new TC initiatives, TAB and AdCom agreed to retire three TCs: Prototyping, Underwater Robots, and Manufacturing Automation.

- ◆ Two new TCs were approved. The TC on Robot Learning will respond to a growing interest in machine learning and statistics within the robotics community and growth in the learning community in using robots as motivating applications for new algorithms and formalisms. Robot learning plays a key role in high-profile competitions such as the DARPA Challenges and RoboCup. The TC on Marine Robotics will bring together research on underwater and surface-water vehicles, spotlighting research on commercial and research unmanned air vehicles (UAVs) and emerging seafloor observatories linked by fiberoptic cables and satellites that will return massive amounts of data from coastal and deep sea sites around the world.
- ◆ We also reviewed the Wikipedia entries for robot, automation, and other topics related to TCs, such as robot surgery. Wikipedia has become a valuable resource for students and the public, and many of these entries would benefit from input from experts in the RAS community. We encourage members to review and edit Wikipedia entries related to their areas. Note that anyone can edit entries, so it is easy to make changes, but also note that other editors can roll back your edits so you must check back over several weeks to make sure your edits stick.
- ◆ TAB expressed its interest in applications for new TCs in areas such as sensor networks and RFID, green automation, healthcare automation, algorithmic automation, and cyber-physical systems.
- ◆ Details on TAB activities, including how to propose a new TC, and a photo of the Mars Explorer next to *Wall-E* are available at the TAB Web site <http://goldberg.berkeley.edu/ras-tab> (see item 7).

As you can see, the record is sound; yet our Society can further grow if we can improve our services to the members. We appreciate the commitment of new volunteers, and we encourage you to provide us with your innovative ideas and input. If you have any comments or wish to be involved, please contact me, any of the officers, or Rosalyn Snyder, our Society Activities Coordinator. Contact information of RAS officers and committee chairs is on our home page.

As this issue will be printed in December, I take this opportunity to wish all members a happy and peaceful holiday season!



Bruno Siciliano  
siciliano@ieee.org  
RAS President 2008–2009