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Welcome Message from the Chairpersons

On behalf of all the organizers of the IEEE International Instrumentation and Measurement Technology Conference (I^2MTC 2016), we welcome you to Taipei, the political, economic and cultural center of Taiwan and also one of the most energetic cities in Asia.

This year, the conference theme is decided to be "Measuring the pulse of Industries, Nature and Humans", to highlight the challenges of sustainable development of the region and even worldwide. Within Region 10, which is of denser populations, strong industries and complex natural disasters, the economy has grown rapidly in the past two decades, thanks to strong manufacturing benefited by an extremely large working population, cheap electrical power, low cost water supply, and even natural resources. The strong economy growth changes daily life, as industrial waste and land development introduce a heavy load to the environment. Meanwhile, natural disaster complexities are high in this region. Typical natural disasters such as earthquakes, volcanic eruptions, and typhoon are always followed by tsunamis, landslides and floods over wide territory. There are new challenges introduced by human activities: smog, PM 2.5, in addition to the natural (mining rare-earth minerals) and man-made toxicants spreading. In 2010, the Society called for proposals for a potential solution on controlling the oil spill from explosion spreads in the Gulf of Mexico which reveals the important direction we can pursue. Many colleagues might be curious about the theme; the "pulse" means the signal (message) from industries, nature and humans after excited by the economic activities of humans; "measuring" is to detect and to understand the messages. The purpose of the theme is to highlight the importance of Instrumentation and Measurement Technology to the lives and livelihood of people, especially the abuse of natural resources for economic development and the impact on humans.

Following tradition, the Conference consists of tutorials and technical sessions. For Monday tutorials, there will be 16 courses from four major domains: measurement basics, industrial applications, medicine-related topics, and sensors & instrumentation. As for regular technical sessions, there are 26 sessions that have been proposed, including 13 special sessions. Thanks to great reviewing works done by all TPC members, 294 papers out of 412 total submitted papers have been accepted for publication. To accommodate all accepted papers, 28 oral sessions and 2 plenary poster sessions have been arranged. The organization committees have invited 3 plenary speakers to share their experiences and viewpoints from academia research, industry and sensor application aspects. The talks have been arranged early morning from Tuesday to Thursday of the conference week. The talks are:

- Prof. Din Ping Tsai, Director and Distinguished Research Fellow of Research Center for Applied Sciences of Academia Sinica - "Plasmonic Metamaterials for Energy, Environment and Better Life" - Tuesday;
- Dr. JC Hsu, VP of MediaTek Ltd. - "IoT market and applications enabled by measurement and connectivity technologies" - Wednesday;
- Mr. Giuseppe Izzo from STMicroelectronics - "Smart Living in the Age of Digital Connectivity: Trends, Technology and Applications," - Thursday

Beyond the Conference tradition, the organization committees reviewed the experiences of previous events and tried to implement new ideas to the conference program and do tests. I would consider I^2MTC 2016 to be a test vehicle; the organizing committee members devoted a lot of time in order to make the changes run smoothly. The new aspects of the conference are highlighted hereinafter.

First of all, the conference is rescheduled from the second week to the third week of May. The semester of most of universities of North America is ended by the second week of May. By rescheduling the conference time, we expect most of colleagues from North America to be relieved from the conflict of doing heavy work before end of the semester and traveling to attend the conference. We expect that this can help the Conference attract more attendees from North America in the future. I have to admit, it is not easy for Conference committees to decide to make a change,

considering the new Conference schedule might overlap with other events. This makes rescheduling a high risk and point of high uncertainty for conference organization. We are proud to take on this challenge, even though the amount of Conference attendees is dropped apparently in compared to the averages of last few years. Fortunately, the registrations are slightly increased with respect to the previous conferences held in Region 10.

Second, the conference tracks have been reintegrated based on the statistics of previous papers; thanks to the work done by Shervin Shirmohammadi, the tracks well reflect the trends of research activities on technologies and applications of instrumentation and measurement. In addition, all of the submitted papers could also be assigned to tracks and been reviewed properly.

Third, to enhance industry engagement and increase exchange between industry members, as well as between industry and academic members, I^2MTC 2016 introduced Industry sessions. The Industry sessions are different from the Industrial Applications and Processes track in regular sessions. For Industry sessions, the role of industrial colleagues is emphasized. We intend to provide industrial colleagues the opportunities to present new technologies, new applications, or even new challenges. Foreseeing the essential difference between academic and industry, the submitted industry papers are limited to be less than 3 pages instead of a 5-6 page full paper. An additional request was that the first or the corresponding authors of submitted industry papers must be from the industry sector to ensure that the major contribution comes from industry colleagues. Considering the paper lengths and review procedures for industry and regular sessions are not consistent, all accepted industrial papers will not be submitted for publication in IEEE Xplore; this is the other experiment of I2MTC 2016. Though we did not expect a high submission number, we fortunately have received enough qualified industry papers. The poster and oral sessions of industry papers are arranged on Thursday morning and afternoon respectively.

I2MTC 2016 initiates an invited talk session entitled “Opportunities, Challenges, and the Future in Instrumentation and Measurement” to enhance the dialogue between academia and industries. We invite immediate past President of IMEKO, Prof. Pasquale Daponte, Chair of Asia Pacific Laboratory Accreditation Cooperation (APLAC), Nigel N. L. Jou, Director General of Center for Measurement Standards, Dr. Tzeng-Yow LIN, the Director General of ITRC, Prof. J. Andrew Yeh, and Jun Watanabe of ALPS, Japan to share their viewpoints from different aspects of measuring, accreditation, instrumentation traceability and 3D printing medical devices. I believe their dialogue will provide new prospects to all audiences. The invited talk session is arranged on Wednesday morning.

The last change is that the organization committees have decided to provide Conference proceedings from cloud server to replace the traditional method of distributing the conference proceeding by USBs or CDs. In past decade, whenever we attend a conference, in most case, we will receive an USB or a CD, in which the conference proceedings have been stored. It is exciting to receive the conference proceedings together with a USB because the USB is like a small gift which can be used for daily works. However, in a realistic scenario, many USBs which we get from the conference might not be used again for years. Now, cloud service is the most convenient way to store and to share documents which changes the usage of store devices. To reflect the conference theme we are highlighting this year, we would like I^2MTC 2016 to be a “green” conference. Therefore, we made a difficult decision again, distributing the conference proceedings through cloud service. You may find in your conference bag there is a mug, and you may be curious about why we provide a mug instead of “hi-tech” gifts or souvenirs of Taiwan. The mug is part of the “green” conference plan, and I would like to invite all of you take your own mug to the conference venue, TiCC, to replace the paper cups they provide during the café breaks, and if you feel the mug is good, please take it back home.

The I^2MTC organization was a complex task; thanks to the efforts of many people, the conference has turned from a plan to a real event. I would like to take this opportunity to thank all and each of them. We like also to thank all organizations and companies supported the conference in different ways. For all of the organizing works, I would like take this privilege to express my personal appreciation to TPC co-chairs, Alessandra, Shervin and Subhas. Albu, Fan and Jenny helped in organizing tutorials, Olfa, Ruqiang and Salvo helped in reviewing and organizing the special sessions, and Warren helped

on inviting patrons. Thank you to all the members of the local working group: Carol, Jun-Yi, Invonne, Poli and Jun-Ren from ITRC. Special thanks given to Max and Reza for great advice, to Jhih-Yan for his help on solving travel document problems for China colleagues, to Wen-Hung who has helped me to have special sponsors from local industries, to an anonymous donor, who donated a lot to relieve any budget problems. I would like thank Chris, Casey, Judy, and Lauren - all of you are great. I am happy to work with you all.

Taipei is a well westernized city embedded with traditional Chinese culture and integrated with different culture harmoniously. We encourage all colleagues to explore night markets, and the culture and beauty of the city during your stay in Taipei. It is therefore with great honor and pride that we welcome you to Taipei, Taiwan, and to I2MTC 2016. We hope that you enjoy both your participation in the conference and your stay in Taipei.

Sincerely,

Chi Hung Hwang, General Chair, I2MTC 2016

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Thank you to all the Reviewers of the I²MTC 2016 papers.

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I²MTC 2016 Keynote and Plenary Speakers

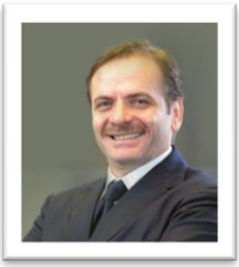
Din Ping Tsai
Director and Distinguished Research Fellow,
Research Center for Applied Sciences, Academia Sinica, Taiwan

Plenary – Tuesday, May 24, 2016
"Plasmonic Metamaterials for Energy, Environment and Better Life"

JC Hsu
Vice President, New Business Development and IoT
MediaTek

Keynote – Wednesday, May 25, 2016
*"IoT market **and** applications enabled by measurement and connectivity technologies"*

Giuseppe Izzo
GM of ST Taiwan; Regional Vice President Greater China and South Asia Region
STMicroelectronics



Keynote – Thursday, May 26, 2016
"Smart Living in the Age of Digital Connectivity: Trends, Technology and Applications"

I²MTC 2016 Conference Sponsors

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Platinum Patron

H.P.B. Optoelectronics Co. Ltd. - The company, H.P.B. co., Ltd, was the first professional microscope manufacturer in Taiwan which was original established in 1985 under supervise of Dr. Chih—Junng Hsu, a vice-professor of Institute of Electro-optical Engineering, National university of Chiao Tung. In 2001, the company reformed as H.P.B Optoelectronics Co. Ltd as a professional designer and manufacturer of optical components and electronic imaging productions.

H.P.B. is located in Central Taiwan Science Park. Currently, there are two factories, one is in Taiwan the other is in China, with a branch office in Japan. Factory in China manufacture optical components, Plant in Taiwan is for designing and manufacture of electronic imaging products, the branch office in Japan responsible promoting H.P.B.'s own brand products in the local market.

Silver Patron

Portwell - Founded in 1993, Portwell has focused herself towards a high-technology scope that brings company value through the state-of-the-art. For the past years, continuous leading product development and revenue growth have made Portwell a major Mission-Critical Application Platform Provider in the world. The in-house design of industrial computers and application platforms by Portwell has also been targetted to meet our customer needs for flexibility.

Portwell, Inc., an Associate Member of the Intel® Internet of Things Solutions Alliance, a community of communications and embedded developers and solution providers, designs and manufactures Communication Appliances along with a full range of Industrial Platform Service (Industrial Computer, Embedded Computing, Digital Security Surveillance, Peripheral), Communication Appliance Service, Vertical Market Service(POS, Gaming, In-Vehicle Infortainment, EMS/DMS), Panel Device Service(Portable PC, IP65, Open Frame, Project) . With streamline access to the latest Intel technology, we paved the way with the broadest array of building blocks, delivering cutting-edge solutions to meet and even exceed the demanding needs of the ever-changing telecommunication, medical electronics, industrial automation, defense and life automation markets.

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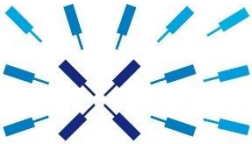
I²MTC 2016 Exhibitors



Zurich Instruments

Zurich Instruments - Zurich Instruments is a test and measurement company based in Zurich, Switzerland, developing and selling measurement instruments and delivering customer support in key markets around the world, either directly or with carefully selected partners. We are a growing, independent and founder-led company.

Zurich Instruments makes cutting-edge instrumentation for scientists and technologists in advanced labs who are passionate about phenomena that are often notoriously difficult to measure. Our core offering includes lock-in amplifiers, phase-locked loops, arbitrary waveform generator, impedance analyzers, digitizers and boxcar averagers.

We believe that system integration is good. We believe that system integration leads to significant time savings, reduced lab setup complexity, efficient workflows and reliable, accurate measurements.

Samwell Testing Inc. - Samwell Testing Inc. is founded in 1986, we focus on high level technology related to increasing reliability of all kinds of industries. We are also the oldest distributor of LMS in the world. Samwell is also the distributor of the best products in the world, we provide total solutions for customers in Taiwan and mainland China, combining with VRTC (virtual & real transfer center) technology, hybrid engineering and system engineering of Samwell.

I²MTC Tradition

The first *IEEE Instrumentation and Measurement Technology Conference* was held in 1984 aboard the Queen Mary in Long Beach, California, but its origins stretch back nearly 20 years earlier to the *Electrical and Electronic Measurement and Test Instrument Conference* held each year from 1966 until 1981 in Ottawa, Canada. The latter was revived by the IEEE Instrumentation and Measurement Society with a new focus on all aspects of instrumentation and measurement. The following list contains locations and themes of the I²MTC conferences:

1984 – Long Beach, CA, USA, *Automation-Quality-Productivity*
1985 – Tampa, FL, USA, *Measurement Science*
1986 – Boulder, CO, USA, *Standards of Excellence*
1987 – Boston, MA, USA, *The Changing Face of I&M Technologies*
1988 – San Diego, CA, USA, *Intelligence in Instrumentation*
1989 – Washington, DC, USA, *Persuasive I&M Technology – A Resource*
1990 – San Jose, CA, USA, *Emerging Measurement Technologies*
1991 – Atlanta, GA, USA, *Enhancing Productivity with Instrumentation and Measurement Technologies*
1992 – Meadowlands, NJ, USA, *Smart People, Smart Instruments, Smart Measurements*
1993 – Irvine, CA, USA, *Innovative Ideas for Industry*
1994 – Hamamatsu, JAPAN, *Advanced Technologies in Instrumentation and Measurement*
1995 – Waltham, MA, USA, *I3C – Integrating Intelligent Instrumentation and Control*
1996 – Brussels, BELGIUM, *Quality Measurements – The Indispensable Bridge between Theory and Reality (No Measurements? No Science!)*
1997 – Ottawa, CANADA, *Sensing, Processing, Networking*
1998 – St. Paul, MN, USA, *Where Instrumentation is Going*
1999 – Venice, ITALY, *Measurements for the New Millennium*
2000 – Baltimore, MD USA, *Smart Connectivity: Integrating Measurement and Control*
2001 – Budapest, HUNGARY, *Rediscovering Measurement in the Age of Informatics*
2002 – Anchorage, AK, USA, *The Frontier of Instrumentation and Measurement*
2003 – Vail, CO, USA, *Instrumentation and Measurement at the Summit*
2004 – Lake Como, ITALY, *From the Electrometer to the Networked Instruments: A Giant Step toward a Deeper Knowledge*
2005 – Ottawa, CANADA, *The 22nd Reunion*
2006 – Sorrento, ITALY, *A View on the New Technologies for Instrumentation and Measurement*
2007 – Warsaw, POLAND, *Synergy of Science and Technology in Instrumentation and Measurement*
2008 – Victoria, British Columbia, CANADA, *Advances in the Science of Measurement Technology*
2009 – Singapore, *Always On: Instrumentation and Measurement in the Networked World*
2010 – Austin, TX, USA, *Innovative and Integrated Applications of I&M*
2011 – Binjiang, Hangzhou, CHINA, *Instrumentation and Measurement for Improving Quality of Life*
2012 – Graz, Austria, *Smart Measurements for a Sustainable Environment*
2013 – Minneapolis, MN, USA, *Instrumentation and Measurement for Life*
2014 – Montevideo, Uruguay, *"Instrumentation and Measurement for Sustainable Development"*
2015 – Pisa, Italy, *"The "Measurable" of Tomorrow: Providing a Better Perspective on Complex Systems"*
2016 – Taipei, Taiwan, *"Measuring the Pulse of Industries, Nature and Humans"*

Awards and Distinctions

Each year the IEEE Instrumentation and Measurement Society accepts nominations for its Awards. The AdCom Awards Committee manages the nominations process, reviews the candidates, and recommends a slate. The slate of candidates is then submitted to the Society AdCom for approval and the awards are presented at our annual Awards Ceremony held as part of the I^2MTC conference. The Awards Committee is pleased to announce the 2014 winners.

2015 Transactions Outstanding Associate Editors

Salvatore Baglio*, University of Catania, Italy*
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Wendy Van Moer*, University of Gävle, Sweden*
Ruqiang Yan*, Southeast University, P.R, China*
Mark Yeary*, University of Oklahoma, USA*

IEEE Instrumentation and Measurement Society Andy Chi Best Paper Award

The I&M Society Andy Chi Best Paper Award is awarded to recognize an author or authors of a paper published in the IEEE Transactions on Instrumentation and Measurement.

The 2015 Andy Chi Best Paper Award is given for the paper: *A Magnetostrictive Guided-Wave Nondestructive Testing Method With Multifrequency Excitation Pulse Signal.*

The recipients are:

Enchao Zhang, *Harbin Institute of Technology Shenzhen Graduate School, China*
Jinping Sun, *Langfang Teachers College, China*
Yang Yang, *Harbin Institute of Technology Shenzhen Graduate School, China*
Zhang Donglai, *Harbin Institute of Technology Shenzhen Graduate School, China*
Zhihui Zhou, *Harbin Institute of Technology Shenzhen Graduate School, China*

IEEE Instrumentation and Measurement Society Outstanding Young Engineer Award

The I&M Outstanding Young Engineer Award recognizes an outstanding young I&M member who has distinguished him or herself through achievements, which are technical, of exemplary service to the I&M Society, or a combination of both, early in their career. The nominee must not have reached their 39th birthday and must be an I&M member at the time of nomination.

The 2015 Outstanding Young Engineer Award recipient is:

Lorenzo Ciani
University of Florence
Italy

"For his contribution to the advancement of instrumentation and measurement in the field of reliability analysis."

