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# INSTRUMENTATION & MEASUREMENT SOCIETY NEWSLETTER

November 2016

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## About the IEEE Instrumentation & Measurement Society Newsletter

The IEEE Instrumentation & Measurement (I&M) Newsletter includes time sensitive news useful to its members and highlights content of the current issue of *IEEE Instrumentation & Measurement Magazine*.

## Benefits of I&M; Membership

Our mission statement says, "The Instrumentation & Measurement Society Administrative Committee strives to provide the most comprehensive and high-quality services to our members and related professionals." The I&M; Society has a wide range of activities and benefits to offer our members. These are detailed on our [website](#), which highlight available services and products.

There also are many opportunities for our members to become involved in volunteer leadership positions that help promote the instrumentation and measurement profession. We invite you to become involved today!

## I&M Conference Calendar

We hold numerous workshops throughout the year. Please refer to the I&M; [Conference website](#) for a full listing.

For more information on any of the conferences, please contact [Mark Yarey](#), VP of Conferences for the I&M; Society.



If you have not yet joined any of these groups, please consider doing so.

### **IEEE Instrumentation & Measurement Magazine**

The latest issue of [IEEE Instrumentation & Measurement Magazine](#) is in the mail and is retrievable now from IEEE Xplore, the IEEE online digital library.

All IEEE Instrumentation & Measurement Magazine subscribers can access the online edition using their [IEEE Account](#).

 [Image of Nov 2016 IEEE I&M Magazine](#)

Feature articles in this issue include:

- " Among the challenges and future trends in I&M;"
- " Ultrasound physiotherapy devices: how to measure them"
- " Investigation of thermal effect by focused ultrasound in cancer treatment"
- " Dynamic threshold algorithm to evaluate trustworthiness of the estimated blood pressure in oscillometry"
- " Architecture of smart clothing for standardized wearable sensor systems"
- " Measuring inside your mouth! Measurement approaches, design considerations, and one example for tongue pressure monitoring"

### **IEEE Senior Membership**

IEEE Senior membership is the highest grade for which application may be made and requires experience reflecting professional maturity. Candidates need to be an engineer, scientist, educator, technical executive, or originator in IEEE-designated fields in

[IEEE Sensors Applications Symposium](#) (SAS) will be held 13-15 March 2017 in Glassboro, NJ, USA. It is a unique opportunity for researchers and developers working in the field of sensors and their applications. General and special sessions will be dedicated to sharing experience and knowledge in the field of sensor technologies, sensing methodologies and applications for sensors as well as the role and the use of sensors in strategic fields ranging from environment monitoring to ambient assisted living. A strong effort will also be dedicated to promote networking activities through formal and informal events.

You are invited to submit papers for this conference. Topics include, but are not limited to:

- Biomedical sensors
- Energy harvesting for sensors
- Internet of things
- Robotics and automation
- MEMS and nano-sensors
- Big data
- Flexible and wearable sensors

Important Dates:

Final Paper Submission: 14 November 2016

Review Notification: 20 December 2016

Final Submission: 20 January 2017

Final Decision Notification: 1 February 2017

2017 IEEE International Symposium on

**MeMeA** | **Medical Measurements and Applications**  
 May 8-10, 2017 | Rochester, MN, USA

You are invited to [submit papers](#) for the 12th Annual IEEE International Symposium on Medical Measurements and Applications (MeMeA) to be held at the Mayo Clinic in Rochester, MN, USA 8-10 May 2017. The symposium will include papers that advance the science of measurement and instrumentation as related or applied to medicine. This includes electrical, chemical and physiological sensors and systems which deliver measurement data for prevention, diagnosis or treatment of disease.

Symposium Topics:

- Sensors for medical systems / sensor fusion and calibration
- Biosignal processing
- Imaging and communication
- Measurement and quality control for medical products
- Environmental medicine and home automation for disability, disease, and aging
- Patient safety
- Internet of things (IoT) in medicine
- Medical and instrumentation uncertainty

Important Dates:

Final Paper Submission: 12 December 2016

Review Notification: 16 January 2017

Submission of Revised paper: 13 February 2017

Final Decision Notification: 6 March 2017

Final Submission: 27 March 2017

professional practice for at least ten years and shall have shown significant performance over a period of at least five of those years.

An [application for Senior Membership](#) requires three references unless nominated by a Senior member, and in that case requires two references.

The following members have been elevated in 2016: Salmiah Ahmad, Sergio Angelo Cruz, Zdenek Bradac, Ana de Almeida, Gordon Deans, Axel Junge, Takehiro Morioka, Amauri Oliveira, Miguel Perez, Briane Ritchie, Norlida Buniyamin, Vittorio Ferrari, Magnus Karlsson, Darren Woodhouse, Seyedreza Abdollahi, Dan Apetrei, Kurt Barbe, Jean-Michel Le Floch, Thomas Simacek, Anthony William Sloman, Anthony Suto, Dr. Ramachandraiah Uppu, Saravanan Veerappan, Donald Hughes, Juliana Johari, Mahanijah Md Kamal, Joshua Gordon, Anuj Kumar, David OBrien, Fazlur Rahman M H R, Xue Wang, Chan Wong, Valeriu Gh David, Arif Sarwat, Lorenzo Ciani, Zuriati Janin, Frederic Surre

### Initiatives for Young Professionals in I&M;

If you are in the Young Professional Program and want to know more about I&M; activities, read this article "[Initiatives for Young Professionals in Instrumentation and Measurement](#)" by the I&M Young Professionals Representative, Erik Timpson.



