IEEE

INSTRUMENTATION & MEASUREMENT SOCIETY
NEWSLETTER

February 2016

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

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 Yeary, VP of Conferences for the I&M; Society.

2016 IEEE
SAS SENSORS APPLICATIONS SYMPOSIUM
April 20-22, 2016 | Catania, Italy

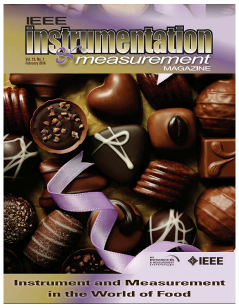
The 2016 IEEE Sensors Applications Symposium (SAS) will be held in Catania, Italy, 20-22 April 2016. IEEE Sensors Applications Symposium is a unique opportunity for researchers and developers working in the field of sensors and their applications. General and special sessions will be dedicated to sharing 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. To register, visit our website.

Submission of final paper: 5 February 2016 these sites, 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.



Feature articles in this issue include:

- "You are what you eat: So measure what you eat!"
- "Historical development of grain moisture measurement and other food quality sensing through electrical properties"
- "AC and DC quantum hall resistance ??? simple and beautiful"
- "E-nose application to food industry production"
- "Microwave sensing of quality attributes of agricultural and food products"
- "Improving calibration accuracy of a vibration sensor through a closed loop measurement system"

New I&M; Chapter

We would like to welcome a new Chapter joining us in 2016:

South China University of Technology, Student Branch Chapter

2016 IEEE International Symposium on
MeMeA
Medical Measurements and Applications
May 12-14, 2016 | Benevento, Italy

The 2016 IEEE International Symposium on Medical Measurements and Applications (MeMeA) will be held in Benevento, Italy 12-14 May 2016. View the Call for Papers.

Submission deadline of revised final paper: 10 March 2016
Final decision notification: 24 March 2016
Final submission, copyright, registration: 4 April 2016

I2MTC™
2016 IEEE International Instrumentation and Measurement Technology Conference
MAY 23-26, 2016 | Taipei International Convention Center | Taipei, Taiwan

The 2016 IEEE International Instrumentation and Measurement Technology Conference (I2MTC) will be held in Taipei, Taiwan 23-26 May 2016. For registration information, please visit our website.

Submission of Final Presentation and Copyright form: 15 February 2016

AUTOTESTCON 2016 will be held in Anaheim, California 12-15 September 2016. 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 Electronics Engineers (IEEE). Abstracts submission deadline is 15 February 2016. View the call for papers, and visit our website for other updates.

I&M; Sponsored Conferences Currently Soliciting Paper Submissions

The 2016 International IEEE Symposium on Precision Clock Synchronization for Measurement, Control and Communication (ISPCS) will be held in Stockholm, Sweden 7-9 September 2016. View the Call for Papers.

Paper submission deadline: 14 March 2016

The 2016 IEEE 2016 IEEE International Conference on Imaging Systems and

IEEE Council on RFID

At the Fall 2015 AdCom meeting, we voted to become a member of the IEEE Council on RFID.

We appointed Dr. George Xiao, Senior Research Officer, National Research Council, as the I&M; Society Representative to the Council on RFID for the two-year term of 2016-2017.

I&M; Strategic Planning Meeting

The I&M; Officers and Editors will be hosting the next Strategic Planning Meeting in Atlanta, GA, 18-20 February 2016.

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 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.

Congratulations to the I&M Senior members that were elevated in 2015: Eduardo Cano, Paul Erickson, Joseph Kaiser, Chetan Kulkarni, Iman Morsi, Tom Nelson, Jomar Ochoco, Jose Pelegri Sebastia, Lihui Peng, Arash Samani, Sarah Seguin, Janusz Smulko, Jesus Urena, Ramli Adnan, Ioannis Gonos, James Henry, Barry Male, Carlo Muscas, Viviana Vladutescu, Detlef Pape, Herve Saint-Jalmes, Jeffrey Miller, Marc Bossche, Ilena Baran, Dwight Clayton, Juan Anzurez-Marin, Robert

Techniques (IST) will be held in Chania, Crete Island, Greece 4-6 October 2016. View the Call for Papers.

Paper submission deadline: 14 April 2016

Have a conference you'd like advertised in the I&M; Society Newsletter? Contact Lauren Stockman for details on how to have it included.

Technical Co-Sponsorship, Exciting Opportunities, and Fees for 2016

Conference organizers have the opportunity to obtain sponsorship by the IEEE Instrumentation & Measurement Society (I&M;) for their events. Technical Co-Sponsorship offers many benefits:

- Share with I&M; members knowledge in the field of instrumentation and measurement
- Advertise the conference on the I&M; website, the I&M; Quarterly Newsletter, and the I&M; Magazine
- Publish in IEEE *Xplore*
- Include IEEE branding

Requirements for Technical Co-Sponsorship by non-IEEE non-profit organizations:

- Direct and substantial involvement by the IMS in the organization of the conference technical program
- Inclusion of I&M; members in the technical program committee and the review process
- Inclusion of the IEEE and I&M; logos in all event publications and announcements

Financial obligation:

- US$1000 as a one-time fee for first-time I&M; Technical co-sponsorship, and if I&M; is the only IEEE entity involved
- US$1000 plus US$15 per paper for IEEE *Xplore* submission
- US$1000 if there is no IEEE *Xplore* submission

These new fees that are for the "cost of doing business," and are not for the purpose of generating additional revenues.