Lorenzo Ciani received the M.S. degree in Electronic Engineering and the Ph.D. degree in Industrial and Reliability Engineering from the University of Florence, Italy, in 2005 and 2009, respectively. He is currently a Post-Doctoral Research Fellow with the Department of Information Engineering, University of Florence. From June, 2012 he is a TÜV Rheinland Industrie Service GmbH – Functional Safety Engineer – Id 5062/12. He is a Teaching assistant for "Reliability and Quality control" and "Diagnostic and systems' safety" courses. He is active also in the field of technical publications. He is currently reviewer for IEEE "Transactions on Instrumentation & Measurement", Elsevier "Measurement" ,Elsevier "Computer Standard & Interface" and Elsevier "Microelectronics Reliability" journals. He has been a Guest Editor for Elsevier "Measurement" and member of the Editorial board of "ACTA Imeko" journal. He is member of the IEEE IMS TC-32 Fault Tolerant Measurement Systems and the IEEE IMS TC-10 Jitter Subcommittee. He is technical program committee member of the following conferences: IEEE International Instrumentation and Measurement Technology Conference, ESREF European Symposium on Reliability of Electron Devices, Failure Physics and Analysis, IMEKO TC10 Workshop His current research interests include system reliability, availability, maintainability and safety, reliability evaluation test and analysis for electronic systems and devices, fault detection and diagnosis, and electrical and electronic instrumentation and measurement. His publication list includes more than 90 peer-reviewed journal and conference papers.

IEEE Instrumentation and Measurement Society Technical Award

The I&M Technical Award is given to an individual or group of individuals for outstanding contribution or leadership in advancing instrumentation design or measurement technique.

The 2015 Technical Award recipient is:

Paolo Carbone
University of Perugia
Perugia, Italy

"For outstanding contributions to the advancement of the state-o-the-art in the quantization of signals in digital instrumentation."

Paolo Carbone (M'94–SM'09–F'15) received the Laurea and Ph.D. degrees from the University of Padua, Padua, Italy, in 1990 and 1994, respectively.

He was a Researcher with Roma Tre University, Rome, Italy, from 1994 to 1997. From 1997 to 2002, he was a Researcher with the University of Perugia, Perugia, Italy. Since 2002, he has been a Full Professor with the University of Perugia, where he teaches courses in instrumentation and measurement and in reliability and quality engineering. He has been involved in various research projects, sponsored by private and public funds. He has authored or co-authored over 170 papers, appeared in international journals and conference proceedings.

Dr. Carbone served as an Associate Editor of the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART II from 2000 to 2002, and the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART I from 2005 to 2007. He is the President of the IEEE Systems Council.

IEEE Instrumentation and Measurement Society Distinguished Service Award

The I&M Society Distinguished Service Award is presented each year to an individual who has given outstanding service to the Society and to the profession.

The 2015 Distinguished Service Award recipient is:

J. Max Cortner
Boston Scientific
USA

"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."

J. Max Cortner earned a BSEE from Iowa State University and an MSEE from the University of Minnesota. After 18 years as a Test Engineer in defense division of Sperry Corporation, Max moved to the Cardiac Rhythm Management division of Guidant, Now the CRM Division of Boston Scientific. Boston Scientific CRM manufactures medical electronics including pacemakers and defibrillators. Max is currently a Senior Fellow Engineer in Test Engineering, a group responsible for automated electronic testing of components, subassemblies and final product in manufacturing. Max is a licensed Professional Engineer, a Certified Project Management Professional and a Senior Member of IEEE.

As an active member of the IEEE Twin Cities Section since 1972, Max has held offices in the Computer Society including local chapter chair and area chair. He worked with a group of activists who organized and successfully ran a 5 year series of multi-week technical symposia covering hot topics such as computer graphics and artificial intelligence. Max was among the founders of the Twin Cities Chapter of the Instrument and Measurement Society. He helped organize numerous local test conferences and served as General Chair for the IMTC 1998. In 1999 he served on the committee of the IEEE Sections Congress which was held in the Twin Cities. Max was Co-Chair of I2MTC held in Minneapolis in 2013. Having served as I2MTC Board Chair and VP of Education for the Instrumentation and Measurement Society Administration Committee, he now serves on the in the role of Executive Vice President.

IEEE Instrumentation and Measurement Society Career Excellence Award

The I&M Society Career Excellence Award is awarded to recognize a lifetime career of meritorious achievement and outstanding technical contribution by an individual in the field of instrumentation and measurement.

The 2015 Career Excellence Award recipient is:

Jerome Blair
Keystone International Inc.
USA

"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."

Jerome J. Blair received a BS in Engineering Physics in 1966 and a Ph.D. in Applied Mathematics in 1970, both from the University of California at Berkeley. From 1970 to 2008 he worked for contractors to the National Nuclear Security Administration in Las Vegas, Nevada designing, characterizing and evaluating complex measurement systems and their software, and is now a semi-retired consultant working for Keystone Internatinal Inc. Since 1989 he has been an active member of the IEEE Instrumentation and Measurement Society's TC-10, the Waveform Generation, Measurement and Analysis Committee. From 1998-2010 he was an Associate Editor for the IEEE Transactions on Instrumentation and Measurement. He is a Fellow of the IEEE.

IEEE Instrumentation and Measurement Society Graduate Fellowship Award

To be announced.

IEEE Instrumentation and Measurement Society Faculty Course Development Award

To be announced.

2015 Instrumentation and Measurement Society Fellows

Mark Yeary
University of Oklahoma
USA

"for contributions to radar systems for technology"

2015 Instrumentation and Measurement Society Senior Member Elevations

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
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Herve Saint-Jalmes
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Alessandra Flammini
Ruqiang Yan
Mark Yeary

2014-2017
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Max Cortner
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Shervin Shirmohammadi

2015-2018
Salvatore Baglio
Zheng Liu
Dario Petri
Juan Manuel Ramirez Cortés

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Membership Development: Shervin Shirmohammadi, *University of Ottawa, Canada*

Society Management: Max Cortner, *Boston Scientific, USA*

Publications: Zheng Liu*, National Research Council Canada, Canada*

Technical Committees and Standards: Ruqiang Yan*, Southeast University, P.R, China*

Social Events

Tutorials Reception

Time: Monday, May 23, 2016 - 6:00 PM – 9:00 PM
Location: Long Table Restaurant
No. 91, Songren Rd, Xinyi District, Taipei City, Taiwan 110

Attendees will meet to walk the 1.1 km distance from the TICC to the Long Table Restaurant.

Welcome Reception

Time: Tuesday, May 24, 2016 - 7:00 PM – 9:30 PM
Location: Taipei World Trade Center

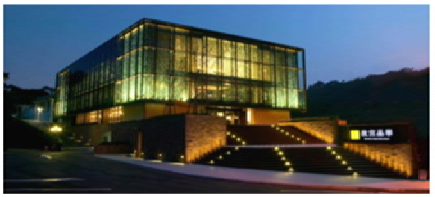
Join us for the Welcome Reception at the Taipei World Trade Center. The Reception will be held on the 33rd floor of Taipei World Trade Center International Trade Building, next to Taipei 101.

Social Dinner

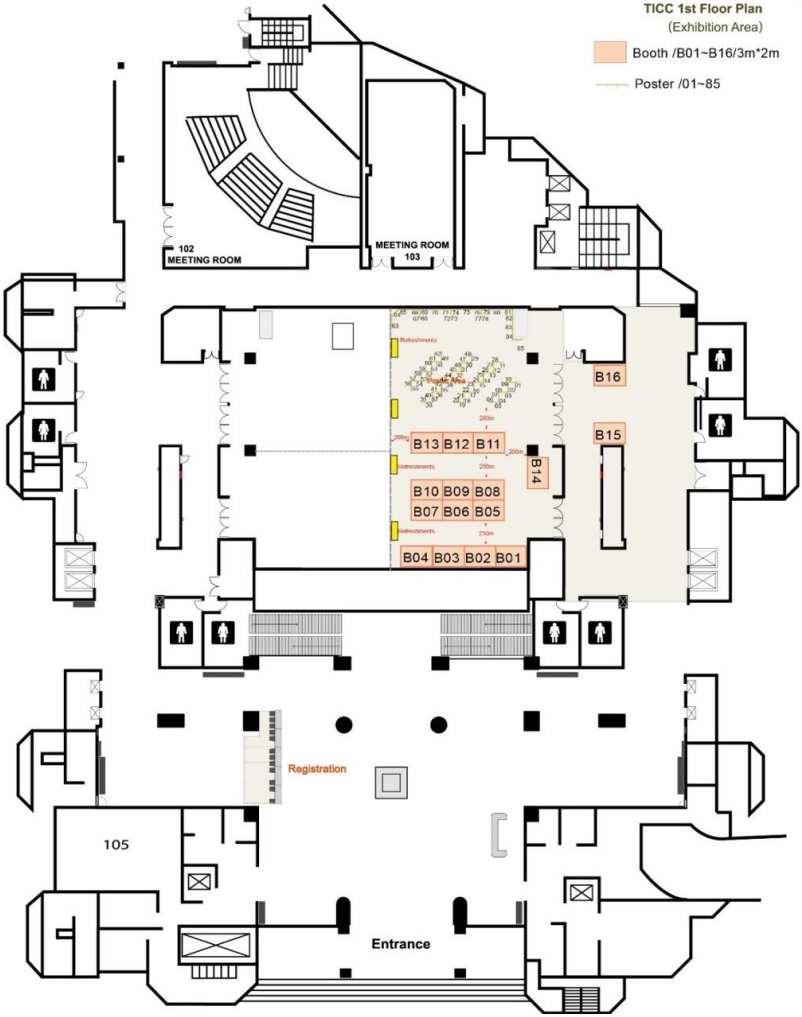
Time: Wednesday, May 25, 2016 - 7:00 PM – 9:30 PM
Location: Silk Palace

*Transportation will be provided. Busses will take attendees back to the TICC.

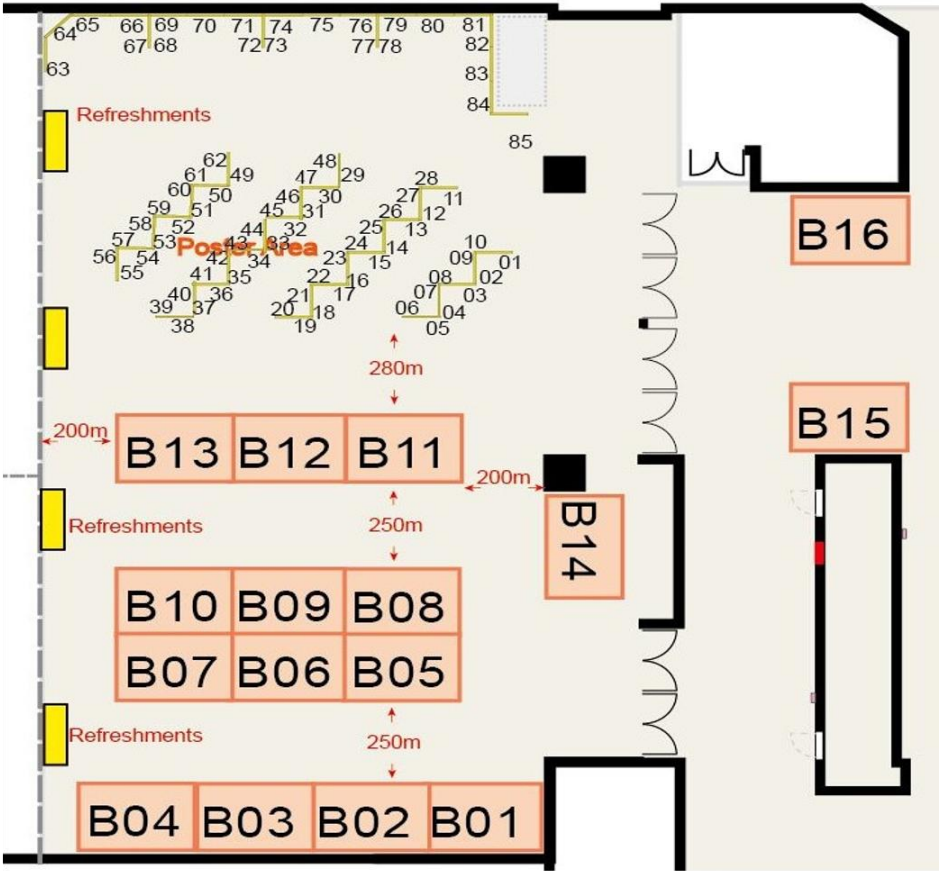
Your paid registration fee includes one banquet ticket. Guest tickets can be purchased for $65.00 each at the Registration Desk.



Venue Map – First Floor



Venue Map – Posters, Exhibitors, and Patrons



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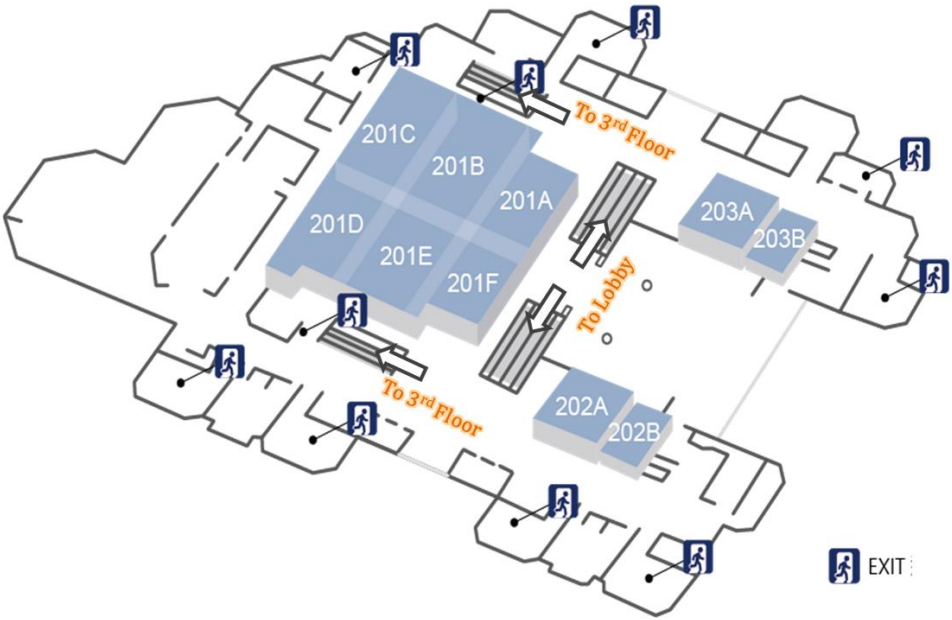
Venue Map – Second Floor



PROGRAM SCHEDULE – Monday, May 23, 2016					
Room	**201A**	**201B**	**201C**	**201D**	**201E-F**
	Measurement Basics	**Measurements and Industrial Applications**	**Measurement Topics in Medicine**	**Sensors and Instrumentation**	
9:00 – 18:00					Chapter Summit *By Invite Only*
9:00 – 10:30	**Methodology of Measurement** Dario Petri	**Metrology and Instrumentation for Semiconductor Industry** Wei-En Fu	**Diagnosis of Human Skin Lesions (Cancer and Burns) Using High-Frequency Techniques – A Review** Reza Zoughi	**Wireless Sensor Networks** Pedro M. B. Silva Girão	
10:30 – 11:00	**Coffee Break – Gallery Ground Floor**				
11:00 – 12:30	**Industrial Wireless Measurement with WirelessHART Technology** Rosdiazli B Ibrahim Tran Duc Chung Hassan Sabo Miya	**Understanding Scanning Near-Field Microwave Microscopy** Kamel Haddadi	**EEG Data Analysis: Feature Extraction, Connectivity and Classification** Aamir S Malik	**Mining Sensor Data in Cyber Physical Systems** Paul O'Leary Matthew Harker	
12:30 – 14:00	**Lunch – Room: VIP Room (4th Floor)**				
14:00 – 15:30	**Resilient Big Data Measurement** Rossi Kamal Choong Seon Hong	**Time Synchronization for Distributed Measurement and Control Systems** David Macii	**Instrumented Training Equipment in Smart Physiotherapy Ecosystem** Octavian Postolache	**Sensor Applications for Precision Agriculture and Food Industry** Gourab Sen Gupta	
15:30 – 16:00	**Coffee Break – Gallery Ground Floor**				
16:00 – 17:30	**Bayesian Inference for Measurement Problems** Markus Neumayer	**The impact of measurements on power system state estimation** Elias Kyriakides Mihaela Albu	**Electrical capacitance tomography and industrial applications** Wuqiang Yang	**Development of u-sensors for health care applications** V.R. Singh	
18:00 – 21:00	**Tutorials Reception – Long Table Restaurant** Address: No. 91, Songren Rd, Xinyi District, Taipei City, Taiwan 110 Attendees will meet to walk the 1.1 km distance from the TICC to the Long Table Restaurant				

	PROGRAM SCHEDULE – Tuesday, May 24, 2016							
Room	**105**	**201A**	**201B**	**201C**	**201D**	**201E**	**201F**	**202**
8:15 – 8:30	**Welcome – Room 101CD**							
8:30 – 9:30	Plenary Talk: Din Ping Tsai – Room 101CD **Chair:** Reza Zoughi							DL Evaluations (**9:00 – 13:00**) *By Invite Only*
9:30 – 9:45	**Special Announcements – Room 101CD**							
9:45 – 12:15	Poster Sessions – Room 101AB, Coffee Break (10:00 – 10:20)							
12:15 – 13:15	**Lunch & ATPC Lunch – Room: VIP Room (4th Floor)**							
13:15 – 15:25		Image Processing and Computational Intelligence Techniques 1 **Chairs:** Annamária Varkonyi-Koczy & Yu-Cheng Fan	Advances in Instrumentation and Measurement Developments and Techniques 1 **Chairs:** Ruqiang Yan & Yong Yan	Instrumentation and Measurement for Medical, Biomedical, and Healthcare Systems 1 **Chair:** Sabrina Grassini	Energy and Power Systems 1 **Chairs:** Dario Petri & Ferdinanda Ponci	Measurement and Instrumentation for Industrial Applications and Processes 1 **Chairs:** Thilo Sauter & Xue Wang	Young Professionals Panel (**13:30 – 15:30**)	TIM Associate Editor Meeting (**13:30 – 15:30**) *By Invite Only*
15:25 – 15:45	**Coffee Break – Room 101AB**							
15:30 – 18:00	IMS Video Tutorials **Chair:** Salvatore Baglio							IMS General TC Meeting (**15:30 – 17:50**) *By Invite Only*
15:45 – 17:55		Measurement Systems and Theory **Chairs:** Pasquale Daponte & Thomas Bretterklieber	Non-Invasive Measurement Techniques and Instrumentation 1 **Chairs:** Paolo Carbone & Huaxiang Wang	Sensors, Actuators, Transducers, and Sensor Fusion 1 **Chair:** Huang-Chen Lee	Data Acquisition Systems and Real-Time Measurements **Chair:** Dominique Dallet	Robotics, Control, Mechanical, and Material Measurements **Chair:** Daniele Fontanelli		
19:00 – 21:30	**Welcome Reception - TWTC**							

