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INSTRUMENTATION & MEASUREMENT SOCIETY NEWSLETTER

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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 & Measurement Magazine*.

Welcome Message from I&M Society President

Greetings!

As President of the Society for 2018 and 2019, I am privileged to lead an outstanding team with a great record of accomplishments. That's not just my opinion, it's the conclusion of the IEEE Society Review Committee. In this position, I will be focusing on people. I want to get to know as many members of the I&M Society as possible and strengthen relationships with those I already know. The I&M Society is a volunteer organization and we can only move toward our vision to "be the premier international professional

Society in the Instrumentation and Measurement fields" by working through people.

The 2018 Administrative Committee (AdCom) is already at work planning conferences, publications, online offerings, and other products to benefit you, our members. It will be a busy and exciting year. As members, I invite you to become familiar with our website and visit it regularly to keep up with what the Society has to offer you. I also invite you to get to know the AdCom personally. Join us at a conference such as the International Instrumentation and Measurement Technical Conference (I2MTC) in Houston, TX, USA, the Medical Measurements and Applications Symposium (MeMeA) in Rome, or at any of the conferences we provide worldwide. When you attend the conference, seek out AdCom members and let us know what you want from the Society. I certainly invite you to meet me and I promise to listen.

Most of all, I invite you to get involved. Submit your research for publication in our journal. Submit articles to the magazine. Join a local conference organizing committee. Encourage your employer's organization to become participants as well. We need your participation and we strive to make it worth your while. Experience personal and professional growth and be an active part of a premier professional organization that is

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](#).



Feature articles in this issue include:

- "Remembering the Slide Rule [Back to Basics]"
- "Covariance evaluation by means of uncertainty assessment"
- "Pure and applied metrology"
- "A very short history of measurement from a social and legal perspective"
- "Human activity monitoring based on hidden Markov models using a smartphone"
- "Photonics enhanced sensors for food monitoring: Part 1"

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

growing in many ways.

Thanks, and have a great 2018 with us!

Sincerely,

J. Max Cortner

President of the IEEE Instrumentation and Measurement Society 2018-2019

Benefits of I&M; Membership

Our mission statement reads, "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](#).

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 Awards & Recognitions:

The IEEE Instrumentation & Measurement Society (I&M) is soliciting nominations for its society and other Awards. To view the full detailed listing of each award please visit our [Awards page](#) on the website.

Nominations are due on varying dates, so please carefully refer to each specific award listing. Nominators should utilize the forms associated with each award description found on the [website](#).

Award Nominations due by 1 March 2018:

Graduate Fellowship Award

[Details](#) | [Nomination Form](#)

Faculty Course Development Award

[Details](#) | [Nomination Form](#)

Award Nominations due by 1 August 2018:

J. Barry Oakes Award

[Details](#) | [Nomination Form](#)

Outstanding Young Engineer Award

[Details](#) | [Nomination Form](#)

Distinguished Service Award

[Details](#) | [Nomination Form](#)

Technical Award

[Details](#) | [Nomination Form](#)

Career Excellence Award

[Details](#) | [Nomination Form](#)

Outstanding Chapter Award

[Details](#)

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.

Council News

THE IEEE JOURNAL OF RFID CALL FOR PAPERS

The *IEEE Journal of Radio Frequency Identification* (JRFID) is a newly launched IEEE journal that publishes peer-reviewed manuscripts addressing various aspects of RFID circuits, systems, standards, and applications. RFID involves multidisciplinary areas of research and development, encompassing a broad spectrum of science and engineering expertise. This call for papers intends to solicit contributions in all areas pertinent to the RFID technology. [Full Call for Papers](#).

A Message from the IEEE Nanotechnology Council President:

My warmest wishes to all the Society family members for a wonderful year 2018!

I serve as President of IEEE NTC (2018-2019) and hope to keep the Society family members informed of emerging nanotechnology, which may impact the Society and the humanity.

NTC maintains a [FaceBook page](#) with rich contents. Please take a look at and bookmark it or request to be an interest member to receive automatic notification of new information.

Happy New Year!

