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INSTRUMENTATION & MEASUREMENT SOCIETY

NEWSLETTER

February 2017

In this issue:

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About the IEEE Instrumentation & Measurement Society Newsletter

Engineers today start their careers with excellent technical skills and subject matter expertise. The IEEE Instrumentation and Measurement (I&M) Newsletter includes time sensitive news useful to its members and highlights content of the current issue of *IEEE Instrumentation and 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 Chi Hung Hwang, VP of Conferences for the I&M; Society.

Twitter

Facebook

Join I&M;

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 Sensors Applications Symposium (SAS) 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.

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

Registration is now open. Advanced registration deadline is 13 February, so register today!

2017 IEEE International Symposium on
MeMeA | Medical Measurements and Applications
May 8-10, 2017 | Rochester, MN, USA

The 12th Annual IEEE International Symposium on Medical Measurements and Applications (MeMeA) will be held at the Mayo Clinic in Rochester, Minnesota, USA. 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. Plenary Speakers are now confirmed! Go to the website for more details!

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:
Review Notification: 15 February 2017
Submission of Revised paper (if required): 28 February 2017
Final Decision Notification: 15 March 2017
Final Submission, Copyright, Registration: 7 April 2017

MeMeA 2017 Pre-conference Tutorials
Sunday 7 May 2017

MeMeA 2017 will include an afternoon tutorial session on Sunday, 7 May 2017 prior to the conference. There will be two tutorial tracks to choose from and the sessions will run from approximately 1 p.m. to 4:30 p.m. local time. The first track will be a

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 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 O'Brien, Fazlur Rahman M H R, Xue Wang, Chan Wong, Valeriu Gh David, Arif Sarwat, Lorenzo Ciani, Zuriati Janin, Frederic Surre, Sardar Azari, Behzad Bahraminejad, Rosdiazli Ibrahim, Francesco Lamonaca, Huaping Liu, Shubhajit Roy Chowdhury, David Stetzer, Wolfram Teppan, Maciej Zawodniok

Congratulations 2017 IEEE Fellows!

Congratulations to the following I&M; Members elevated to IEEE Fellow as of January 2017:

Michael Gard
for contributions to instrumentation-and-measurement technology for petroleum exploration, computed tomography, and underground

technical track devoted to novel instrumentation and measurement techniques and the second track will be hosted by Mayo Clinic physicians and researchers and devoted to the medical application of biological sensors. More details will be available as soon as the topics and speakers are confirmed.

Registration Now Open! Register NOW!

I2MTC 2017 IEEE International Instrumentation and Measurement Technology Conference
May 22-25, 2017 | Politecnico di Torino | Torino, Italy

Join us for the 2017 IEEE International Instrumentation and Measurement Technology Conference (I^{2}MTC) to be held in Torino, Italy, 22-25 May 2017. I2MTC 2017 spans research, development and applications in the field of instrumentation and measurement science and technology. This includes Industrial Tracks, where research merges with practical applications in industrial technology used every day. The Conference fosters the exchange of know-how between industry and academia.

Important Upcoming Deadlines:
Submission of Revised Paper (if Required): 23 January 2017
Final Notification Deadline: 17 February 2017
Final Manuscript Submission for ALL Papers: 3 March 2017
The Tutorials Program is now available online!

Industry Papers - To enhance industry engagement and increase exchange between industry members, as well as between industry and academic members, I2MTC 2017 is holding Industry Sessions. Call for Industry Papers

Registration is now open! Register Now!

2017 IEEE AUTOTESTCON

The 2017 IEEE AUTOTESTCON will be held in Schaumburg, IL on 11-14 September 2017.

AUTOTESTCON is the world's premier conference that brings together the military/aerospace automatic test industry and government/military acquirers and users to share new technologies, discuss innovative applications, and exhibit products and services. It is sponsored annually by the Institute of Electrical and Electronic Engineers (IEEE).

AUTOTESTCON will be held at the Renaissance Schaumburg Convention Center Hotel in Schaumburg, Illinois, USA, on 11-14 September 2017. The technical program for AUTOTESTCON 2017 will be determined by the interests of those participants submitting for publication, presenting a technical paper or organizing a technical session. Papers and sessions should cover appropriate topics dealing with system readiness and automatic test technology in particular.

Call for Papers

construction

Shervin Shirmohammadi
for contributions to multimedia systems and network measurements

Call for Nominations to IEEE Fellow Class of 2018

IEEE Fellow is a distinction reserved to recognize IEEE members whose extraordinary accomplishments in any of the IEEE fields of interest are deemed fitting of this prestigious grade elevation.

The total number of new IEEE Fellows selected in any one year does not exceed one-tenth of one percent of the total voting Institute membership.
IEEE Instrumentation and Measurement Society welcomes nominations to IEEE Fellow elevation.