PROGRAM SCHEDULE – Wednesday, May 25, 2016								
Room	**105**	**201A**	**201B**	**201C**	**201D**	**201E**	**201F**	**202**
8:15 – 9:00	Plenary Talk: JC Hsu – Room 101CD **Chair**: J. Andrew Yeh							
9:00 – 9:45	**Awards Presentations – Room 101CD**							
9:45 – 10:05	**Coffee Break – Room 101AB**							
10:00 – 12:00	I2MTC 2018 Planning Meeting							WIM Panel
10:05 – 11:30						Tutorial - A Comprehensive Insight into Effective and Informed Archival Journal Publication Process – "Dos and Don'ts" **Presenter:** Reza Zoughi **Chair:** Chi Hung Hwang		
10:05 – 12:15	**Invited Talks – Room 101CD** **Chair:** J. Max Cortner							
12:15 – 13:15	**Lunch – Room: VIP Room (4th Floor)**							
13:15 – 15:30		SPECIAL SESSION: Advances in Industrial Tomography: Sensor design, Instrumentation, Image Reconstruction algorithms and Measurement **Chair:** Wuqiang Yang & Lijun Xu	SPECIAL SESSION: Advanced Measurement and Data Processing for Complex Engineering System Health Monitoring **Chair:** Feng Dong	Measurement Applications **Chair:** Mang Ou-Yang	SPECIAL SESSION: Measurements for emerging power systems **Chairs:** Antonello Monti & Carlo Muscas	Measurement and Instrumentation for Industrial Applications and Processes 2 **Chairs:** Georg Brasseur & Zheng Liu	Advances in Instrumentation and Measurement **Chair:** Weihua Li	Graduate Student Panel – "Finding your Niche" (**13:30 – 15:30**)
15:30 – 18:30	**Travel to Palace Museum & Tour – Buses Leave by 16:00**							
19:00 – 21:30	**Gala Dinner – Silk Palace**							

PROGRAM SCHEDULE – Thursday, May 26, 2016							
Room	**201A**	**201B**	**201C**	**201D**	**201E**	**201F**	**202**
8:30 – 9:30	Plenary Talk: Giuseppe Izzo – Room 101CD **Chair:** Salvatore Baglio						
9:00 – 10:30							I2MTC 2016 Wrap-Up Meeting *By Invite Only*
9:30 – 12:00	**Poster Sessions – Room 101AB, Coffee Break (10:30 – 11:00)**						
11:00 – 12:30							I2MTC 2017 Planning Meeting *By Invite Only*
12:00 – 13:00	**Lunch – Room: VIP Room (4th Floor)**						
13:00 – 15:10	SPECIAL SESSION: Impedance Spectroscopy for Measurement and Sensor Solutions **Chair:** Olfa Kanoun	Advances in Instrumentation and Measurement Development and Techniques 2 **Chair:** Sergio Rapuano	Instrumentation and Measurement for Medical, Biomedical, and Healthcare Systems 2 **Chairs:** Paul Annus & Kurt Barbé	Energy and Power Systems 2 **Chair:** Carmine Landi	Non-invasive Measurement Techniques and Instrumentation 2 **Chairs:** Sergey Kharkovsky & Marco Parvis	Industrial applications 1 **Chairs:** Marco Faifer & Stefano Rinaldi	
15:10 – 15:30	**Coffee Break – Room 101AB**						
15:30 – 17:40	Image Processing and Computational Intelligence Techniques 2 **Chair:** Maurizio Bevilacqua	SPECIAL SESSION: Advances Measurement and Instrumentation for NDT&E **Chair:** Sergey Kharkovsky	Sensors, Actuators, Transducers, and Sensor Fusion 2 **Chairs:** Bruno Andò & Boby George	Measurement of Electric and Magnetic Qualities **Chair:** Euler Tavares Macedo	Signal Processing Techniques **Chair:** Kurt Barbé	Industrial applications 2 **Chair:** Octavian Adrian Postolache	

Tutorials – Monday, May 23rd

Session 1
9:00 – 10:30

Methodology of Measurement
Dario Petri (University of Trento, Italy)
Room: **201A**

Metrology and Instrumentation for Semiconductor Industry
*Wei-En Fu (*Center for Measurement Standards; Industrial Technology Research Institute, Taiwan)
Room: **201B**

Diagnosis of Human Skin Lesions (Cancer and Burns) Using High-Frequency Techniques – A Review
Reza Zoughi (Missouri University of Science and Technology (S & T), MO)
Room: **201C**

Wireless Sensor Networks
Pedro M. B. Silva Girão (University of Lisbon, Portugal)
Room: **201D**

Coffee Break
Room: Ground Floor Gallery
10:30 – 11:00

Session 2
11:00 – 12:30

Industrial Wireless Measurement with WirelessHART Technology
Rosdiazli B Ibrahim (Universiti Teknologi PETRONAS, Malaysia)
Tran Duc Chung (Universiti Teknologi PETRONAS, Malaysia)
Hassan Sabo Miya (Universiti Teknologi PETRONAS, Malaysia)
Room: **201A**

Understanding Scanning Near-Field Microwave Microscopy
Kamel Haddadi (University of Lille 1, France)
Room: **201B**

EEG Data Analysis: Feature Extraction, Connectivity and Classification
Aamir S Malik (Universiti Teknologi PETRONAS, Malaysia)
Room: **201C**

Mining Sensor Data in Cyber Physical Systems
Paul O'Leary (University of Leoben, Austria)
Matthew Harker (University of Leoben, Austria)
Room: **201D**

Lunch
Room: VIP Room (4th Floor)
12:30 – 14:00

Tutorials – Monday, May 23rd

Session 3
14:00 – 15:30

Resilient Big Data Measurement
Rossi Kamal (Kyung Hee University & IROBIX INC, Korea)
Choong Seon Hong (Kyung Hee University, Korea)
Room: **201A**

Time Synchronization for Distributed Measurement and Control Systems
David Macii (University of Trento, Italy)
Room: 201B

Instrumented Training Equipment in Smart Physiotherapy Ecosystem
Octavian Postolache (DCTI, Instituto de Telecomunicações, Lisboa/IT, Instituto Universitario de Lisboa, ISCTE-IUL, Portugal)
Room: 201C

Sensor Applications for Precision Agriculture and Food Industry
Gourab Sen Gupta (Massey University, New Zealand)
Room: **201D**

Coffee Break
Room: Ground Floor Gallery
15:30 – 16:00

Session 4
16:00 – 17:30

Bayesian Inference for Measurement Problems
Markus Neumayer (Graz University of Technology, Austria)
Room: 201A

The impact of measurements on power system state estimation
Elias Kyriakides (University of Cyprus, Cyprus)
Mihaela Albu (Politehnica University of Bucharest, Romania)
Room: 201B

Electrical capacitance tomography and industrial applications
Wuqiang Yang (The University of Manchester, United Kingdom)
Room: 201C

Development of u-sensors for health care applications
V.R. Singh (National Physical Laboratory New Delhi, India)
Room: **201D**

18:00 – 21:00
Tutorials Reception
Location: Long Table Restaurant

Tuesday, May 24th

08:15 - 08:30
Welcome and Announcements
Room: 101CD

08:30 - 09:30
Plenary Talk: Plasmonic Metamaterials for Energy, Environment and Better Life
Din Ping Tsai (Director and Distinguished Research Fellow of Research Center for Applied Sciences, Academia Sinica)
Room: 101CD
Chair: Reza Zoughi (Missouri University of Science and Technoogy, USA)

09:30 - 09:45
Special Announcements
Room: 101CD

09:45 - 12:15
Poster Session: Advances in Instrumentation and Measurement
Room: 101AB
Chair: Dušan Agrež (University of Ljubljana, Slovenia)

1: A novel adapter for the accurate measurement of AMN input impedance
Pinzhang Zhao (Jiangsu Institute of Metrology, P.R. China)
Wei Yan (Nanjing Normal University, P.R. China)
Bo Zhao (Jiangsu Institute of Metrology, P.R. China)
Lin Li (Jiangsu Institute of Metrology, P.R. China)
Jia Gao (Jiangsu Institute of Metrology, P.R. China)

2: A Framework for Uncertainty Propagation in 3D Shape Measurement using Laser Triangulation
Mahsa Mohammadikaji (Karlsruhe Institute of Technology, Germany)
Stephan Bergmann (Karlsruhe Institute of Technology, Germany)
Stephan Irgenfried (Karlsruhe Institute of Technology (KIT), Germany)
Jürgen Beyerer (Fraunhofer IOSB, Germany)
Carsten Dachsbacher (Karlsruhe Institute of Technology, Germany)
Heinz Wörn (Karlsruhe Institute of Technology (KIT), Germany)

3: Data Fusion for a Street Lighting Monitoring System Based On Statistical Inference and Fuzzy Logic
Carlos Muñoz (Instituto Tecnológico de Chihuahua, Mexico)
José Rivera-Mejía (Instituto Tecnologico de Chihuahua, Mexico)
Javier Vega (Instituto Tecnológico de Chihuahua, Mexico)
José L. Durán Gómez (Instituto Tecnológico de Chihuahua, Mexico)

Tuesday, May 24th

4: A Thermoelectric Module Thermal-Cycling Testing Platform with Automated Measurement Capabilities
Hugo César Tenório (Federal University of Paraíba, Brazil)
Débora Vieira (Federal University of Paraíba, Brazil) Cleonilson Protasio Souza (Federal University of Paraiba & Center of Alternative and Renewable Energies, Brazil)
Euler Tavares Macedo (Federal University of Paraíba, Brazil)
Raimundo Freire (Universidade Federal de Campina Grande - PB, Brazil)

5: Probe design based on Three-axis acceleration measurement
Hongjun Sun (Tianjin University, P.R. China)
Tao Yu (TianjinUniversity, P.R. China)

6: Charge Distribution Reconstruction in a Bubbling Fluidized Bed Using a Wire-Mesh Electrostatic Sensor
Wenbiao Zhang (North China Electric Power University, P.R. China)
Binbin Yang (North China Electric Power University, P.R. China)
Yong Yan (University of Kent, United Kingdom)
Xiangchen Qian (North China Electric Power University, P.R. China)

7: Surface Roughness Measurement Using Photometric Stereo Method with Coordinate Measuring Machine
Thammarat Somthong (Brunel University London, United Kingdom)
Qingping Yang (Brunel University London)

8: Digital Feedback Optical Vibrometer
Michele Norgia (Politecnico di Milano, Italy)
Alessandro Magnani (Politecnico di Milano, Italy)
Dario Melchionni (Politecnico di Milano, Italy)
Cesare Svelto (Politecnico di Milano, Italy)
Alessandro Pesatori (Politecnico di Milano, Italy)

9: Impact Analysis of pressure sensor size on measurement of the high-speed train aerodynamic performance test
Chunjun Chen (Southwest Jiaotong University, P.R. China)
Liu Yi (Southwest Jiaotong University, P.R. China)
Hongyang He (Southwest Jiaotong University, P.R. China)

10: An independent components number estimation technique in eddy current pulsed thermography
Peipei Zhu (University of Electronic Science and Technology of China, P.R. China)
Yuhua Cheng (University of Electronic Science and Technology of China & School of Automation Engineering, P.R. China)
Chun Yin (University of Electronic Science and Technology of China & School of Automation Engineering, P.R. China)
Libing Bai (University of Electronic Science and Technology of China, P.R. China)

11: A Sparse Signal Reconstruction Approach For Sequential Equivalent Time Sampling
Yijiu Zhao (University of Electronic Science and Technology of China, P.R. China)
Jingjing Liu (University of Electronic Science and Technology of China, P.R. China)
Xiaoyan Zhuang (Xihua University, P.R. China)

Tuesday, May 24th

12: Time-frequency Spectrum Based on Iterative Generalized Demodulation for Gearbox Fault Diagnosis under Nonstationary Conditions
Xiaowang Chen (University of Science and Technology Beijing, P.R. China)
Zhipeng Feng (University of Science and Technology Beijing, P.R. China)
Kangqiang Li (University of Science and Technology Beijing, P.R. China)

13: A two-step method using Duffing oscillator and stochastic resonance to detect mechanical faults
Jiawei Xiang (Wenzhou University, P.R. China)
Yongteng Zhong (WenZhou University, P.R. China)
14: Compressive Sensing of Roller Bearing Fault using Tunable Q-factor Wavelet Transform
Huaqing Wang, Yanliang Ke, Ganggang Luo and Gang Tang (Beijing University of Chemical Technology, P.R. China)

15: Reference Broadcast Synchronization Scheme for Nanomachines
Chengfeng Yang (Shanghai University, P.R. China)
Lin Lin (Shanghai University, P.R. China)
Feiyan Li (Shanghai University, P.R. China)
Maode Ma (Nanyang Technological University, Singapore)
Shiwei Ma (Shanghai University, P.R. China)

78: A Multi-frequency Demodulation Method Based on the Information-filtering Algorithm for Electrical Tomography
Shijie Sun (Beihang University, P.R. China)
Zhang Cao (Beihang University, P.R. China)
Lijun Xu (Beihang University, P.R. China)
Xiangyu Liu (Beihang University, P.R. China)

Poster Session: Energy, Power, Electrical and Magnetic measurements
Room: 101AB
Chair: Mihaela Albu (Politehnica University of Bucharest, Romania)

16: Modeling of Measurement Error of Energy Meter using NARX model
Supriya Jaiswal (Visvesvaraya National Institute of Technology Nagpur & Visvesvaraya National Institute of Technology Nagpur, India)
Makarand Ballal (Visvesvaraya National Institute of Technology, India)

17: Signal-Dependent Preprocessing of Buffered PMU Measurements for Hybrid State Estimation
Neelabh Kashyap (Aalto University, Finland)
Stefan Werner (Aalto University, Finland)
Jarmo Lundén (Aalto University, Finland)

18: A Novel Method of Current-Only Directional Overcurrent Protection
Tao Hua (Siemens, P.R. China)

19: Highly Sensitive Detection of Methane Based on Tunable Diode Laser Absorption Spectrum
Jun Jiang (North China Electric Power University, P.R. China)
Guo-ming Ma (North China Electric Power University, P.R. China)
Hong-Tu Song (North China Electric Power University, P.R. China)
Cheng-Rong Li (North China Electric Power University, P.R. China)
Ying-Ting Luo (Electric Power Research Institute of Guangdong Power Grid Corporation, P.R. China)
Hong-Bin Wang (Electric Power Research Institute of Guangdong Power Grid Corporation, P.R. China)

Tuesday, May 24th

20: Resonant Coils Analysis for Inductively Coupled Wireless Power Transfer Applications
Chandrasekharan Nataraj (Asia Pacific University of Technology and Innovation, Malaysia)
Sheroz Khan (Inetrnational Islamic University Malaysia, Malaysia)
Mohamed Hadi Habaebi (International Islamic University Malaysia (IIUM), Malaysia)
Asan G. A. Muthalif (International Islamic University Malaysia, Malaysia)
Atika Arshad (International Islamic University Malaysia, Malaysia)

21: Behavior of Voltage Transformers Under Distorted Conditions
Ting Lei (Politecnico di Milano, Italy)
Loredana Cristaldi (Politecnico di Milano, Italy)
Marco Faifer (Politecnico di Milano, Italy)
Roberto Ottoboni (Politecnico di Milano, Italy)
Sergio Toscani (Politecnico di Milano, Italy)
Claudio Cherbaucich (RSE S.p.A., Italy)
Paolo Mazza (RSE S.p.A., Italy)

22: Estimating the Impact of Defects in Photovoltaic Cells and Panels
Christian Schuss (University of Oulu, Finland)
Kari Remes (University of Oulu, Finland)
Kimmo K Leppänen (University of Oulu, Finland)
Juha Saarela (University of Oulu, Finland)
Tapio Fabritius (University of Oulu, Finland)
Bernd Eichberger (Graz University of Technology, Austria)
Timo Rahkonen (University of Oulu, Finland)

23: Automated test system to assess reporting latency in PMUs
Paolo Castello (University of Cagliari, Italy)
Carlo Muscas (University of Cagliari, Italy)
Paolo Attilio Pegoraro (University of Cagliari, Italy)
Sara Sulis (University of Cagliari, Italy)

24: The Measurand: The Problem of Frequency
Harold Kirkham (Pacific Northwest National Laboratory, USA)

25: A Direct-Digital Interface Circuit for Sensors Representable using Parallel R-C Model
Vijayakumar Sreenath (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)

26: A Resistance-to-Digital Converter Possessing Exceptional Insensitivity to Circuit Parameters
Vijayakumar Sreenath (Indian Institute of Technology Madras, India)
Koniyath Semeerali (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)