2017 [IEEE International Instrumentation and Measurement Technology Conference](#) (I<sup>2</sup>MTC) will be held in Torino, Italy, 22-25 May 2017. The conference will be held on the Politecnico di Torino campus, with Marco Parvis and Sabrina Grassini serving as the Conference General Co-Chairs.

Detailed information about I<sup>2</sup>MTC 2017 is posted on the [I<sup>2</sup>MTC website](#).



The 10th [International Conference on Sensing Technology](#) (ICST 2016) will be held 11-13 November 2016 in Nanjing, China.

Nanjing is the capital of Jiangsu Province in East China. Running through the city are the lower reaches of the Yangtze River whose estuary is not far away. Nanjing enjoys a civilization of over 6000 years, and the city itself was founded 2500 years ago. Enclosed by mountains and rivers, and located in a strategic place, it boasts picturesque scenery that blends natural landscape with towering modern buildings, integrating traditional styles with modern civilization. Thus it has long been known to the world as a unique historic and cultural city.



The 16th [Mediterranean Microwave Symposium](#) (MMS2016) will be held at Al Ain University of Science and Technology (AAU), in Abu Dhabi City in United Arab Emirates (UAE) 14-16 November 2016.

The goal of the MMS2016 is to provide an excellent opportunity to present research progress and recent developments in radio-frequency (RF), microwave related topics, antenna technologies, wireless communications, and in a broad range of high-frequency topics, including terahertz and photonic technologies. The experts will be able to discuss/present the latest product, information, and technology solutions in the RF and microwave industry. The MMS2016 will have featured keynote talks, special sessions, poster presentation, tutorials, and workshops.

Have a conference you would like advertised in the I&M; Society Newsletter? Contact [Judy Scharmann](#) for details on how to have it included.

## Spotlight on the Benefits of Technical Co-Sponsorship

I&M offers two types of sponsorship: Technical and Financial. In this issue, we would like to briefly focus on technical co-sponsorship. The main benefit of technical co-sponsorship is the knowledge that I&M members share about the field of instrumentation and measurement. Other benefits are:

- Be included in the IEEE Conference Search tool

- Be encouraged and supported to participate in the IEEE Conference Publications Program (CPP): the primary objective of the CPP is to include the Conference papers in IEEE *Xplore* for the widest dissemination within the technical community
- Be included in the I&M website
- Use I&M and IEEE logos to attract qualified attendees
- Be listed in the IEEE I&M Magazine pages

Other benefits can be specified in the conference Memorandum of Understanding (MoU). Technical co-sponsorship requires direct and substantial involvement by the I&M in the organization of the conference technical program. Technically co-sponsored Conferences must include I&M members in the technical committees in order to contribute in managing the Call for Papers, the technical program and the review process. In addition, the IEEE I&M logo must be included in all event publications and announcements. In summary, these requirements help to boost the collaboration between the I&M and the primary participants of the conference so that the benefits listed above are maximized.

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## Report from I&M Education Committee

### Updated Video Content

The [Instrumentation & Measurement Channel](#) on IEEE.tv has been updated to better focus on the scope and field of interest of the IEEE Instrumentation and Measurement Society. We have also updated the [Educational Video Tutorial section](#) on the I&M website; it is now showing video tutorials.

On these sites, you can find fifteen exciting videos, including eight new video tutorials recently recorded by top experts in the field. Five of them cover interesting hot topics in the field of sensors and sensor networks, one is focused on how sensors and measurement systems can be inspired by nature, and one presents a new hot topic in metrology: forensic metrology. Visit these pages and enjoy the videos.

The video tutorials are separated in two main classes: The [Expert](#) and the [Classroom](#) series.

Expert series video tutorials cover advanced topics in the area of I&M and are given by well-known experts in the specific field. Classroom video tutorials are presented by students (with the supervision of the Professor) and focus on theoretical or experimental aspects of basic knowledge in the I&M field.

### Invitation to submit Instrumentation & Measurement Video Tutorials

If you wish to submit a proposal for a new video in either the Expert series or Classroom series please visit our [website](#).

Your proposal will be reviewed by the Editorial board with the help of expert reviewers. If accepted, you may record your video with your own audio/video facilities or attend one of the video recording stages that will be organized at selected I&M conferences.