Yonhua (Tommy) Tzeng

Award Nominations due by 1 October 2018:

Best Application in Instrumentation & Measurement

[Details](#) | [Nomination Form](#)

Award Nominations due by 31 December 2018:

Outstanding Technical Committee Award

[Details](#) | [Nomination Form](#)

For more information, please visit our [Awards](#) page on the I&M Website.

Call for Nominations to IEEE Fellow Class of 2019

IEEE Instrumentation & Measurement Society welcomes nominations to IEEE Fellow elevation.

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. Indeed, the total number of new IEEE Fellows selected in any one year does not exceed one-tenth of one percent of the total voting IEEE membership.

To be eligible for IEEE Fellow elevation, a nominee must be an IEEE Senior Member or an IEEE Life Member, and to have been a member in good standing in any grade for a period of at least five years preceding January 1st of the year of elevation.

IEEE Fellow nominees are classified into the following four categories:

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

The nominator can be any person, including non-IEEE members. The nominator has the responsibility to:

- o Prepare the IEEE Fellow Grade Nomination Form
- o Solicit at least five, but no more than eight, IEEE Fellow references capable of assessing the nominee's contributions
- o Solicit no more than three endorsements capable of supporting the nomination. Any person, including non-IEEE members, may submit an endorsement
- o 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 2018 (hard deadline, no extensions).

Further information about the IEEE Fellow program are available on the [website](#).

I&M Publications News

Three More Resources Help Authors Publish in Your Periodicals

The Author Education Initiative launched by the IEEE Publications Services and Products Board (PSPB) in 2017 helps IEEE proactively uphold their rigorous standards for publishing in its periodicals. Outcomes from the Author Education Initiative consist of

Fellow and President, IEEE
Nanotechnology Council
University Chair and
Distinguished Professor of
Electrical Engineering
National Cheng Kung University
Tainan City, Taiwan
Professor Emeritus of Electrical
and Computer Engineering
Auburn University, Auburn
Alabama USA
tzengyo@mail.ncku.edu.tw,
tzengyo@gmail.com

three resources currently available to help authors publish with IEEE: the IEEE Author Center website, video tutorials, and a monthly newsletter.

According to Reza Zoughi, IEEE PSPB member at-large, former President of IEEE Instrumentation & Measurement Society (I&M), and a past editor-in-chief (EIC) of the *IEEE Transactions on Instrumentation and Measurement* (TIM), "as a professor, I'd rather see authors become informed than be penalized". As part of the initiative, Zoughi created a series of Author Education videos. These videos include topics like "Reviewing an Article" and "A Comprehensive Insight into Effective and Informed Archival Journal Publication Process 'Dos & Don'ts.'"

These videos are now available on the [I&M website](#) for our members or anyone who may be interested.

I&M; Conference Committee News

In 2018, the Society expects to sponsor a total of 20 technical events including nine financially-sponsored conferences and 11 technically-sponsored ones; compared with 2017, five more conferences are technically sponsored. The most exciting part is that there are four new conferences and most of the sponsored conferences are continued. In addition to sponsoring conferences, the Society also supports 5G world forum and IEEE SG4SC which organized by the other Society/Council. All the sponsored conferences can be either found from the Society website and Society Conferences Newsletter, and the Newsletter is always delivered via email directly to all society members. We believe you can find some events fit your research fields from Society sponsored technical events.

There is one more exciting thing to be announced: the revised Society Conferences Management Guidelines became effective January first. We sincerely welcome all potential conference organizers and colleagues who would require sponsor from IEEE I&M Society could take time to read the guidelines, especial for the colleagues who don't have experience on organizing an IEEE sponsored conference. The guidelines offer many useful information which can be easily accessed by clicking the provided hyperlinks. The conference committee also prepared a flowchart, as shown below, regarding how to contact IEEE I&M for requiring possible technical sponsored.

[Click to enlarge image](#)

To provide Society members better service, the conference committee continuously facilitates high-quality technical events in I&M fields by sponsoring diversified conferences. Consequently, Society members can exchange their up-to-date researches, meet new friends, and know new challenges and chances from various technical aspects through attending the well-organized conferences. As a conference committee chair, I sincerely invite all Society colleagues to contact me or conference committee members near you to provide your treasurable suggestions to improve the mechanisms for requiring conference sponsorship and to propose an initiative for organization of emerging technology conference. We also welcome local Chapters to

cooperate with Societies on organizing conferences to benefit all members.