Poster Session: Image Processing and Computational Intelligence
Room: 101AB
Chairs: Ye Chow Kuang (Monash University Malaysia, Malaysia), Humaira Nisar (Universiti Tunku Abdul Rahman, Malaysia)

27: A Variable-Threshold Voltage Technique to Enhance the Linearity of Folding-Integration/Cyclic Cascaded ADCs
Tongxi Wang (Shizuoka University, Japan)
Shoji Kawahito (Research Institute of Electronics, Japan)

Tuesday, May 24th

28: Crane tracking and monitoring system based on TLD algorithm
Hongjun Sun (Tianjin University, P.R. China)
Tao Yu (TianjinUniversity, P.R. China)

29: New Selection Methods of Regularization Parameter for Electrical Resistance Tomography Image Reconstruction
Chuanlei Wang (Tianjin University, P.R. China)
Shihong Yue (Tianjin University, P.R. China)

30: Hyperspectral Image Classification Method Based on Orthogonal NMF and LPP
Miao Zhang (Harbin Institute of Technology, P.R. China)
Peiyuan Jia (Harbin Institude of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Fei Shen (Shanghai Aerospace Control Technology Research Institute, P.R. China)

31: A Novel Perception Oriented Image Color Representation
Wenyi Wang (University of Ottawa, Canada)
Ya Luo (University of Ottawa, Canada)
Jun Hu (University of Ottawa, Canada)
Jiying Zhao (University of Ottawa, Canada)

32: An Algorithm for Generating Prime Implicants
Sunil R. Das (University of Ottawa, Canada)
Abdullah Amin (Troy State University, USA)
Satyendra Biswas (Norfolk State University, USA)
Mansour H Assaf (The University of the South Pacific (USP) & Faculty of Science & Technology, Fiji)
Emil M. Petriu (University of Ottawa, Canada)
Voicu Groza (University of Ottawa, Canada)

33: Imitated Light Field Image Architecture Based on Haar Discrete Wavelet Transform
Yu-Cheng Fan (National Taipei University of Technology, Taiwan)

34: Flight Control of UAV Using LED Panel and On-board Camera
Hiroyuki Ukida (The University of Tokushima, Japan)
Masafumi Miwa (The University of Tokushima, Japan)
Yoshio Tanimoto (Kibikogen Rehabilitation Center, Japan)
Tetsuya Sano (System Enterprise Co., Ltd, Japan)
Hideki Yamamoto (Kibikogen Rehabilitation Center, Japan)

35: Embedded Vision: Enhancing Embedded Platform For Face Detection System
Kushsairy Kadir (Universiti Kuala Lumpur British Malaysian Institute, Malaysia)
MohdKhairi Kamaruddin (Universiti Kuala Lumpur & British Malaysian Institute, Malaysia)
Haidawati Nasir (Universiti Kuala Lumpur, Malaysia)
Sairul Safie (Universiti Kuala Lumpur, Malaysia)
Zulkifli Abdul Kadir Bakti (Universiti Kuala Lumpur, Malaysia)
Sheroz Khan (Inetrnational Islamic University Malaysia, Malaysia)

36: Rectification for Fronto-parallel Camera Movement in 3D Reconstruction of Printed Circuit Boards
Matthias Breier (RWTH Aachen University, Germany)
Patrick Küsters (RWTH Aachen University, Germany)
Anna König (RWTH Aachen University, Germany)
Wei Li (RWTH Aachen University, Germany)
Marcel Bosling (RWTH Aachen University, Germany)
Thomas Pretz (RWTH Aachen University, Germany)
Dorit Merhof (RWTH Aachen University, Germany)

Tuesday, May 24th

37: Adaptive Recursive Optimized Extrinsic Self-calibration in Distributed Visual Sensor Networks
Peng Dai (Tsinghua University, P.R. China)
Xue Wang (Tsinghua University, P.R. China)
Yuqi Tan (Tsinghua University, P.R. China)
Pengbo Zhang (Tsinghua University, P.R. China)
Xuanping Li (Tsinghua University, P.R. China)

Poster Session: Industrial Applications
Room: 101AB
Chair: Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil), Dominique Dallet (IMS Laboratory – University Bordeaux, France)

38: Laser cleaning of metal artifacts: microstructural, chemical and optical fiber-based analysis
Emma Paola Angelini (Politecnico di Torino, Italy)
Sabrina Grassini (Politecnico di Torino & Department of Applied Science and Technology, Italy)
Massimo Olivero (Politecnico di Torino, Italy)
Marco Parvis (Politecnico di Torino, Italy)
Guido Perrone (Politecnico di Torino, Italy)

39: Coloring c-Si PV cells: a new structure
Loredana Cristaldi (Politecnico di Milano, Italy)
Sergio C. Brofferio (Politecnico Di Milano, Italy)
Giancarlo Bernasconi (Politecnico di Milano, Italy)
Marco Faifer (Politecnico di Milano, Italy)
Giosuè Iseni (Politecnico di Milano, Italy)

40: Short Duration Voice Data Speaker Recognition System Using Novel Fuzzy Vector Quantization Algorithm
Satyanand Singh (St Peter's Engineering College, India)
Mansour H Assaf (The University of the South Pacific (USP) & Faculty of Science & Technology, Fiji)
Sunil R. Das (University of Ottawa, Canada)
Satyendra Biswas (Norfolk State University, USA)
Emil M. Petriu (University of Ottawa, Canada)
Voicu Groza (University of Ottawa, Canada)

41: Waveform Reconstruction for Recurrent Non-Uniform Discrete-Time Sampling Scheme: Discussion of Its Instability
Wei-Da Hao (Texas A&M University-Kingsville, USA)
Yih-Chuyn Jenq (Portland State University, USA)
David Chiang (Portland State University, USA)

42: Performance of Parallel Prefix Circuit Transition Localization of Pulsed Waveforms
Yuanwei Fang (University of Chicago, USA)
Andrew A Chien (University of Chicago & Argonne National Laboratory, USA)
Andrew Lehane (Keysight Inc, United Kingdom)
Lee A Barford (Keysight Laboratories, Keysight Technologies, Inc. & University of Nevada, USA)

Tuesday, May 24th

43: The Implementation of Equalization Algorithms for Real Transmission Channels*
Radek Martinek (VSB - Technical University of Ostrava & Faculty of Electrical Engineering and Computer Science, Czech Republic)
Jan Vanus (VSB - Technical University of Ostrava, Czech Republic)
Petr Bilik (VSB - Technical University Ostrava, P.R. China)
Mohamed Al-Wohaishi (VSB - Technical University of Ostrava, Czech Republic)
Jan Zidek (VSB - Technical University of Ostrava, Czech Republic)
He Wen (Hunan University & College of Electrical and Information Engineering, P.R. China)

44: Selective Locking Tensor Orthogonal Matching Pursuit Algorithm Based on Block Sparsity for Multidimensional Compressive Sensing
Zhao Rongqiang (Harbin Institute of Technology, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)

45: A Preliminary Study on the Estimation of the Uncertainty of Traffic Noise Measurements
Consolatina Liguori, Alfredo Paolillo, Alessandro Ruggiero and Domenico Russo (University of Salerno, Italy)

46: A Sparse Representation Method of 2-D Sensory Data in Wireless Sensor Networks
Cuicui Lv (Harbin Institute of Technology, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)
Wenjie Yan (Hebei University of Technology)
Zhao Rongqiang (Harbin Institute of Technology, P.R. China)
Jinming Chen (Beijing Institute of Spacecraft Environment Engineering, P.R. China)

47: Measurement-driven Quality Assessment of Nonlinear Systems by Exponential Replacement
Manuel Stein (Technische Universitaet Muenchen, Germany)
Josef A. Nossek (TU Munich, Germany)
Kurt Barbé (VUB, Belgium)

48: A Comparative Study on Data-Driven Prognostic Approaches Using Fleet Knowledge
Giacomo Leone (Politecnico di Milano, Italy)
Loredana Cristaldi (Politecnico di Milano, Italy)
Roberto Ottoboni (Politecnico di Milano, Italy)
Simone Turrin (ABB AG, Corporate Research Center Germany, Germany)
Subanatarajan Subbiah (ABB AG, Corporate Research Center Germany, Germany)

49: Measurements and characterization of Air Temperature Sensors for weather stations
Marcantonio Catelani (University of Florence, Italy)
Lorenzo Ciani (University of Florence, Italy)
Andrea Zanobini (Università di Firenze, Italy)

50: A condition monitoring tool based on a FMECA and FMMEA combined approach in Oil&Gas applications
Marcantonio Catelani (University of Florence, Italy)
Lorenzo Ciani (University of Florence, Italy)
Loredana Cristaldi (Politecnico di Milano, Italy)
Mohamed Khalil (Politecnico di Milano, Italy)
Sergio Toscani (Politecnico di Milano, Italy)
Matteo Venzi (University of Florence, Italy)

Tuesday, May 24th

51: Extension for the Range Ability of Differential Pressure Flow Meters with parameters identified online
Gang Li (The First power Plant of Jilin Petrochemical Company Petrochina, P.R. China)
Quansheng Duan (North China Electric Power University, P.R. China)
Jingsi Yang (North China Electric Power University, P.R. China)
Renting Ma (North China Electric Power University, P.R. China)
Yong Yan (University of Kent, United Kingdom)
Jian Qu (The First power Plant of Jilin Petrochemical Company Petrochina, P.R. China)

52: Real-time Machining Precision Detection of Steel Wheel Model using Laser Triangulation
Ya-Cheng Liu (Instrument Technology Research Center-NARL, Taiwan)
Chun-Fu Lin (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chun-Li Chang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)
Newman Chen (Avvatech, Taiwan)

53: New multi-lighting simulator for emerging photovoltaic in I-V measurement
Yean-San Long (ITRI, Taiwan)
Shu-Tsung Hsu (ITRI, Taiwan)
Teng-Chun Wu (ITRI, Taiwan)

54: A Low-cost, Acid- and Alkali-Resistant Atomizer for Nanoparticles Sizing in Semiconductor Application
Sheng-Hann Wang (Industrial Technology Research Institute, Taiwan)
Hsin-Chia Ho (Industrial Technology Research Institute, Taiwan)
Yen-Liang Lin (Industrial Technology Research Institute, Taiwan)
Hsiu-Ling Lin (Industrial Technology Research Institute, Taiwan)

55: Inspection of moiture separator reheater piping system using a Hall sensor array
Hwa Sik Do (KEPCO Plant Service & Engineering Co., LTD, Korea)
Minhhuy Le (Chosun University, Korea)
Jungmin Kim (Chosun University, Korea)
Jinyi Lee (Chosun University, Korea)

56: Development of an Automatic Sampling Module to Monitor Concentration of Liquid-Borne Nanoparticle
Guo Dung Chen (Industrial Technology Research Institute & Center for Measurement Standards, Taiwan)

57: Development of an On-line Inspection System for Micro-defects on Chips
Liang-Yin Hwang (Gallant Micro. Machine Corp, Taiwan)
Ming-Fu Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chih-Wen Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chih-Yen Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)

Tuesday, May 24th

58: System Evaluation of Uncertainty in Measurement for Precision Nanopositioning Module
Cliff Tseng (Bruker Corporation, Taiwan)
James Su (ITRC, NARL, Taiwan)
Ming Hua Shiao (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chien-Nan Hsiao (Instrument Technology Research Center, Taiwan)
Fong Zhi Chen (ITRC, NARL, Taiwan)
J. Andrew Yeh (National Tsing Hua University & Instrument Technology Research Center, Taiwan)

Poster Session: Sensors, Transducers, healthcare
Room: 101AB
Chair: Carmine Landi (Second University of Naples, Italy), Luigi Rovati (University of Modena and Reggio Emilia, Italy)

59: A passive Barkhausen noise sensor for low-power applications
Jesper Hamfelt (Luleå University of Technology, Sweden)
Jonas Gustafsson (Luleå University of Technology, Sweden)
Jan van Deventer (Luleå University of Technology, Sweden)
Torbjörn Löfqvist (Luleå University of Technology, Sweden)
Fredrik Häggström (Luleå University of Technology, Sweden)
Jerker Delsing (Lulea University of TEchnology, Sweden)

60: Development of a fast humidity sensor based on quartz tuning fork
Alessio Carullo (Politecnico di Torino, Italy)
Alberto Vallan (Politecnico di Torino, Italy)
Ahmed Afify (Politecnico di Torino, Italy)
Jean Marc Tulliani (Politecnico di Torino, Italy)

61: Online quantitative analysis of accidental contaminant in water distribution system based on Dempster-Shafer evidence theory
Xiang Wen (Zhejiang University, P.R. China)
Di-Bo Hou (Zhejiang University, P.R. China)
Tian-Heng Feng (Zhejiang University, P.R. China)
Huang Ping-Jie (Zhejiang University, P.R. China)
Guang-Xin Zhang (Zhejiang University, P.R. China)
62: Energy method for the optimization of a silicon resonant accelerometer
Jing Zhang (Nanjing University of Science and Technology, P.R. China)
An-ping Qiu (Nanjing University of Science and Technology, P.R. China)

63: A methodology for the compensation of compass heading estimation for the effect of magnetic influences
Vincenzo Marletta (University of Catania, Italy)
Bruno Andò (University of Catania, Italy)
Salvatore Baglio (University of Catania, Italy)
Cristian O. Lombardo (University of Catania, Italy)
Salvatore Frisenna (University of Catania, Italy)

Tuesday, May 24th

64: Implementation and Characterization of a Smart Parking System based on 3-axis Magnetic Sensors
Carlo Trigona (University of Catania, Italy)
Bruno Andò (University of Catania, Italy)
Valentina Sinatra (University of Catania, Italy)
Chiara Vacirca (DIEEI, Italy)
Eduardo Rossino (DIEEI, Italy)
Luigi Palermo (DIEEI, Italy)
Santosh Kurukunda (DIEEI, Italy)
Salvatore Baglio (University of Catania, Italy)

65: Study of an IPMC based flowmeter
Salvatore Graziani (University of Catania, Italy)
Giovanna Di Pasquale (University of Catania, Italy)
Carla Marino (University of Catania, Italy)
Antonino Pollicino (Univesrità di Catania, Italy)
Salvatore Strazzeri (University of Catania, Italy)

66: Preliminary study of damage detection in unidirectional CFRP based on open electrical impedance tomography
Wenru Fan (Civil Aviation University of China, P.R. China)
Huaxiang Wang (Tianjin University, P.R. China)

67: Performance Investigation of a Nonlinear Vibrational Energy Harvester with Band Limited Noise
Vincenzo Marletta (University of Catania, Italy)
Bruno Andò (University of Catania, Italy)
Salvatore Baglio (University of Catania, Italy)
Adi R. Bulsara (Space and Naval Warfare Center (San Diego), USA)
Antonio Pistorio (University of Catania, Italy)

68: Rapid Current Monitoring and Detecting for LEDs Circuit using Planar Squire-Spiral Inductor Sensor Array
Min-Wei Hung (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chien-Hung Chen (National Applied Research Laboratories, Taiwan)
Ching-Ching Yang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chih-Chung Yang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Kuo-Cheng Huang (Instrument Technology Research Center, Taiwan)

69: Design of Absolute Encoder Disk Coding Based on Affine n digit N-ary Gray Code
Sarbajit Paul (Dong-A University & Korean Government Research, Korea)
Junghwan Chang (Dong-A University, Korea)

70: Simulation Study of Electrodes Optimization Design of Power Density Imaging
Chunqing Dou (Tianjin University, P.R. China)
Yanbin Xu (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

Tuesday, May 24th

71: Possible Environmental Effects in Scour Monitoring of a Cable-stayed Bridge with Pier Vibration Measurements
Wen-Hwa Wu (National Yunlin University of Science and Technology, Taiwan)
Chien-Chou Chen (National Yunlin University of Science & Technology, Taiwan)
Wei-Sheng Shi (National Yunlin University of Science & Technology, Taiwan)
Chun-Ming Huang (National Chip Implementation Center, Taiwan)

72: Thin Shear Crack Observation of a Cylinder Structure Test using Image Analysis
Yuan-Sen Yang (National Taipei University of Technology, Taiwan)
Chiun-lin Wu (National Center for Research on Earthquake Engineering, Taiwan)
Thomas Hsu (University of Houston, USA)

73: A Real-time Bridge Scour Sensor System with Accelerometers
Ssu-Ying Chen (National Chip Implementation Center, Taiwan)
Yi-Jie Hsieh (National Chip Implementation Center, Taiwan)
Chih-Chyau Yang (National Chip Implementation Center, Taiwan)
Chien-Ming Wu (National Chip Implementation Center, Taiwan)
Chun-Ming Huang (National Chip Implementation Center, Taiwan)

74: Application of the Low-cost MEMS-type Seismometer for Structural Health Monitoring: A Pre-study
Ting-Yu Hsu (National Center for Research on Earthquake Engineering, Taiwan)
Ren-Cheng Yin (National Taiwan University, Taiwan)

75: Precise and Fast Frequency Determination of Resonant SAW Sensors by a Low-Cost Six-Port Interferometer
Fabian Lurz (University of Erlangen-Nuremberg, Germany)
Stefan Lindner (University of Erlangen-Nuremberg, Germany)
Sebastian Mann (University of Erlangen-Nuremberg, Germany)
Sarah Linz (University of Erlangen-Nuremberg, Germany)
Robert Weigel (University of Erlangen-Nuremberg, Germany)
Alexander Koelpin (University of Erlangen-Nuremberg & Institute f. Electronics Engineering, Germany)

76: Millimeter-wave Six-Port IQ Demodulator in 65 nm SOI CMOS Technology
Kamel Haddadi (University of Lille1/IEMN, France)
Christophe Loyez (University of Lille, France)

77: A Floating Wiper Inductive Voltage Divider Type Displacement Transducer
Srinivas Rana (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)
Jagadeesh Kumar V (Indian Institute of Technology Madras, India)