Finally, the relationship between sponsoring organizations must be explicitly defined in a Memorandum of Understanding (MoU).

Technical Committees

I&M; has many 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. To view the complete list of TCs, visit our website.

TC-32-Fault Tolerant Measurement Systems

Atkinson, Niranjan Debnath, Christopher Eio, Martin Hudlicka, Stephen Uurtamo, Marco Jose Da Silva, Pete Gregory, Mahesh Nair, Andrew Scott and Chao Tan.

TC-32 offers to the I&M; Society community the following free online tools for measurement uncertainty evaluation through the Technical Committee Website:

1. Online Mathematical Toolbox for Analytical Standard Uncertainty Evaluation
2. Mellin Transform-based Moment Calculator for Multivariate Polynomials
3. Benchmark Test Distributions for Measurement Uncertainty Evaluation

Award Nominations

Faculty Course Development Award

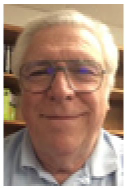
The Faculty Course Development Award is to support and encourage faculty members to develop a new course or significantly revise an existing course with specific focus on Instrumentation and/or Measurement, taught in an accredited (in accordance to the accepted rules of the country of applicant) engineering, physics, or science curriculum. Presentation will be made at the Awards Luncheon at the IEEE International Instrumentation and Measurement Technology Conference (I2MTC). Nominations are due by **1 March 2016**.

To nominate, please visit our website.

Graduate Fellowship Award
The purpose of the grant is to support and encourage graduate-level research in the area of instrumentation and measurement. Nominations are due by **1 March 2016**.

To nominate, please visit our website.

2015 Society Award Announcements



2015 Career Excellence Award
Jerry Blair
"For significant contributions in instrumentation & measurement for underground nuclear testing, which helped the USA win the Cold War, and for monumental technical and administrative contributions to IEEE standards on waveform recorders, analog-to-digital converters, digital-to-analog converters, and pulse term and test method as well as to the I&M; ADCOM."

2015 Distinguished Service Award
Max Cortner
"For outstanding contributions to the Society as IMTC 1998 General Chair, I2MTC 2013 General Co-Chair, I2MTC Board of Directors Chair, Administrative Committee VP of Education, as well as his Society leadership over many years at the local section level. He has contributed to the Society and the profession as a leader, teacher, mentor and practitioner."

2015 Outstanding Young Engineer Award
Lorenzo Ciani
"For his contribution to the advancement of instrumentation and measurement in the field of reliability analysis."

2015 Technical Award
Paolo Carbone
"For outstanding contributions to the advancement of the state-of-the-art in the quantization of signals in digital instrumentation."

IEEE/OSA Journal of Lightwave Technology (J-LT) Special Issue

Guided Lightwaves for Sensors & Measurement Systems: Advanced Techniques and Applications

This special issue is organized by I&M; Society. It aims to highlight the advancement of guided lightwaves in applications to sensors, instrumentation and measurement. The scope includes, but is not limited to the following:

- Sensors and instrumentation for industrial and clinical applications including
  - chemical, medical and biological applications
  - environmental monitoring
  - structural health monitoring
- Instrumentation for optical fiber communication applications
- Novel concepts and techniques for the measurement of physical, chemical and biological parameters
- Micro- and nano-scale sensors
- Multiplexing and distributed sensor networks
- High speed instrumentation and measurement systems
- Sensor fusion and big data

Guest Editors: Dr. Gaozhi (George) Xiao, National Research Council of Canada; Prof. Tong Sun, City University London, UK; Prof. Luigi Rovati, University of Modena and Reggio Emilia, Italy; and Prof. Zuyuan He, AE of J-LT.

On behalf of the Guest Editors and the Editor-in-Chief, we encourage you to submit your paper to the journal. Typically, these papers are five to seven pages in length. Mandatory page charges of US$260 per page are enforced in excess of seven pages. This paper would appear in an upcoming J-LT special issue titled "IEEE-IMS." Tutorial presenters will be invited individually. Tutorial review papers can range up to 16 pages in length. Target 2017 May issue with accepted papers posted online within one week of author final file upload. Target Page Count 400 pages (max).

Submissions by website only: http://mc.manuscriptcentral.com/jlt-ieee
Manuscript Type: "IEEE-IMS"
Submission questions: Doug Hargis, Journal of Lightwave Technology, d.hargis@ieee.org

Submission deadline: 16 May 2016

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 govern which titles will be displayed. We look forward to your contributions! Visit our website for terms and guidelines.

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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