Sincerely,
Chi Hung Hwang
VP of Conferences I&M Society

I&M Conference Calendar

We hold numerous conferences throughout the year. Please refer to the I&M [Conference listing](#) to see a full listing.

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



[IEEE Sensors Applications Symposium](#) (SAS) 2018 will be held in Seoul, Korea from 12-14 March 2018. For more information, please visit the [conference website](#).

[Registration](#) is now open!



The [2018 IEEE International Instrumentation & Measurement Technology Conference](#) (I2MTC) will be held 14-17 May 2018 in Houston, TX, USA. Learn more [here](#).

[Registration](#) is now open!



The [2018 IEEE International Symposium on Medical Measurements & Applications](#) will be held 11-13 June 2018 in Rome, Italy. Visit the [conference website](#) for more information.

Important Dates:

First Paper Submission Deadline - 16 February 2018

Notification of Paper Acceptance - 2 March 2018

Submission of Revised Paper Deadline - 16 March 2018

Final Decision Notification - 6 April 2018

Final Paper Submission - 27 April 2018



[CIVEMSA 2018](#) (IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications) will be held 12-14 June 2018 in Ottawa, ON, Canada.

Important Dates:

Full Paper Submission: 4 March 2018

Final Paper Submission: 1 May 2018

For more information, see the [conference website](#).



The [2018 IEEE AUTOTESTCON](#) will be held at the Gaylord National Convention Center in National Harbor, MD, USA on 17-20 September 2018.

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).

For more information, please visit the [conference website](#).

Important Dates:

Abstract Submission Deadline - 16 March 2018

Acceptance Notification - 4 May 2018

Final Papers Due - 31 July 2018



[ISPCS 2018](#) will be held on 30 September – 5 October 2018 at CERN, Geneva, Switzerland

For more information, visit the [conference website](#).

Important Dates:

Initial Paper Submission Deadline - 16 April 2018

Acceptance Notice & WIP Deadline - 28 May 2018

Final Papers Due - 23 July 2018

Please note: the following I&M Society Technically Co-Sponsored Conferences are approaching.

[3rd International Conference on Microwave and Photonics \(ICMAP 2018\)](#)

Dhanbad, India | 9-11 February 2018

[5th IEEE International Workshop on Metrology for AeroSpace \(MetroAeroSpace\)](#)

Rome, Italy | 20-22 June 2018

Other Conferences of Interest:

[2018 IEEE 1st 5G World Forum \(G5WF'18\)](#)

Santa Clara, CA, USA | 9-11 July 2018

[2018 IEEE International Flexible Electronics Technology Conference \(IFETC\)](#)

Ottawa, ON, Canada | 7-9 August 2018

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

Education Committee News

Distinguished Lecturer Program - 2018 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://iee-ims.org/education/distinguished-lecturers-program>

DLP Evaluations are conducted in person each year at I2MTC. This year, I2MTC will be held 14-18 May in Houston, Texas, USA. Details on the Evaluation Meeting will be posted on the [I&M website](#) and the [I2MTC website](#) as they become available.

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 single 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 2018. Proposal presentations selected for an evaluation slot 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](#).

Call for Participation in Technical Committees

I&M has 20 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 out the [application form](#) and send to the chair of a TC of interest. To view the complete list of TCs, visit our [website](#).

2017 Outstanding TC Award

Congratulations to TC-39, winner of the 2017 Outstanding TC Award! For more information, see the [I&M website](#).

Recognition of Technical Achievements and Innovations - Announcement of Issued Patents

I&M recognizes 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 2017/2016 we would like 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.

Attention Book Authors

Advertise your book on the I&M; website! The Instrumentation and Measurement Society would like to provide 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 advancements within and outside of the community and that the website will help to spread the good news about the hard work of the authors. We look forward to your contributions! Visit our [website](#) for terms and guidelines.

To see the full list of 2018 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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