10:00 - 10:20
Coffee Break
Room: 101AB

12:15 - 13:15
Lunch & ATPC Lunch
Room: VIP Room (4th Floor)

Tuesday, May 24th

13:15 - 15:25
Image Processing and Computational Intelligence Techniques 1
Room: 201A
Chair: Annamária R. Várkonyi-Koczy (Obuda University, Hungary), Yu-Cheng Fan (National Taipei University of Technology, Taiwan)

Evaluation Metric for Rate of Background Detection
M Abul Hassan (Universiti Teknologi Petronas, Malaysia)
Aamir S Malik (Senior Lecturer, Malaysia)
David Fofi (Université de Bourgogne, France)
Mohamad Naufal Mohamad Saad (Universiti Teknologi Petronas, Malaysia)

Bandwidth Estimation Algorithm of Digitally Modulated Signals Based on Histogram of Spectrum
Woo-Hyun Ahn (Hanwha Thales, Korea)
Bo-Seok Seo (Chungbuk National University, Korea)
Hong-Suk Shim (Hanwha Thales, Korea)
Ji-Hyun Roh (Hanwha Thales, Korea)
Sun-Phil Nah (Agency for Defense Development, Korea)

Sparseness Constrained NMF-based Shape Priors for Level Set Tracking
Xue Zhou (University of Electronic Science and Technology of China, P.R. China)

Intelligent identification of induction motor conditions at several mechanical loads
Pilar Gomez-Gil (National Institute of Astrophysics, Optics and Electronics, Mexico)
Edgar Garcia-Treviño (National Autonomous University of Mexico, Mexico)
Jose J. Rangel-Magdaleno (INAOE, Mexico)
Juan Ramirez-Cortes (INAOE, Mexico)
Israel Cruz-Vega (CONACYT-INAOE, Mexico)

Estimation of Sludge Volume Index (SVI) using Bright Field Activated Sludge Images
Muhammad Burhan Khan (UTAR, Malaysia)
Humaira Nisar (Universiti Tunku Abdul Rahman, Malaysia)
Choon Aun Ng (UTAR, Malaysia)
Po Kim Lo (Universiti Tunku Abdul Rahman, Malaysia)

13:15 - 15:25
Advances in Instrumentation and Measurement Developments and Techniques 1
Room: 201B
Chair: Ruqiang Yan (Southeast University, P.R. China), Yong Yan (University of Kent, United Kingdom)

A New Particle Sensor Based on True RMS Value Measurement
Wenjia Shao (Zhejiang University, P.R. China)
Hongjian Zhang (Zhejiang University, P.R. China)
Hongliang Zhou (Zhejiang University, P.R. China)

Tuesday, May 24th

Investigation of the NMR techniques to detect hidden defects in hazelnuts
Domenico Di Caro (University of Salerno, Italy)
Consolatina Liguori (University of Salerno, Italy)
Antonio Pietrosanto (University of Salerno & CEO of SPRING OFF srl, Italy)
Paolo Sommella (University of Salerno, Italy)

Practical Synthesis of Ternary Sequences for System Identification
Alessio De Angelis (University of Perugia, Italy)
Johan Schoukens (Vrije Universiteit Brussel, Belgium)
Keith Godfrey (University of Warwick, United Kingdom)
Paolo Carbone (University of Perugia, Italy)

A 256-channel Multi-phase Clock Sampling-Based Time-to-Digital Converter Implemented in a Kintex-7 FPGA
Yonggang Wang (University of Science and Technology of China, P.R. China)
Peng Kuang (University of Science and Technology of China, P.R. China)
Chong Liu (University of Science and Technology of China, P.R. China)

Theoretical Deviation and Ray Tracing Analysis of Optical Rotary Encoder
Hou-Chi Chiang (National Chiao Tung University, Taiwan)
Wei-Kai Su (The Pennsylvania State University, USA)
Mang Ou-Yang (Natinal Chiao-Tung University, Taiwan)
Ting-Wei Huang (National Chiao Tung University, Taiwan)

13:15 - 15:25
Instrumentation and Measurement for Medical, Biomedical, and Healthcare Systems 1
Room: 201C
Chair: Sabrina Grassini (Politecnico di Torino & Department of Applied Science and Technology, Italy)

Design of synchronizing pupillometer for observing nerve conduction by pupillary responses
Yi-Chun Tsai (National Chiao Tung University, Taiwan)
Yung-Jhe Yan (National Chiao Tung University, Taiwan)
Mei-Lan Ko (National Taiwan University Hospital Hsinchu Branch, Taiwan)
Ting-Wei Huang (National Chiao Tung University, Taiwan)
Jin-Chern Chiou (Institution of Electrical and Control Engineering, Taiwan)
Mang Ou-Yang (Natinal Chiao-Tung University, Taiwan)

Sensor-Fusion Based Augmented-Reality Surgical Navigation System
Chang-Yu He (Beijing Institute of Technology, P.R. China)
Yue Liu (Beijing Institute of Technology, P.R. China)
Yongtian Wang (Beijing Institute of Technology, P.R. China)

An Activity Monitoring System for Senior Citizens Living Independently Using Capacitive Sensing Technique
Atika Arshad (International Islamic University Malaysia, Malaysia)
Sheroz Khan (International Islamic University Malaysia, Malaysia)
Ahm Zahirul Alam (International Islamic University Malaysia, Malaysia)
Rumana Tasnim (IIUM, Malaysia)
Teddy Surya Gunawan (International Islamic University Malaysia, Malaysia)
Robiah Ahmad (Universiti Teknologi Malaysia, Malaysia)
Chandrasekharan Nataraj (Asia Pacific University of Technology and Innovation, Malaysia)

Tuesday, May 24th

Optimal Source Selection for Image Photoplethysmography
M Abul Hassan (Universiti Teknologi Petronas, Malaysia)
Aamir S Malik (Senior Lecturer, Malaysia)
David Fofi (Université de Bourgogne, France)
Mohamad Naufal Mohamad Saad (Universiti Teknologi Petronas, Malaysia)
Babak Karasfi (Biomedical Technology MOR, University Technology Petronas & Faculty of Computer and Information Technology Engineering Qazvin Branch (IAU), Malaysia)

Millimeter Reflectometry as an Effective Diagnosis Tool for Skin Burn Injuries
Yuan Gao (Missouri University of Science and Technology, USA)
Reza Zoughi (Missouri University of Science and Technoogy, USA)

13:15 - 15:25
Energy and Power Systems 1
Room: 201D
Chair: Dario Petri (University of Trento, Italy), Ferdinanda Ponci (RWTH Aachen University, Germany

Cyber-attack on Packet-Based Time Synchronization Protocols: the Undetectable Delay Box
Sergio Barreto Andrade (Ecole Polytechnique Federale de Lausanne, Switzerland)
Aswin Suresh (École Polytechnique Fédérale de Lausanne, Switzerland)
Jean-Yves Le Boudec (EPFL, Switzerland)

Design and Implementation of Dual Time Synchronization Signal for Micro Phasor Measurement Unit (μPMU)
Ching-Chuan Luo (National Taiwan University, Taiwan)
Chih-Wen Liu (National Taiwan University, Taiwan)

Weighted Least Squares Dynamic Synchrophasor Estimation in the Case of Harmonically Distorted Sine-waves
Daniel Belega (University of Timisoara, Romania)
Dario Petri (University of Trento, Italy)

Characterization and Performance Measurements of Mid-Range Wireless Power Transfer Links
Alessio De Angelis (University of Perugia, Italy)
Marco Dionigi (University of Perugia, Italy)
Paolo Carbone (University of Perugia, Italy)
Mauro Mongiardo (University of Perugia, Italy)

Measurement of the Mass Flow Distribution of Pulverized Coal in Primary Air Pipes Using Electrostatic Sensing Techniques
Xiangchen Qian (North China Electric Power University, P.R. China)
Xiaobing Huang (North China Electric Power University, P.R. China)
Yonghui Hu (North China Electric Power University, P.R. China)
Yong Yan (University of Kent, United Kingdom)

Tuesday, May 24th

13:15 - 15:25
Measurement and Instrumentation for Industrial Applications and Processes 1
Room: 201E
Chairs: Thilo Sauter (Danube University Krems, Austria), Xue Wang (Tsinghua University, P.R. China)

Internal Model Control for Industrial Wireless Plant Subject to Measured Round Trip Delays
Chung D Tran (Universiti Teknologi PETRONAS, Malaysia)
Rosdiazli Ibrahim (Universiti Teknologi PETRONAS, Malaysia)
Vijanth Sagayan Asirvadam (Center Intelligent Signal and Imaging Research (CISIR) & University Teknologi PETRONAS, Malaysia)
Nordin B Saad (Universiti Teknologi Petronas, Malaysia)
Sabo Miya Hassan (Universiti Teknologi PETRONAS, Malaysia)

Precision Inclinometer Measurement System with a Wireless Gateway
Roland Schmidt (University of Leoben, Austria)
Paul O'Leary (University of Leoben, Austria)
Matthew Harker (University of Leoben, Austria)

Extensions of the IEEE802.15.4 Protocol for Ultra-Low Energy Real-Time Communication
Axel Sikora (University of Applied Sciences Offenburg, Germany)
Manuel Schappacher (Offenburg University of Applied Sciences, Germany)
Nguyen Minh Phuong (Offenburg University of Applied Sciences, Germany)
Voicu Groza (University of Ottawa, Canada)

Performance of all-digital waveform generators for narrowband Power Line Communications
Emiliano Sisinni (University of Brescia, Italy)
Mirko Lavarini (University of Brescia, Italy)
Alessandro Depari (University of Brescia, Italy)
Alessandra Flammini (University of Brescia, Italy)

Enabling PROFINET devices to work in IoT: characterization and requirements
Paolo Bellagente (University of Brescia)
Paolo Ferrari (University of Brescia, Italy)
Alessandra Flammini (University of Brescia, Italy)
Stefano Rinaldi (University of Brescia, Italy)
Emiliano Sisinni (University of Brescia, Italy)

13:30 - 15:30
Young Professionals Panel
Room: 201F

15:25 - 15:45
Coffee Break
Room: 101AB

Tuesday, May 24th

15:45 - 17:55
Measurement Systems and Theory
Room: 201A
Chairs: Pasquale Daponte (University of Sannio, Italy), Thomas Bretterklieber (Graz University of Technology, Austria)

Estimation of Inner Scattering Parameters from Coupled Systems
Markus Neumayer (Graz University of Technology, Austria)
Thomas Bretterklieber (Graz University of Technology, Austria)

A Photogrammetry Pose Measurement Method for Moving Targets in a Wind Tunnel
Xin Ma (Dalian University of Tech-nology, P.R. China)
Wei Liu (Dalian University of Tech-nology, P.R. China)
Ling Chen (Dalian University of Tech-nology, P.R. China)
Jiwen Lu (Dalian University of Tech-nology, P.R. China)
Weixiao Liu (Dalian University of Tech-nology, P.R. China)
Jiakun Zhang (Dalian University of Tech-nology, P.R. China)
Zhenyuan Jia (Dalian University of Tech-nology, P.R. China)
Long Changyu (Beijing Institute of Spacecraft Environment Engineering, P.R. China)
Yang Zaihua (Beijing Institute of Spacecraft Environment Engineering, P.R. China)
Yi Wangmin (Beijing Institute of Spacecraft Environment Engineering, P.R. China)

Statistical behavior of a comparator with weak repetitive signal and additive white Gaussian noise
Shufeng Zheng (University of Oulu, Finland)
Juha Kostamovaara (University of Oulu, Finland)

Cyclo-Stationary process analysis within telecom applications
Vladimir Lazov (Vrije Universiteit Brussels, Belgium)
Gerd Vandersteen (Vrije Universiteit Brussel, Belgium)

Simulation and experimental verification of a meander-line-coil Electromagnetic Acoustic Transducers (EMATs)
Yuedong Xie (University of Manchester, United Kingdom)
Sergio Alberto Rodriguez Gutierrez (The University of Manchester, United Kingdom)
Zenghua Liu (Beijing University of Technology, P.R. China)
Jianna Hao (Shanghai Maritime University, P.R. China)
Qian Zhao (Qufu Normal University, P.R. China)
Ben Wang (Changzhou Mega Power Technology Limited, P.R. China)
Wuliang Yin (The University of Manchester, United Kingdom)
Anthony Peyton (University of Manchester, United Kingdom)

EEG Feature Selection Based on Weighted-Normalized Mutual Information for Mental Fatigue Classification
Pengbo Zhang (Tsinghua University, P.R. China)
Xue Wang (Tsinghua University, P.R. China)
Xuanping Li (Tsinghua University, P.R. China)
Peng Dai (Tsinghua University, P.R. China)

Tuesday, May 24th

15:45 - 17:55
Non-invasive Measurement Techniques and Instrumentation 1
Room: 201B
Chairs: Paolo Carbone (University of Perugia, Italy), Huaxiang Wang (Tianjin University, P.R. China)

Microwave Dual Waveguide Sensor System for the Measurement of Gap between Concrete and Metal Surfaces
Md Ashraful Islam (Western Sydney University, Australia)
Sergey Kharkovsky (University of Western Sydney & UWS, Australia)

Detection of crack in cement-based specimens using microwave imaging with the 3-axis scanning system
Sergey Kharkovsky (University of Western Sydney & UWS, Australia)
Paritosh Giri (Western Sydney University, Australia)

2D Geometry Characterization of Cracks From ECT Image Analysis using Planar Coils and GMR-Sensors
Dário Pasadas (Instituto Telecomunicações / Instituto Superior Técnico, Portugal)
Artur L. Ribeiro (Instituto de Telecomunicações, Portugal)
Helena G. Ramos (Instituto de Telecomunicacoes, Instituto Superior Tecnico, Portugal)
Tiago Rocha (Instituto de Telecomunicações / Instituto Superior Técnico, Portugal)

Method of imaging and evaluation for defect based on pulsed eddy current
Shuhao Zhao (Zhejiang University, P.R. China)
Xuwei Luo (Zhejiang University, P.R. China)
Huang Ping-Jie (Zhejiang University, P.R. China)
Xiedan Peng (Zhejiang University, P.R. China)
Dibo Hou (Zhejiang University, P.R. China)
Guang-Xin Zhang (Zhejiang University, P.R. China)

SVM Classification of Thickness and Lift-off Using Transient Eddy Current Oscillation Method
Chandra Angani (Instituto de Telecomunicações, Portugal)
Helena G. Ramos (Instituto de Telecomunicacoes, Instituto Superior Tecnico, Portugal)
Tiago Rocha (Instituto de Telecomunicações / Instituto Superior Técnico, Portugal)
Artur L. Ribeiro (Instituto de Telecomunicações, Portugal)

15:45 - 17:55
Sensors, Actuators, Transducers, and Sensor Fusion 1
Room: 201C
Chair: Huang-Chen Lee (National Chung-Cheng University, Taiwan)

Sensitivity Matrix for Ultrasound Modulated Electrical Impedance Tomography
Xizi Song (Tianjin University, P.R. China)
Yanbin Xu (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

Toward the Development of a Distributed All-fiber Temperature Sensor for Biomedical Applications
Riccardo Gassino (Politecnico di Torino, Italy)
Yu Liu (Politecnico di Torino, Italy)
Massimo Olivero (Politecnico di Torino, Italy)
Alberto Vallan (Politecnico di Torino, Italy)
Guido Perrone (Politecnico di Torino, Italy)
Daniele Tosi (Nazarbayev University, Kazakhstan)

Tuesday, May 24th

PCB-integrated Flow Sensors - How Good is State of the Art Technology?
Thilo Sauter (Danube University Krems & Vienna University of Technology, Austria)
Thomas Glatzl (Danube University Krems, Austria)
Harald Steiner (Center for Integrated Sensor Systems, Austria)
Franz Kohl (Austrian Academy of Sciences, Austria)
Samir Cerimovic (Vienna University of Technology, Austria)

Characterisation of Pulverised Fuel Flow in a Square-shaped Pneumatic Conveying Pipe Using Electrostatic Sensor Arrays
Shuai Zhang (North China Electric Power University, P.R. China)
Xiangchen Qian (North China Electric Power University, P.R. China)
Yong Yan (University of Kent, United Kingdom)
Yonghui Hu (North China Electric Power University, P.R. China)

Power Consumption Analysis of a Wireless Sensor Network for Road Safety
Pasquale Daponte (University of Sannio, Italy)
Luca De Vito (University of Sannio, Italy)
Gianluca Mazzilli (University of Sannio, Italy)
Francesco Picariello (University of Sannio, Italy)
Sergio Rapuano (University of Sannio, Italy)

15:45 - 17:55
Data Acquisition Systems and Real-Time Measurements
Room: 201D
Chair: Dominique Dallet (IMS Laboratory - University Bordeaux, France)

Towards Condition Monitoring of Railway Points: Instrumentation, Measurement and Signal Processing
Werner Kollment (Montanuniversität Leoben, Austria)
Paul O'Leary (University of Leoben, Austria)
Matthew Harker (University of Leoben, Austria)
Uwe Ossberger (Voestalpine VAE GmbH, Austria)
Sven Eck (Materials Center Leoben GmbH, Austria)

Towards the Development of a Low-cost Food Texture Analyser
Gourab Sen Gupta (Massey University, New Zealand)
Weizhong Shi (Massey University, New Zealand)
Ken Mercer (Massey University, New Zealand)
John Bronlund (Massey University, New Zealand)

Network-Capable Smart Batteries for Smart Grid and Battery Management Systems
Lucas Hartmann (Universidade Federal da Paraíba, Brazil)
Euler Tavares Macedo (Federal University of Paraíba, Brazil)
Yuri Rodriguez (Federal University of Paraíba, Brazil)
Juan Moises Mauricio Villanueva (Universidade Federal da Paraíba, Brazil)
Carlos Vidal (Moura Batteries, Brazil)