To be eligible for IEEE Fellow, a nominee must be an IEEE Senior Member or IEEE Life Member, and to have been a member in good standing in any grade for a period of five years or more preceding 1 January of the year of elevation.
IEEE Fellow nominees are classified into the following four categories:

- Application Engineer/Practitioner
- Educator
- Research Engineer/Scientist
- Technical Leader

The nominator can be any person, including non-IEEE members, and does not have to be an IEEE Fellow. The nominator has the responsibility to:

1. Prepare the IEEE Fellow Grade Nomination Form
2. Solicit at least five, but no more than eight, IEEE Fellow references capable of assessing the nominee's contributions
3. Solicit no more than three endorsements capable of supporting the nomination. Any person, including non-

IMPORTANT DATES:
Submission of abstracts 15 February 2017
Acceptance Notification 6 May 2017
Final Papers due 31 July 2017

Please note the following deadlines for I&M; Society Conferences that are approaching and notify your colleagues that may not be aware of these deadlines.

[CIVEMSA 2017](#) (2017 IEEE International Conference on Computational Intelligence & Virtual Environments for Measurement Systems and Applications)

26-28 June 2017 | Annecy, France

Initial Full Paper Submission: 17 February 2017

[ISPCS 2017](#) (2017 International IEEE Symposium on Precision Clock Synchronization for Measurement, Control, and Communication)

27 August - 1 Septmember 2017 | Monterey, CA, USA

Initial Full Paper Submission: 3 April 2017

[M&N;](#) (2017 IEEE International Workshop on Measurements and Networking)

27-29 Septmember 2017 | Naples, Italy

Initial Full Paper Submission: 31 May 2017

Please note the following I&M; Society Technically Co Sponsored Conferences that are approaching.

[2017 IEEE 4th International Workshop on Metrology for AeroSpace](#)
Padua, Italy - 21-23 JUNE 2017

IEEE members, may submit an endorsement
4. Identify an IEEE Society/Technical Council whose evaluating committee will assess the nominee's technical qualifications and contributions

The next deadline for submitting IEEE Fellow nominations is **1 March 2017** (hard deadline, no extensions).

Further information about the IEEE Fellow program are available on the website.

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.

Extended Abstract Submission Deadline: 12 February 2017

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

The I&M; Society is dedicated to provide worldwide, high quality conferences, symposia and workshops for all I&M; colleagues throughout the year; disseminating and exchanging information concerning the science and application of instrumentation and measurement.

Seeing the energetic activities of local Chapters and members of TCs, we sincerely invite members of local Chapters and TCs and colleagues who are organizing conferences in instrumentation and measurement field to contact the I&M Conference committee for possible technical cosponsor on developing special tracks, paper-reviewing-procedure improvement, conference promotion, and conference organization.

The purposes of looking for cooperation with all potential conference organizers is to benefit I&M members by providing high quality technical events of emerging techniques. The conference will obtain the following privilege benefits provided by I&M:

- 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 on the I&M website
- Use I&M and IEEE logos to attract qualified attendees
- Be listed in the IEEE I&M Magazine pages

We believe the co-sponsorship can make each conference a high-quality technical event which benefits both the conference organizers and I&M members. More detailed benefits of I&M co-sponsorship can be founded in I&M Society Conferences Management Guidelines which is available in I&M Website.

For the coming I&M sponsored conferences, please refer to the I&M; Conference website for a full listing. For more information on any of the conferences, please contact Chi Hung Hwang, VP of Conferences for the I&M Society.

Membership Committee

2017 Chapter Chair Summit

The Instrumentation & Measurement Society (I&M) invites all Chapter Chairs to attend the fifth I&M Chapter Chair Summit on 22 May 2017 in Turin, Italy. The Summit will be held in conjunction with I2MTC 2017. There is no charge to attend the Summit, and Chairs are encouraged to attend the Summit along with the conference.

All Chapter Chairs are encouraged to take advantage of the Summit to network with fellow Chairs, interact with I&M Administrative Committee members, and let I&M know how we can serve you better.

Travel grants of up to US$600 are available on a first-come, first-serve basis until grant funds are no longer available. To apply for a Travel Grant, send a statement of need to Sergio Rapuano. This Travel Grant can be used for any expense incurred (hotel, airfare, conference registration, etc.).

Registration for the Summit and Travel Grant requests are due by 31 March 2017. To register for the Summit, send an email to Sergio Rapuano indicating your plans to attend.

Many thanks to all Chapter Chairs for your continued service to I&M and our members. I hope to see you at the Summit in 2017!

Best regards
Sergio Rapuano

Publications Committee

IEEE TIM is the Number 1 I&M-focused Journal According to New SCOPUS Metric

SCOPUS has recently released a new metric to provide a broader and more transparent perspective on serial citation impact: the CiteScoreTM metric. Read more.