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## I&M Distinguished Lecturer Program

The I&M Distinguished Lecturer Program (DLP) supports our Chapters, members, and those interested in the I&M field by providing Distinguished Lecturers (DLs) for approved meetings, events, and conference keynotes.

Currently I&M has twelve active DLs and more than twenty (completed and upcoming) approved DL events taking place all over the world. The next few events take place in Thailand (DL Prof. Pedro Silva Girao), China (DL Prof. Octavian Postolache), and Romania (DL Prof. Octavian Postolache). For more information, please visit our [website](#) or contact the DLP Chair, [Kristen Donnell](#).

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## Call for Participation in I&M Technical Committees

I&M has various Technical Committees (TC). Our TC's define and implement the technical directions of the Society. As a fundamental element of the Society all members are invited - and encouraged - to participate in one or more of its technical committees. Please reach out to [Rugiang Yan](#), VP Technical and Standards Activities or any member of the Technical and Standards Activities Committee if you are interested in membership in one or more of our TC's. You can also fill out an application form and send to the chair of your interested TC's. To view the complete list of TC's, visit our [website](#).

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## Recognition of Technical Achievements and Innovations - Announcement of Issued Patents

We would like to recognize I&M; Society member technical achievements and innovations that have resulted in issued patents during the current calendar year. If you have been issued a patent in 2016 we wish to add it to the list. To do so please fill out [this form](#) and we will add the information to our website. In addition, if you are issued a patent in the future please use the same link to inform us and we will add it to the list as we intend to keep this list continuously updated.

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## National Science Foundation (NSF) Announces New Program and Seeks Proposals

NSF has recently announced a new program, entitled "[Smart and Autonomous Systems \(S&AS;\).](#)" The program focuses on Intelligent Physical Systems (IPS) that are cognizant, taskable, reflective, ethical, and knowledge-rich. The S&AS; program welcomes research on IPS that are aware of their capabilities and limitations, leading to long-term autonomy requiring minimal or no human operator intervention.Z

Examples of IPS include, but are not limited to, robotic platforms and networked systems that combine computing, sensing, communication, and actuation. Cognizant IPS exhibit high-level awareness beyond primitive actions, in support of persistent and long-term autonomy.

The deadline for proposals is 19 December 2017. The solicitation is open to universities, colleges, and non-profit research organizations located in the United States. More information can be found on their [website](#). A webinar and FAQ are being prepared, and information will be listed on the program website when available.

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## Attention Book Authors

Advertise your book on the I&M; website! The Instrumentation & Measurement Society provides a list of book titles written by I&M authors on the I&M; [website](#). The Society believes that books are an excellent avenue to disseminate the most advanced state-of-the art within and outside of the community and that the website will help to spread the

good news about the hard work of the authors. The guidance governs which titles will be displayed. We look forward to your contributions! Visit our [website](#) for terms and guidelines.

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## I&M Chapter News

The Best Chapter Award for 2015 has been awarded to the IMS Italy Chapter, chaired by Leopoldo Angrisani. They will receive US\$1,000 and a certificate. Congratulations!

We would also like to welcome Karunya Institute of Technology Instrumentation and Measurement Society Student Branch Chapter in the Madras Section as our newest Chapter.

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## I&M; 2016 Officers

[View](#) the full list of 2016 I&M; Officers.

[View](#) the full list of I&M; AdCom members.

[View](#) the full list of additional AdCom appointments.

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The 2016 Fall AdCom meeting took place in in Catania, Italy 13-15 October 2016.



Front row: Zheng Liu, Max Cortner, Reza Zoughi, Katelyn Brinker, Wendy Van Moer, Ruth Dyer, Kristen Donnell, Ferdi Ponci, Octavia Dobre, Jorge Daher, Lee Barford, Juan Manuel Ramirez Cortes.

Back row: Christophe Dubois, Chi-Hung Hwang, Sergio Rapuano, Mark Yeary, Alessandro Ferrero, Dario Petri, Salvo Baglio, Shervin Shirmohammadi, Mihaela Albu, Judy Scharmann

Please welcome our newly - elected AdCom Members for the term 2017-2020:



Alessandro Ferrero Sergio Rapuano

Helena Maria dos  
Santos Geirinhas Ramos

Mark Yeary

### 2017 I&M; Officers:

President: Ruth A. Dyer

Executive Vice President (VP): Max Cortner

VP Conferences: Chi-Hung Hwang

VP Education: Salvatore Baglio

VP Finance: Dario Petri

VP Membership: Shervin Shirmohammadi

VP Publications: Zheng Liu

VP Technical & Standards: Ruqiang Yan

Treasurer: Juan Manuel Ramirez Cortes

Junior Past President: Reza Zoughi

Senior Past President: Jorge Fernandez Daher

Please welcome our new Editor-in-Chief (EiC) of the *IEEE Transactions on*

*Instrumentation and Measurement*, Shervin Shirmohammadi of University of Ottawa, Ottawa, Canada. He begins his term on 1 January 2017. We thank the outgoing EiC, Alessandro Ferrero, for his past five years of service.

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