Design of a Real-Time Acquisition System for the CLIC Klystron Modulators Control Loop
Pasquale Arpaia (University of Naples Federico II, Italy)
Carlo Baccigalupi (CERN & Univerity of Calabria, Switzerland)
Miguel Cerqueira Bastos (CERN, Switzerland)
Michele Martino (CERN, Switzerland)

Tuesday, May 24th

A Correlation-based Approach to Trustworthy Sensing for Cyber-Physical Systems
Dongyu Wu (Case Western Reserve University, USA)
Peng Wang (Case Western Reserve University, USA)
Xingwu Zhang (Case Western Reserve University, USA)
Ruqiang Yan (Case Western Reserve University, USA)
Robert X. Gao (Case Western Reserve University, USA)

15:45 - 17:55
Robotics, Control, Mechanical, and Material Measurements
Room: 201E
Chair: Daniele Fontanelli (University of Trento, Italy)

Interleaved Switch Harvesting on Inductor: Non-linear extraction, action and reaction
Fredrik Häggström (Luleå University of Technology, Sweden)
Jonas Gustafsson (Luleå University of Technology, Sweden)
Jerker Delsing (Luleå University of Technology, Sweden)

Setpoint Weighted WirelessHART Networked Control of Process Plant
Sabo Miya Hassan (Universiti Teknologi PETRONAS, Malaysia)
Rosdiazli Ibrahim (Universiti Teknologi PETRONAS, Malaysia)
Nordin B Saad (Universiti Teknologi PETRONAS, Malaysia)
Vijanth Sagayan Asirvadam (Center Intelligent Signal and Imaging Research (CISIR) & University Teknologi PETRONAS, Malaysia)
Chung D Tran (Universiti Teknologi PETRONAS, Malaysia)

Piezoelectric energy harvesting modeled with SPICE
Fredrik Häggström (Luleå University of Technology, Sweden)
Jonas Gustafsson (Luleå University of Technology, Sweden)
Jerker Delsing (Luleå University of Technology, Sweden)

Microwave Characterization of Fly Ash Geopolymerization
Christopher R. Shearer (South Dakota School of Mines and Technology, USA)
Ali Foudazi (Missouri University of Science and Technology, USA)
Ashkan Hashemi (Missouri University of Science and Technology & Applied Microwave Nondestructive Testing Laboratory, USA)
Kristen M Donnell (Missouri University of Science and Technology, USA)

Collaborative Localization of Robotic Wheeled Walkers using Interlaced Extended Kalman Filters
Daniele Fontanelli (University of Trento, Italy)
David Macii (University of Trento, Italy)
Payam Nazemzadeh (University of Trento, Italy)
Luigi Palopoli (Universita` di Trento, Italy)

19:00 - 21:30
Welcome Reception
Room: Taipei World Trade Center

Wednesday, May 25th

08:15 - 09:00
Plenary Talk: **IoT market and applications enabled by measurement and connectivity technologies**
JC Hsu (Vice President, New Business Development and IoT, MediaTek)
Room: 101CD
Chair: J. Andrew Yeh (National Tsing Hua University, Taiwan)

09:00 - 09:45
Awards Presentation
Room: 101CD

09:45 - 10:05
Coffee Break
Room: 101AB

10:00 - 12:00
WIM Panel
Room: 202

10:05 - 12:15
Invited Talks
Room: 101CD
Chair: J. Max Cortner (Boston Scientific, USA)

Emerging technologies for measuring
Prof. Pasquale Daponte (Immediate Past President of IMEKO)

Application of Instrumentation and Measurement to Accreditation - from Accreditor's Viewpoint
Nigel N. L. Jou (Chair, Asia Pacific Laboratory Accreditation Cooperation (APLAC))

Measurement Traceability for New-Era Instrumentation: Taiwan Implementation
Dr. Tzeng-Yow LIN (General Director, Center for Measurement Standards, Industrial Technology Research Institute)

Roadmap of Medical Devices Industry in Taiwan - 3D Printing Application
Prof. J. Andrew Yeh (Director General, Instrument Technology Research Center, National Applied Research Labs (NA Labs))

Creating IoT(Internet of Things) Solutions
Jun Watanabe (ALPS, Japan)

10:05 - 11:30
Tutorial - A Comprehensive Insight into Effective and Informed Archival Journal Publication Process – "Dos and Don'ts"
Presenter: Reza Zoughi (Missouri University of Science and Technology, USA)
Chair: Chi Hung Hwang
Rooms: 201E, 201F

Wednesday, May 25th

12:15 - 13:15
Lunch
Room: VIP Room (4th Floor)

13:15 - 15:30
SPECIAL SESSION: Advances in Industrial Tomography: Sensor design, Instrumentation, Image Reconstruction algorithms and Measurement
Room: 201A
Chair: Wuqiang Yang (The University of Manchester, United Kingdom), Lijun Xu (Beihang University, P.R. China)

Electrical Resistance Tomography with Voltage Excitation
Marco Antonio Rodriguez Frias (University of Manchester, United Kingdom)
Wuqiang Yang (The University of Manchester, United Kingdom)

A Compact Multispectral Image Capture Unit for deployment on Drones
Ezekiel Bokolonga (University of the South Pacific, Fiji)
Martin Hauhana (University of the South Pacific, Fiji)
Nicholas Rollings (University of the South Pacific, Fiji)
David Aitchison (University of the South Pacific, Fiji)
Mansour H Assaf (The University of the South Pacific (USP) & Faculty of Science & Technology, Fiji)
Sunil R. Das (University of Ottawa, Canada)
Satyendra Biswas (Norfolk State University, USA)
Emil M. Petriu (University of Ottawa, Canada)
Voicu Groza (University of Ottawa, Canada)

Effect of Packing and Liquid Conductivity on Gas Distribution and Holdup in Reaction Column
Huarui Wang (Jiangsu Normal University, P.R. China)
Jiabin Jia (The University of Edinburgh, United Kingdom)

Correlation Analysis of Solid Particles' Permittivity and Composition Using Electrical Capacitance Tomography and Maxwell Garnett Formula
Jiabin Jia (The University of Edinburgh, United Kingdom)
Huarui Wang (School of Physics and Electronic Engineering, Jiangsu Normal University, P.R. China)

Effects of Views and Spectral Lines Numbers on Hyperspectral Temperature Distribution Tomography
Qianwei Qu (Beihang University, P.R. China)
Lijun Xu (Beihang University, P.R. China)
Zhang Cao (Beihang University, P.R. China)
Chang Liu (Beihang University, P.R. China)

13:15 - 15:30
SPECIAL SESSION: Advanced Measurement and Data Processing for Complex Engineering System Health Monitoring
Room: 201B
Chair: Feng Dong (Tianjin University, P.R. China)

Two-Class Model Based on Nonlinear Manifold Learning for Bearing Health Monitoring
Xiaoxi Ding (University of Science and Technology of China, P.R. China)
Qingbo He (University of Science and Technology of China, P.R. China)

Wednesday, May 25th

Incipient Feature Extraction for Rolling Element Bearing Based on Particle Filter Preprocessing and Kurtogram
Hongkun Li (Dalian University of Technology, P.R. China)
Yuanjie Ren (School of Mechanical Engineering, Dalian University of Technology, P.R. China)
Rui Yang (Dalian University of Technology, P.R. China)

Enhancement Ensemble Empirical Mode Decomposition base 2D-MUSIC method for on-line impact localization of composite structures
Yongteng Zhong (WenZhou University, P.R. China)
Jiawei Xiang (WenZhou University, P.R. China)
MinJie Tong (WenZhou University, P.R. China)

A method of automatic feature extraction from massive vibration signals of machines
Feng Jia (Xi'an Jiaotong University, P.R. China)
Yaguo Lei (Xi'an Jiaotong University, P.R. China)
Saibo Xing (Xi'an Jiaotong University, P.R. China)
Jing Lin (Xi'an Jiaotong University, P.R. China)

Improved VMD for Feature Visualization to Identify Wheel Set Bearing Fault of High Speed Locomotive
Jinglong Chen (Xi'an Jiaotong University, P.R. China)
Zipeng Li (Xi'an Jiaotong University, P.R. China)
Jun Pan (Xi'an Jiaotong Unversity, P.R. China)
Yanyang Zi (Xi'an Jiaotong University, P.R. China)
Yu Wang (Xi'an Jiaotong University, P.R. China)

13:15 - 15:30
Measurement Applications
Room: 201C
Chair: Mang Ou-Yang (Natinal Chiao-Tung University, Taiwan)

Cloud Base Height Measurement System Based on Stereo Vision with Automatic Calibration
Fernando M. Janeiro (IT Lisbon / UE, Portugal)
Filipe Carretas (Universidade de Évora, Centro de Geofísica de Évora, Portugal)
Pedro M. Ramos (Instituto de Telecomunicações, Instituto Superior Técnico & Universidade de Lisboa, Portugal)
Frank Wagner (Universidade de Évora, Centro de Geofísica de Évora, Portugal)

Sensing Oil Layers in Manifolds of Small Size Two Stroke Engines
Thomas Bretterklieber (Graz University of Technology, Austria)
Markus Neumayer (Graz University of Technology, Austria)
Matthias Flatscher (Graz University of Technology, Austria)

Magnetic Field Analysis for Distance Measurement in 3D Positioning Applications
Valter Pasku (University of Perugia, Italy)
Alessio De Angelis (University of Perugia, Italy)
Guido De Angelis (Regione Umbria, Italy)
Antonio Moschitta (University of Perugia, Italy)
Paolo Carbone (University of Perugia, Italy)

Wednesday, May 25th

Localization of Continuous Gas Leaks from a Flat-Surface Structure Using an Acoustic Emission Sensor Array
Xiwang Cui (North China Electric Power University, P.R. China)
Yong Yan (University of Kent, United Kingdom)
Miao Guo (North China Electric Power University, P.R. China)
Yonghui Hu (North China Electric Power University, P.R. China)
Xiaojuan Han (University of North China Electric Power, P.R. China)

Gas-liquid Two-phase Flow Measurement Using Coriolis Flowmeters Incorporating Neural Networks
Lijuan Wang (University of Kent, United Kingdom)
Jinyu Liu (University of Kent, United Kingdom)
Yong Yan (University of Kent, United Kingdom)
Xue Wang (University of Kent, United Kingdom)
Tao Wang (KROHNE Ltd, United Kingdom)

13:15 - 15:30
SPECIAL SESSION: Measurements for emerging power systems
Room: 201D
Chairs: Antonello Monti (RWTH Aachen University & Institute for Automation of Complex Power Systems, Germany), Carlo Muscas (University of Cagliari, Italy)

The unbundled Smart Meter concept in a synchro-SCADA framework
Mihai Sanduleac (ECRO, Romania)
Lucas Pons (ETRA E+D, Spain)
Giampaolo Fiorentino (Italy & Engineering, Italy)
Rares Pop (ECRO, Romania)
Mihaela Albu (Politehnica University of Bucharest, Romania)

Impact of measurement set-up on RVC-like event detection
Ana Ruxandra Toma (Politehnica University of Bucharest, Romania)
Ana Maria Dumitrescu (Politehnica University of Bucharest, Romania)
Mihaela Albu (Politehnica University of Bucharest, Romania)

Adaptive PMU-based Distribution System State Estimation exploiting the Cloud-based IoT paradigm
Paolo Attilio Pegoraro (University of Cagliari, Italy)
Alessio Meloni (University of Cagliari, Italy)
Luigi Atzori (University of Cagliari, Italy)
Paolo Castello (University of Cagliari, Italy)
Sara Sulis (University of Cagliari, Italy)

Dynamic Synchrophasor Estimation using Smoothed Kalman Filtering
Daniele Fontanelli (University of Trento, Italy)
David Macii (University of Trento, Italy)
Dario Petri (University of Trento, Italy)

Fast Multi-area Approach for Distribution System State Estimation
Carlo Muscas (University of Cagliari, Italy)
Paolo Attilio Pegoraro (University of Cagliari, Italy)
Sara Sulis (University of Cagliari, Italy)
Marco Pau (RWTH Aachen University, Germany
Ferdinanda Ponci (RWTH Aachen University, Germany)
Antonello Monti (RWTH Aachen University & Institute for Automation of Complex Power Systems, Germany)

Wednesday, May 25th

13:15 - 15:30
Measurement and Instrumentation for Industrial Applications and Processes 2
Room: 201E
Chairs: Georg Brasseur (Graz University of Technology, Austria), Zheng Liu (University of British Columbia Okanagan, Canada)

Experimental Investigations into the Use of Piezoelectric Film Transducers to Determine Particle Size through Impact Analysis
James Coombes (University of Kent, United Kingdom)
Yong Yan (University of Kent, United Kingdom)

Multi-sensor Data Fusion for Improved Measurement Accuracy in Injection Molding
Zhaoyan Fan (University of Connecticut, USA)
Robert X. Gao (Case Western Reserve University, USA)
Peng Wang (Case Western Reserve University, USA)
David Kazmer (University of Massachusetts, Lowell, USA)

Power Integration Based Dynamic Equilibrium Measurement and Control Device of Beam Pumping Unit
Zhao Huaijun (Xi'an University of Technology, P.R. China)
Zhang Yan (Xi'an University of Technology & School of Mechanical and Precision Instrument Engineering, P.R. China)
Zhu Lingjian (Xi'an University of Technology)
Qiu Zongming (Xi'an University of Technology, P.R. China)

Non-Contact Measurement of Circular Surfaces via Photometric Stereo in Polar Coordinates
Bernhard Radler (University of Leoben, Austria)
Matthew Harker (University of Leoben, Austria)
Paul O'Leary (University of Leoben, Austria)
Thomas Lucyshyn (University of Leoben, Austria)

Model Based Monitoring of Ice Accretion on Overhead Power Lines
Thomas Bretterklieber (Graz University of Technology, Austria
Markus Neumayer (Graz University of Technology, Austria
Matthias Flatscher (Graz University of Technology, Austria
Andreas Becke (Graz University of Technology, Austria
Georg Brasseur (Graz University of Technology, Austria)

13:15 - 15:30
Advances in Instrumentation and Measurement
Room: 201F
Chair: Weihua Li (South China University of Technology, P.R. China)

Sparse representation of gearbox compound fault features by combining Majorization-Minimization algorithm and wavelet bases
Chunyan Luo (Soochow University, P.R. China)
Changqing Shen (Soochow University, P.R. China)
Wei You (Soochow University, P.R. China)
Weiguo Huang (Soochow University, P.R. China)
GaiGai Cai (Soochow University, P.R. China)
Zhongkui Zhu (Soochow University, P.R. China)

Wednesday, May 25th

Induction Motor Fault Diagnosis Based on Ensemble Classifiers
Xueliang Yang (Southeast University, P.R. China)
Ruqiang Yan (Southeast University, P.R. China)
Robert X. Gao (Case Western Reserve University, USA)

Sparsity-Aware Tight Frame Learning for Rotary Machine Fault Diagnosis
Han Zhang (Xi'an Jiaotong University, P.R. China)
Xuefeng Chen (Xian Jiaotong University, P.R. China)
Zhaohui Du (Xi'an Jiaotong University, P.R. China)
Meng Ma (Xi'an Jiaotong University, P.R. China)
Xiaoli Zhang (Xian Jiaotong University, P.R. China)

Spline Cell-Based Hidden Markov Approach for Singular Time Series Forecasting in Performance Degradation Trend Analysis
Zhen Liu (University of Electronic Science and Technology of China, P.R. China)
Xianping Zeng (University of Electronic Science and Technology of China, P.R. China)
Yuhua Cheng (University of Electronic Science and Technology of China & School of Automation Engineering, P.R. China)
Sensen Song (University of Electronic Science and Technology of China, P.R. China)

Machine fault classification using deep belief networks
Zhuyun Chen (South China University of Technology, P.R. China)
Xueqiong Zeng (South China University of Technology, P.R. China)
Weihua Li (South China University of Technology, P.R. China)
Guanglan Liao (Huazhong University of Science and Technology, P.R. China)

13:30 - 15:30
Graduate Student Panel – "Finding your Niche"
Room: 202

15:30 - 18:30
Travel to Palace Museum & Tour
Buses Leave by 16:00 from TICC

19:00 – 21:30
Gala Dinner - Silk Palace

Thursday, May 26th

08:30 - 09:30
Plenary Talk: **Smart Living in the Age of Digital Connectivity: Trends, Technology and Applications**
Giuseppe Izzo (Regional Vice President and Taiwan General Manager, STMicroelectronics - Greater China and South Asia Region)
Room: 101CD
Chair: Salvatore Baglio (University of Catania, Italy)

09:30 - 12:00
Poster Session: Advances in Instrumentation and Measurement
Room: 101AB
Chairs: Francesco Picariello (University of Sannio, Italy), D M Gamage Preethichandra (Central Queensland University, Australia)

1: A High Precision Proton Magnetometer Based on a Multi-Channel Frequency Measurement
Huan Liu (China University of Geosciences, P.R. China)
Haobin Dong (China University of Geosciences, P.R. China)
Jian Ge (China University of Geosciences, P.R. China)
Bingjie Bai (China University of Geosciences, P.R. China)

2: Embedded FSS Sensing for Structural Health Monitoring of Bridge Columns
Dustin Pieper (Missouri University of Science and Technology, USA)
Omar Abdelkarim (Missouri University of Science and Technology, USA)
Mohamed ElGawady (Missouri University of Science and Technology, USA)
Kristen M Donnell (Missouri University of Science and Technology, USA)

3: A Simple Direct-Digitizer for Giant Magneto-Resistance Based Sensors
Santoshkumar Chavan (Indian Institute of Technology, Kharagpur, India)
Chandrika Sreekantan Anoop (Indian Institute of Technology Kharagpur, India)