Education Committee

Distinguished Lecturer Program - 2017 Call for Applications

The Instrumentation and Measurement (I&M) Society is currently accepting applications for new Distinguished Lecturers (DL) for the Distinguished Lecturer Program (DLP). The DLP provides I&M chapters and technical events around the world with talks by experts on topics of interest and importance to the I&M community. Our lecturers are among the most qualified experts in their field. More details on the DLP can be found at: http://ieee-ims.org/education/distinguished-lecturers-program

DLP Evaluations are conducted in person each year at I2MTC. This year, I2MTC is in Torino, Italy. Details on the Evaluation Meeting will be posted on the I&M website and the I2MTC website.

Suggested topics for DL presentations include (but are not limited to):

- Laser/Optics (including Fiber Optic Sensing)
- Measurement Precision, Sensitivity, and Noise
- Measurement Fundamentals (accuracy, trueness, repeatability, resolution, etc.)
- Calibration and Calibration Periodicity
- DC Measurements
- Biomedical Instrumentation and Measurements
- Robotics/Automated Measurements
- Nanotechnology in Instrumentation and Measurement
- Big Data and Metrology
- Measurement for Food Safety
- State-of-the-Art of Traditional Measurements and Instrumentation (Digitizers, Voltmeters, Spectrum Analyzers, etc.)

To apply, submit a PDF file that includes the following:

- Title of Presentation
- Presenter's name and affiliation
- Abstract of the presentation topic (between 500 and 1000 words)

- A biography of the presenter (limited to 150 words)

Applications will be accepted through 11:59pm (CST) on 1 May 2017. Proposal presentations selected for an evaluation slot must be must be no longer than 12 minutes, and **must be presented in person at I2MTC**.

For questions or to submit your application, contact the DLP Chair, Kristen Donnell.

The IEEE Instrumentation and Measurement Society has revamped Educational Video Tutorials.

The Instrumentation & Measurement Channel on IEEE.tv has been updated and better focused on the scope and field of interest of the IEEE Instrumentation and Measurement Society as well as the Educational Video Tutorial section of the I&M website that is now showing the new Video Tutorials.

Here you can find 15 exciting videos, including 8 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.

Please, visit these pages and enjoy the videos.

Video tutorials are separated in two main classes: Expert series and Classroom series.

Expert series video tutorials cover advanced topics in the area of Instrumentation and Measurements and are given by very well know 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 either "Expert series"☐ or "Classroom series"☐ please visit the related page on the Instrumentation & Measurement Society web page.

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.

Salvo Baglio
salvatore.baglio@unict.it
IEEE Fellow
IEEE IMS VP Education
I&M; Video Tutorial Editor in Chief

Call for Nominations!

The I&M; Society invites you to participate in nominating a fellow student or faculty member for our prestigious Education Awards. **The deadline for nominations is 1 March!**

- Graduate Fellowship Award: The purpose of the award is to support and encourage graduate-level research in the area of instrumentation and measurement. The award recipient will receive a cash award and a complimentary I&M student membership starting in September of the grant year and including two subsequent years. For more information, download the PDF for the Graduate Fellowship Award. Inquiries regarding the Graduate Student Fellowship Award should be directed to the Selection Committee Chair, Ferdinanda Ponci. Nominations are submitted from the Graduate Advisor. **To nominate a student for this award please click here.**

- Faculty Course Development Award: The purpose of the award is to support and encourage faculty members to develop a new course or significantly revise an existing course with specific focus on Instrumentation and/or Measurement, taught in an accredited (in accordance to the accepted rules of the country of applicant) engineering/physics/science curriculum. The award recipient will receive a cash award. Inquiries regarding the Faculty Course Development Award should be directed to the Selection Committee Chair, Kristi Paranjape. For more information on the Faculty Course Development Award and to **apply for this award, please click here.**

For more information, please visit our Awards page on the I&M; Website.

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.

Call for Participation in Technical Committees

I&M; has 19 different Technical Committees (TC). Our TCs 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 contact Ruqiang Yan, VP Technical and Standards Activities, at ruqiang@seu.edu.cn or any member of the Technical and Standards Activities Committee, if you are interested in membership in one or more of our TCs. You can also fill the application form and send to the chair of your interested TCs. To view the complete list of TCs, visit our website.

Recognition of Technical Achievements and Innovations – Announcement of Issued Patents

We would like to recognize I&M; Society members' technical achievements and innovations that have resulted in issued patents during the current calendar year. If you have already been issued a patent in 2016 we wish to add it to the list. To do so please fill out the form here and we will add the information to the website. In addition, if you are issued a patent in the future please use the same link to inform us and we will be happy to add it to the list as we intend to continuously update the information in this list.

Report of the I&M; AdCom Fall 2016 Meeting

The Instrumentation and Measurement Administrative Committee (AdCom) meets twice a year to manage the business of the society. The following synopses of the most recent meetings on 13-15 October 2016 are offered in the interest of clear communication with our members. Read more.

IMS 2017 AdCom

To see the full list of 2017 I&M; Officers, please click here.

To see the full list of I&M; AdCom members, please click here.

To see the full list of additional AdCom appointments, please click here.

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