4: Simplified algorithm of ionizing radiation detecting based on image sensor
Tai-Shan Liao (Instrument Technology Research Center, Taiwan)
Chih-Chung Chou (National Applied Research Laboratories, Taiwan)
Chi-Chieh Wu (iXENSOR, Inc, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)
Ya-Wen Tang (Instrument Technology Researcher Center, Taiwan)
Din Ping Tsai (Research Center for Applied Sciences, Academia Sinica, Taiwan)
Tzung Yuang Chen (National Tsing Hua University, Taiwan)

5: Effect of Applied Magnetic Field on Remote and Noninvasive Magnetic Nanothermometry
Le He (Huazhong University of Science and Technology, P.R. China)
Ming Yang (Huazhong University of Science and Technology, P.R. China)
Qingguo Xie (Huazhong University of Science and Technology, P.R. China)
Wenzhong Liu (Huazhong University of Science and Technology, P.R. China)

6: Fault Detection on Power Cables Based on Ultrasound Scans and 3rd Order Cumulants
Huixin Zhang (University of Manitoba, Canada)
Gabriel Thomas (University of Manitoba, Canada)
Arezoo Emadi (Royal Canadian Mint, Canada)
Nathan Jacob (Manitoba Hydro, Canada)

Thursday, May 26th

7: Radial Vibration Measurement of Rotary Shafts through Electrostatic Sensing and Hilbert-Huang Transform
Lijuan Wang (North China Electric Power University, P.R. China)
Yong Yan (University of Kent, United Kingdom)
Yonghui Hu (North China Electric Power University, P.R. China)
Xiangchen Qian (North China Electric Power University, P.R. China)

8: On-line Continuous Measurement of the Operating Deflection Shape of Power Transmission Belts through Electrostatic Sensing
Yonghui Hu (North China Electric Power University, P.R. China)
Lu Yang (North China Electric Power University, P.R. China)
Lijuan Wang (North China Electric Power University, P.R. China)
Xiangchen Qian (North China Electric Power University, P.R. China)
Yong Yan (University of Kent, United Kingdom)

9: Clamp Current Transformers for Noninvasive Calibration of Current Transformers
Karel Draxler (Czech Technical University in Prague, Czech Republic)
Jan Hlavacek (Czech Technical University in Prague, Czech Republic)
Radek Prochazka (Czech Technical University in Prague & Faculty of Electrical Engineering, Czech Republic)
Martin Knenicky (Czech Technical University in Prague, Czech Republic)
Renata Styblikova (Czech Metrology Institute, Czech Republic)

10: A simple calibration method to quantify the effects of head movements on vision-based eye-tracking systems
Stefano Cattini (University of Modena and Reggio Emilia & Science & Technology Park for Medicine, Mirandola, Modena, Italy)
Luigi Rovati (University of Modena and Reggio Emilia, Italy)

11: A Self-adapting Landweber Algorithm For The Inverse Problem Of Electrical Capacitance Tomography (ECT)
Hongli Hu (Xi'an Jiaotong University, P.R. China)
Xiao Liu (Xi'an Jiaotong University, P.R. China)
Xiaoxin Wang (Xi'an Jiaotong University, P.R. China)
Lin Li (Xi'an Jiaotong University, P.R. China)

12: Image Reconstruction Method of Electromagnetic Tomography Based on Finite Rate of Innovation
Guoxing Huang (Harbin Institute of Technology, P.R. China)
Ning Fu (Harbin Institute of Technology, P.R. China)
Jingchao Zhang (Harbin Institute of Technology, P.R. China)
Qiao Li-yan (Harbin Institute of Technology, P.R. China)

13: Rapid displacement sensor based on fitting scan
Zheng-Jie Ye (National Chiao Tung University, Taiwan)
Pi-Ying Cheng (National Chiao Tung University, Taiwan)
Chun-Jen Weng (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)
Chih-Yen Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)

Thursday, May 26th

14: Fiber-Pumped Yb Er:glass Microchip Laser for Coherent OTDR Sensing
Alexey Pniov (Bauman Moscow State Technical University, Russia)
Andrey A Zhirnov (Bauman Moscow State Technical University, Russia)
Dmitry Shelestov (Bauman Moscow State Technical University, Russia)
Valery Karasik (Bauman Moscow State Technical University, Russia)
Cesare Svelto (Politecnico di Milano, Italy)
Michele Norgia (Politecnico di Milano, Italy)
Alessandro Pesatori (Politecnico di Milano, Italy)
Gianluca Galzerano (Politecnico di Milano, Italy)
Paolo Laporta (Politecnico di Milano, Italy)

15: Evaluation of bulge failure status for power battery packs at high temperatures based on ERT
Xiaobin Hong (South China University of Technology, P.R. China)
Shuoman Xie (South China University of Technology, P.R. China)
Nianzhi Li (South China University of Technology, P.R. China)
Guojian Huang (Guangzhou Institute of Special Mechanical and Electrical Equipment Inspection, P.R. China)

16: Improving tightly-coupled model for indoor pedestrian navigation using foot-mounted IMU and UWB measurements
Yuan Xu (University of Jinan, P.R. China)
Xiyuan Chen (Southeast University, P.R. China)
Jin Cheng (University of Jinan, P.R. China)
Qinjun Zhao (University of Jinan, P.R. China)
Yimin Wang (University of Jinan, P.R. China)

17: Implementation and Performance Evaluation of a Distributed GNSS/SINS Ultra-Tightly Integrated Navigation System
Changhui Jiang (Nanjing University of Science and Technology, P.R. China)
Chen Shuai (Nanjing University of Science and Technology, P.R. China)
Jichun Shen (Nanjing University of Science and Technology, P.R. China)
Liu Yaling (Nanjing University of Science and Technology, P.R. China)

18: Far-infrared Pedestrians Detection Based on Adaptive Template Matching and Heterogeneous-Feature-Based Classification
Guohua Wang (South China University of Technology, P.R. China)
Qiong Liu (South China University of Technology, P.R. China)
Zheng Yongsen (Sun Yat-sen University, P.R. China)
Shaowu Peng (South China University of Technology, P.R. China)

19: Measurement of the IP Packet Delay Variation for a reliable estimation of the Mean Opinion Score in VoIP services
Leopoldo Angrisani (University of Naples Federico II, Italy)
Domenico Capriglione (University of Cassino and Southern Lazio, Italy)
Luigi Ferrigno (University of Cassino, Italy)
Gianfranco Miele (Pegaso Online University, Italy)

20: Distributed Measurement System for the Assesment of IEC 61850 Transfer Time in Smart Grid
Stefano Rinaldi (University of Brescia, Italy)
Paolo Ferrari (University of Brescia, Italy)
Alessandra Flammini (University of Brescia, Italy)
Matteo Loda (University of Brescia, Italy)
Mattia Rizzi (University of Brescia, Italy)

Thursday, May 26th

Poster Session: Energy, Power, Electrical and Magnetic measurements
Room: 101AB
Chairs: Bernardo Tellini (University of Pisa, Italy), Donyau Chiang (Instrument Technology Research Center, Taiwan)

21: A proposal for DSO bandwidth extension through synchronous time interleaving
Massimo D'Apuzzo (Università di Napoli Federico II, Italy)
Mauro D'Arco (University of Naples Federico II, Italy)
Michele Vadursi (University of Naples Parthenope, Italy)

22: Design of Near Probe High Precision Signal Acquisition Array Circuit for Three-Dimension Acoustic Logging Tool
Dong Ma (University of Electronic Science and Technology of China, P.R. China)
Yibing Shi (University of Electronic Science and Technology of China, P.R. China)
Wei Zhang (University of Electronic Science and Technology of China, P.R. China)
Qingwang Luo (University of Electronic Science and Technology of China, P.R. China)

23: Efficient low cost and easy testing methodology for analysis of wireless communication applied for IEDs
Fabiano Salvadori (Federal University of Paraiba - UFPB, Brazil)
Camila Gehrke (Federal University of Paraiba, Brazil)
Lucas Hartmann (Universidade Federal da Paraíba, Brazil)
Sérgio Maia and Alison de Lmia (Federal Institute of Education, Science and Technology, Brazil)
Euler Tavares Macedo (Federal University of Paraíba, Brazil)

24: Real-time Image Data Acquisition and Inspection System for Integrated Circuit Wafer after Sawing Process
Chun-Fu Lin (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Hong-Ren Fang (Institute of Electrical Control Engineering, National Chiao Tung University)
Jyh-Rou Sze (Instrument Technology Research Center-NARL, Taiwan)
Sheng-Fuu Lin (Institute of Electrical Control Engineering, National Chiao Tung University, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)

25: An Accurate and Efficient Sampling Algorithm for Capacitive Touch Panels
Humza Akhtar (Nanyang Technological University, Singapore)
Qian Kemao (Nanyang Technological University, Singapore)

26: Shielding Effectiveness of Multi-layered Cu and PET Thin Films from Electromagnetic Interference
Tatsuhiro Akiyama (Hosei University, Japan)
Miyu Sasaki (Hosei University, Japan)
Mitsuru Shinagawa (Hosei University, Japan)
Koichiro Tanaka (JX Nippon Mining & Metals Corporation, Japan)
Kenji Sato (JX Nippon Mining & Metals Corporation, Japan)
Toshiaki Asahi (JX Nippon Minig & Metals Corporation, Japan)

27: A Simple Circuit for Characterization of Photovoltaic Module Under Uniform Radiation and Shading Conditions
Rafael Medeiros (Federal University of Paraiba, Brazil)
José Maurício Ramos de Souza Neto (Federal University of Paraiba, Brazil)
Montie Vitorino (University of Campina Grande, Brazil)
Euler Tavares Macedo (Federal University of Paraíba, Brazil)
Lucas Hartmann (Universidade Federal da Paraíba, Brazil)

Thursday, May 26th

28: Solving the Initial Voltage of Settling in Switched-Capacitor Circuits
Jia Sun (Oulu University, Finland)

Poster Session: Image Processing and Computational Intelligence
Room: 101AB
Chair: Wu-Ja Lin (National Formosa University, Taiwan)

29: Classification with Fuzzy Hypermatrices
Annamária R. Várkonyi-Kóczy (Óbuda University, Hungary)
Balazs Tusor (Óbuda University & Integrated Intelligent Systems Japanese-Hungarian Laboratory, Hungary)
János Tóth (J. Selye University, Slovakia)

30: Adaptive contourlet-based image watermarking robust to geometric transformations and image compression
Lei Chen (University of Ottawa, Canada)
Jiying Zhao (University of Ottawa, Canada)

31: Automating Measurement of Renal Interstitial Fibrosis: Effect of Colour Spaces on Quantification
Wei Keat Tey (Monash University Malaysia, Malaysia)
Melanie Ooi (Heriot-Watt University, Malaysia)
Ye Chow Kuang (Monash University Malaysia, Malaysia)
Joon Joon Khoo (Monash University Malaysia, Malaysia)
Serge Demidenko (Massey University, New Zealand)

32: Biofilm monitoring of dissolved oxygen in wine aging barrel wood with optical chemical sensors
Jesus A Baro
Ignacio Nevares (Universidad de Valladolid, Spain)
María del Álamo Sanza (Universidad de Valladolid, Spain)
Josef Ehgartner (Graz University of Technology, Austria)
Torsten Mayr (Graz University of Technology, Austria)

33: Closed Interface Shape Characterization Methods Based on Wavelet Transform
Guanghui Liang (Tianjin University, P.R. China)
Shangjie Ren (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

34: Coin Recognition Based on Texture Classification on Ring and Fan Areas of The Coin Image
Wu-Ja Lin (National Formosa University, Taiwan)
Sin-sin Jhuo (National Formosa University, Taiwan)

35: Vegetation index determination method based on color Room processing for weed control applications in organic farming
Florian Johannes Knoll (West Coast University, Germany)
Tim Holtorf (West Coast University of Applied Sciences, Germany)
Stephan Hussmann (West Coast University of Applied Sciences, Germany)

Thursday, May 26th

36: Development of a Wireless Electrical Resistance Detector for Real-Time Particle Volume Fraction Measurement in Centrifuges
Tong Zhao (Xi`an University of Technology, P.R. China)
Fumiya Nagae (Chiba University, Japan)
Kazuya Okawa (Chiba University, Japan)
Yoshiyuki Iso (IHI Corporation, Japan)
Noriaki Ichijo (IHI Corporation, Japan)
Ryousuke Ikeda (IHI Corporation, Japan)
Masahiro Takei (Chiba University, Japan)

37: Detection of Fault Electrode In EIT For Two-Phase Flow
Min-Ho Jeon (Jeju National University, Korea)
Masahiro Takei (Chiba University, Japan)
Kyung Youn Kim (Jeju National University, Korea)

38: Sparse Electromagnetic Tomography Based on Matching Pursuit Algorithms
Yang Tao (The University of Manchester, United Kingdom)
Yifei Zhao (University of Manchester, United Kingdom)
Wuliang Yin (The University of Manchester, United Kingdom)
Christos Ktistis (University of Manchester, United Kingdom)
Anthony Peyton (University of Manchester, United Kingdom)

39: Application of twin-plane ECT sensor for identification of the internal imperfections inside concrete beams
Krzysztof Grudzien (Lodz University of Technology, Poland)
Zbigniew Chaniecki (Lodz University of Technology, Poland)
Andrzej Romanowski (Lodz University of Technology, Poland)
Maciej Niedostatkiewicz (Gdansk University of Technology, Poland)
Dominik Sankowski (Technical University of Lodz, Poland)
Jacek Nowakowski (Lodz University of Technology, Poland)

40: Notes on Applicability of the Impedance Spectroscopy for Characterization of Materials and Substances
Paul Annus (Tallinn University of Technology, Estonia)
Raul Land (Tallinn University of Technology, Estonia)
Marko Reidla (Tallinn University of Technology, Estonia)
Marek Rist (Tallinn University of Technology, Estonia)
Mart Min (Tallinn University of Technology, Estonia)

Poster Session: Industrial Applications
Room: 101AB
Chair: Ming Hua Shiao (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)

41: Application of a Double-cone Flowmeter for Parameters Measurement of Gas-liquid Two-Phase Flow
YaLi An (China Jiliang University, P.R. China)
Dailiang Xie (China Jiliang University, P.R. China)
Peng Xu (China Jiliang University, P.R. China)
Xia Li (Zhejiang University, P.R. China)
Shuo Wang (Academy of Metrology and Quality Inspection Chongqing, P.R. China)

42: Relative Reflectivity Uncertainty Evaluation for a Broadband Spectrophotometer System
Donyau Chiang (Instrument Technology Research Center, Taiwan)

Thursday, May 26th

43: Disturbance Observer for Estimation of Oxygen Uptake Rate in an Activated Sludge Reactor
Francisco Jadilson dos Santos Silva (Federal University of Rio Grande do Norte, Brazil)
Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil)
Carlos E T Dorea (UFRN, Brazil)
Euler Tavares Macedo (Federal University of Paraíba, Brazil)
Adrianus van Haandel (UFCG, Brazil)

44: Design of Critical Nozzles with Conical Inlet and Calibration Facility for Small Gas Flowrate
YiDan Xia (China Jiliang University, P.R. China)
Dailiang Xie (China Jiliang University, P.R. China)
ZhiPeng Xu (China Jiliang University, P.R. China)
Xia Li (Zhejiang University, P.R. China)
Shuo Wang (Academy of Metrology and Quality Inspection Chongqing, P.R. China)

45: Indirect material density measurement by a simple digital imaging method
Daniele Fulginiti (Politecnico di Torino, Italy)
Sabrina Grassini (Politecnico di Torino & Department of Applied Science and Technology, Italy)
Emma Paola Angelini (Politecnico di Torino, Italy)
Marco Parvis (Politecnico di Torino, Italy)

46: Sensors and Instrumentation to Measure SAP Flow in Small STEM Plants
David Morton (Massey University, New Zealand)
Hemant Ghayvat (Massey University, New Zealand)
Subhas Mukhopadhyay (Massey University, New Zealand)
Steev Green (Plant and Food Research Food Industry Science Centre, New Zealand)

47: Limitations in Implementing Wireless Clock Synchronization using the Timing Advertisement Approach from IEEE 802.11
Aneeq Mahmood (Donau University Krems, Austria)
Thilo Sauter (Danube University Krems & Vienna University of Technology, Austria)

48: An ECT/ERT Dual-modality System Based on An Internal Electrode Sensor
Benyuan Sun (Tianjin University, P.R. China)
Ziqiang Cui (Tianjin University, P.R. China)
Shihong Yue (Tianjin University, P.R. China)
Huaxiang Wang (Tianjin University, P.R. China)

49: A New Ultrasonic Flowmeter with Low Power Consumption for Small Pipeline Application
Weiguo Zhao (China Jiliang University, P.R. China)
Yanfu Jiang (China Jiliang University, P.R. China)
Chaochuan Huang (Zhejiang Cangnan Instrument Group, P.R. China)

50: Quality estimation of microlenses using a multi-channel optical coupling system
Min-Wei Hung (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Wen-Ning Chuang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Cheng-Ru Li (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Kuo-Cheng Huang (Instrument Technology Research Center, Taiwan)
Yu-Hsuan Lin (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)

Thursday, May 26th

51: Analysis of a Radio Physical Layer Fault in WirelessHART Networks
Ivan Müller (State University of Rio Grande do Sul)
Carlos E Pereira (Federal University of Rio Grande do Sul, Brazil)
João Cesar Netto (Universidade Federal do Rio Grande do Sul, Brazil)
Jean Michel Winter (Federal University of Rio Grande do Sul, Brazil)
Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil)
Fernando Sousa (Federal University of Rio Grande do Sul, Brazil)

52: An AOI System Development for Inspecting Defects on 6 Surfaces of Chips
Ming-Fu Chen (Instrument Technology Research Center, NARLabs, Taiwan)
Chih-Wen Chen (Instrument Technology Research Center, NARLabs, Taiwan)
Chih-Yen Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)

53: Microwave Synthetic Aperture Radar Imaging using sparse measurement
Xiahan Yang (Missouri University of Science and Technology)
Yahong Rosa Zheng, Mohammad Tayeb Ghasr and Kristen M Donnell (Missouri University of Science and Technology, USA)
Reza Zoughi (Missouri University of Science and Technoogy, USA)

54: Precision Rogowski Coil Construction based on the Partial Inductance Method
Mirko Marracci (University of Pisa, Italy)
Bernardo Tellini (University of Pisa, Italy)

55: Design & Evaluation of Hybrid Direct Digital Synthesis / Phase Locked Loop Frequency Synthesizer
D M Gamage Preethichandra (Central Queensland University, Australia)
Ben Sneath (CQU, Australia)

56: Gas Flow Measurement with Wide Range Using Multi-thermistors
Weiguo Zhao (China Jiliang University, P.R. China)
Haojie Zhou (China Jiliang University, P.R. China)
Shengyi Zhang (Company of Cangnan Instrument, P.R. China)

57: Development of precision angle measurement system
Chien-Yao Huang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Wei-Jei Peng (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Cheng-Fong Ho (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Jung-Hsing Wang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Jun-Cheng Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Aaron Wei-Yao Hsu (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Fong Zhi Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)

58: Development of an Online Measurement Apparatus for the Study of Stratified Flow in Near-Horizontal Pipes
Andrea Scozzari (CNR ISTI, Italy)
Paolo Andreussi (University of Pisa, Italy)
Daniele Picciaia (TEA Sistemi, Italy)

Thursday, May 26th

Poster Session: Sensors, Transducers, healthcare
Room: 101AB
Chair: Mirko Marracci (University of Pisa, Italy)

59: Jitter Measurement on Deep Waveforms with Constant Memory
Yanzhou Liu (University of Maryland, USA)
Lee A Barford (Keysight Laboratories, Keysight Technologies, Inc. & University of Nevada, USA)
Shuvra Bhattacharyya (University of Maryland, USA)

60: IoTI: Internet of Things Instruments Reconstruction Model Design
Zhijin Qiu (Ocean University of China, P.R. China)
Zhongwen Guo (Ocean University of China, P.R. China)
Shuai Guo (Ocean University of China, P.R. China)
Qiu Like (Ocean University of China, P.R. China)
Xi Wang (Ocean University of China, P.R. China)
Shiyong Liu (Qingdao Star Information Technology, P.R. China)
Chao Liu (Ocean University of China, P.R. China)

61: Platinum Growth Analysis in Atomic Layer Deposition using In-situ Resistance Measurement
Wen-Hao Cho (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chi-Chung Kei (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Bo-Heng Liu (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Yo-Shane Yu (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Fong-Zhi Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)

62: Moment-based Measurement Uncertainty Evaluation for Reliability Analysis in Design Optimization
Arvind Rajan (Monash University, Malaysia)
Ye Chow Kuang (Monash University Malaysia, Malaysia)
Melanie Ooi (Heriot-Watt University, Malaysia)
Serge Demidenko (Massey University, New Zealand)

63: A set of indicators for arc faults detection based on low frequency harmonic analysis
Giovanni Artale (Università di Palermo, Italy)
Antonio Cataliotti (University of Palermo, Italy)
Valentina Cosentino (Università di Palermo, Italy)
Salvatore Nuccio (University of Palermo, Italy)
Dario Di Cara (National Research Council, Institute of Intelligent System for Automation, Italy)
Giovanni Tinè (National Research Council, Italy)
Giuseppe Privitera (STMicroelectronics, Italy)

Thursday, May 26th

64: Inferring Trimming Activity of Solid-State Drives Based on Energy Consumption
James Shey (United States Naval Academy, USA)
Ryan Rakvic (United States Naval Academy, USA)
Hau Ngo (United States Naval Academy, USA)
Owens Walker (United States Naval Academy, USA)
Thomas Tedesso (United States Naval Academy, USA)
Justin Blanco (United States Naval Academyi, USA)
Kevin D. Fairbanks (United States Naval Academy, USA)

65: A FPGA-Based Multi-Frequency Current Source for Biological EIT System
Xianding Yang (Tianjin University, P.R. China)
Yanbin Xu (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

66: A Health Monitoring System Using Multiple Non-Contact ECG Sensors for Automotive Drivers
Rahul Kumar Singh (Third year Undergraduate Student, IIT Kharagpur & IIT Kharagpur, India)
Archisman Sarkar (B-410, Patel Hall, Indian Institute of Technology Kharagpur & IIT KGP, India)
Santoshkumar Chavan (Indian Institute of Technology, Kharagpur, India)
Chandrika Sreekantan Anoop (Indian Institute of Technology Kharagpur, India)

67: Characterization of Measurements from Pressure Sensitive Mats Using an Anthropomorphic Body Model
Madison Cohen-McFarlane (Carleton University, Canada)
James R Green (Carleton University, Canada)
Rafik Goubran (Carleton University, Canada)
Frank Knoefel (Bruyere Continuing Care, Canada)

68: Human Physical Activity Recognition Based on Computer Vision with Deep Learning model
Lingfei Mo (Southeast University, P.R. China)
Fan Li (Southeast University, P.R. China)
Yanjia Zhu (Southeast University, P.R. China)
Anjie Huang (Southeast University, P.R. China)

69: Development of fNIRS-EEG based Brain Activation Energy Monitor System
Ya-Wen Tang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Yue-Der Lin (Feng Chia University, Taiwan)

70: Measurement of wheelChair users' calorie consumption to develop a wheelChair activity device
Yoshio Tanimoto (Kibikogen Rehabilitation Center, Japan)
Kuniharu Nanba (Kibikogen Rehabilitation Center, Japan)
Kazunari Furusawa (Kibikogen Rehabilitation Center, Japan)
Akihiro Tokuhiro (Kibikogen Rehabilitation Center, Japan)
Hideki Yamamoto (Kibikogen Rehabilitation Center, Japan)
Hiroyuki Ukida (The University of Tokushima, Japan)

Thursday, May 26th

71: Level-Crossing ADC Modeling for Wireless Electrocardiogram Signal Acquisition System
Mariam Tlili (GRESCOM Research Lab., SUP'COM, University of Carthage & IMS Research Lab., University of Bordeaux, Bordeaux INP ENSEIRB-MATMECA, Tunisia)
Asma Maalej (SUPCOM, Tunisia)
Manel Ben-Romdhane (Sup'Com, Tunisia)
Mohamed Chaker Bali (GRESCOM Research Laboratory, SUPCOM, University of Carthage, Tunisia)
Francois Rivet (University of Bordeaux, France)
Dominique Dallet (IMS Laboratory - University Bordeaux, France)
Chiheb Rebai (Ecole Superieure des Communications de Tunis (SUP'COM), Tunisia)

72: Non-Uniform Sampling Photoacoustic Microscope System Based on Low Rank Matrix Completion
Ting Liu (Harbin Institute of Technology, P.R. China)
Mingjian Sun (Harbin Institute of Technology, P.R. China)
Naizhang Feng (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Wenlei Pan (Harbin Institute of Technology, P.R. China)
Miao Zhang (Harbin Institute of Technology, P.R. China)

73: Characterization of the Complex Permittivity of Glucose/Water Solutions for Noninvasive
RF/Microwave Blood Glucose Sensing
Volkan Turgul (University of Westminster, United Kingdom)
Izzet Kale (University of Westminster, United Kingdom)

74: Food Calorie Measurement Using Deep Learning Neural Network
Parisa Pouladzadeh (University of Ottawa, Canada)

75: An Angular Acceleration Estimation Method Based on the Complementary Filter Theory
Jiali Yang (Tsinghua University, P.R. China)
Jihong Zhu (Tsinghua University, P.R. China)

76: A self-powered wireless sensor node in a mesh network topology for air quality measurements
Alessio Galli (Qatar University, Qatar)
Damiano Crescini (University of Brescia, Italy)
Farid Touati (Qatar University, Qatar)
Paolo Crescini (University of Brescia, Italy)
Adel Ben Mnaouer (Canadian University of Dubai & School of Engineering, Applied Sciences and Technology, UAE)
Davide Alghisi (University of Brescia, Italy)

77: NUI Therapeutic Serious Games with Metrics Validation based on Wearable Devices
Vítor Viegas (Polytechnic Institute of Setubal & SetUbal School of Technology, Portugal)
Octavian Adrian Postolache (Instituto de Telecomunicações, Lisboa/IT & Instituto Universitario de Lisboa, ISCTE-IUL, Portugal)
Jose Costa Pereira (ESTSetúbal, Portugal)
Pedro M. B. Silva Girão (Instituto Superior Técnico, Portugal)

10:30 - 11:00
Coffee Break
Room: 101AB

Thursday, May 26th

12:00 - 13:00
Lunch
Room: VIP Room (4th Floor)

13:00 - 15:10
SPECIAL SESSION: Impedance Spectroscopy for Measurement and Sensor Solutions
Room: 201A
Chair: Olfa Kanoun (Chemnitz University of Technology, Germany)

Impedance Based Nanocrystalline Silicon Oxide Immunosensor Electronic Tongue for Ultrasensitive and Low Cost Multiple Food Toxin Detection
Hrilina Ghosh (Indian Institute of Engineering Science and Technology (IIEST) Shibpur, India)
Rahul Das (Indian Institute of Engineering Science and Technology (IIEST) Shibpur, India)
Chirasree RoyChaudhuri (Indian Institute of Engineering Science and Technology (IIEST) Shibpur)

A Comparative Analysis between Genetic Algorithms and Complex Nonlinear Least Squares on Electrical Impedance Characterization
Fernando M. Janeiro (IT Lisbon / UE, Portugal)
Pedro M. Ramos (Instituto de Telecomunicações, Instituto Superior Técnico & Universidade de Lisboa, Portugal)

Vector Fitting based Automatic Circuit Identification
Pedro M. Ramos (Instituto de Telecomunicações, Instituto Superior Técnico & Universidade de Lisboa, Portugal)
Fernando M. Janeiro (IT Lisbon / UE, Portugal)

Practical Nitrate Sensor Based on Electrochemical Impedance Measurement
Md Eshrat E Alahi (Massey University, New Zealand)
Li Xie (Massey University & Palmerston North, New Zealand)
Asif Iqbal Zia (Massey University & COMSATS Institute of Information Technology, New Zealand)
Subhas Mukhopadhyay (Massey University, New Zealand)
Lucy Burkitt (Massey University, New Zealand)

Comparison of Excitation Signals and Methods for a Wideband Bioimpedance Measurement
Jaan Ojarand (Competence Centre ELIKO & Tallinn University of Technology, Estonia)
Marek Rist (Tallinn University of Technology, Estonia)
Mart Min (Tallinn University of Technology, Estonia)

13:00 - 15:10
Advances in Instrumentation and Measurement Developments and Techniques 2
Room: 201B
Chair: Sergio Rapuano (University of Sannio, Italy)

Comparisons of Algorithms for Broadband Continuous Extraction of Complex Propagation Constant Involved in Various Microwave Measurements
Kuen-Fwu Fuh (National United University, Taiwan)
Kuan-Yu Chen (National Nano Device Laboratories, Taiwan)

Thursday, May 26th

Design of an Intelligent Electronic Device Based on TivaC Platform for Smart Grid Applications
Fabiano Salvadori (Federal University of Paraiba - UFPB, Brazil)
Camila Gehrke (Federal University of Paraiba, Brazil)
Lucas Hartmann (Universidade Federal da Paraíba, Brazil)
Alison de Lmia (Federal Institute of Education, Science and Technology, Brazil)
Sérgio Maia (Federal Institute of Education, Science and Technology, Brazil)
Euler Tavares Macedo (Federal University of Paraíba, Brazil)

A Crosstalk-Resilient Method for Time-of-Arrival Measurement
Guido De Angelis (Regione Umbria, Italy)
Alessio De Angelis (University of Perugia, Italy)
Antonio Moschitta (University of Perugia, Italy)
Paolo Carbone (University of Perugia, Italy)

Indoor Positional Tracking Using Dual-Axis Rotating Laser Sweeps
Shahidul Islam (Mgestyk Technologies, Canada)
Bogdan Ionescu (University of Ottawa, Canada)
Cristian Gadea (University of Ottawa, Canada)
Dan Ionescu (University of Ottawa, Canada)

A method for real-time compensation of magnetometers embedded on smartphones
Pasquale Daponte (University of Sannio, Italy)
Luca De Vito (University of Sannio, Italy)
Francesco Picariello (University of Sannio, Italy)
Sergio Rapuano (University of Sannio, Italy)
Carmine Sementa (University of Sannio, Italy)

13:00 - 15:10
Instrumentation and Measurement for Medical, Biomedical, and Healthcare Systems 2
Room: 201C
Chairs: Paul Annus (Tallinn University of Technology, Estonia), Kurt Barbé (VUB, Belgium)

Photonic sensor design evaluation for measuring the photoplethysmogram
Abu Naim Rakib Ahmed (Vrije University of Brussels, Belgium)
Kurt Barbé (VUB, Belgium)
Heidi Ottevaere (Vrije Universiteit Brussel, Belgium)

New Method for Accurate Prediction of CO2 in the Smart Home
Jan Vanus (VSB - Technical University of Ostrava, Czech Republic)
Radek Martinek (VSB - Technical University of Ostrava & Faculty of Electrical Engineering and Computer Science, Czech Republic)
Pavel Dohnalek (VSB-TU Ostrava, FEECS, Czech Republic)
Petr Gajdos (VSB-TU Ostrava, FEECS, Czech Republic)
Petr Bilik (VSB - Technical University Ostrava, P.R. China)
Jan Zidek (VSB - Technical University of Ostrava, Czech Republic)

Thursday, May 26th

Measuring haemolysis in haemodialysis: comparison between a new and existing data processing algorithms
Stefano Cattini (University of Modena and Reggio Emilia & Science & Technology Park for Medicine, Mirandola, Modena, Italy)
Luigi Rovati (University of Modena and Reggio Emilia, Italy)

Near-infrared spectroscopy for non-invasive monitoring of drugs blood-brain barrier penetration
Luigi Rovati (University of Modena and Reggio Emilia, Italy)
Stefano Cattini (University of Modena and Reggio Emilia & Science & Technology Park for Medicine, Mirandola, Modena, Italy)
Francesco Crespi (Glaxo, Italy)

13:00 - 15:10
Energy and Power Systems 2
Room: 201D
Chair: Carmine Landi (Second University of Naples, Italy)

Smart Meter Systems for Smart Grid management
Fabio Clarizia (Second University of Naples, Italy)
Daniele Gallo (Second University of Naples, Italy)
Carmine Landi (Second University of Naples, Italy)
Mario Luiso (Second University of Naples, Italy)
Raffaele Rinaldi (Second University of Naples, Italy)

Impact of Sampling Interval on the Accuracy of Estimating the Amount of Solar Energy
Christian Schuss (University of Oulu, Finland)
Bernd Eichberger (Graz University of Technology, Austria)
Timo Rahkonen (University of Oulu, Finland)

Specifying measurements' rates for monitoring of dynamic distribution grids
Andrea Angioni (RWTH Aachen University, Germany)
Igor Demchuk (RWTH University Aachen)
Ferdinanda Ponci (RWTH Aachen University, Germany)
Antonello Monti (RWTH Aachen University & Institute for Automation of Complex Power Systems, Germany)

EV-Based Voltage Regulation in Line Distribution Grid
Xinxin Wu (University of Electronic Science and Technology of China, P.R. China)
Liying Li (University of Electronic Science and Technology of China, P.R. China)
Jianxiao Zou (University of Electronic Science and Technology of China, P.R. China)
Gang Zhang (University of Electronic Science and Technology of China, P.R. China)

Experimental Comparison of MPPT Algorithms
Loredana Cristaldi, Marco Faifer, Christian Laurano, Roberto Ottoboni and Sergio Toscani (Politecnico di Milano, Italy)

Thursday, May 26th

13:00 - 15:10
Non-invasive Measurement Techniques and Instrumentation 2
Room: 201E
Chairs: Sergey Kharkovsky (University of Western Sydney & UWS, Australia), Marco Parvis (Politecnico di Torino, Italy)

A Model-Based Transit-Time Ultrasonic Gas Flowrate Measurement Method
Yandan Jiang (Zhejiang University, P.R. China)
Baoliang Wang (Zhejiang University, P.R. China)
Zhiyao Huang (Zhejiang University, P.R. China)
Haifeng Ji (Zhejiang University, P.R. China)
Haiqing Li (Zhejiang University, P.R. China)
Xia Li (Chongqing Academy of Metrology and Quality Inspection, P.R. China)

Noninvasive Glucose Evaluation by Human Skin Oxygen Saturation Level
Tzu-Ting Wei (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Hsin-Yi Tsai (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Ching-Ching Yang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Wen-Tse Hsiao (Instrument Technology Research Center, Taiwan)
Kuo-Cheng Huang (Instrument Technology Research Center, Taiwan)

Level Set Based Image Segmentation for Oil Film Monitoring Using ECT
Qian Xue (Civil Aviation University of China)
Min Ma (Civil Aviation University of China, P.R. China)
Wenru Fan (Tianjin University, P.R. China)
Benyuan Sun (Tianjin University, P.R. China)
Ziqiang Cui (Tianjin University, P.R. China)
Huaxiang Wang (Tianjin University, P.R. China)

Sensors and Instrumentation towards early detection of Osteoporosis
Nasrin Afsarimanesh (Massey University, Palmerston North, New Zealand)
Subhas Mukhopadhyay (Massey University, New Zealand)
Pak Yu (Massey University, New Zealand)
Jürgen Kosel (King Abdullah University of Science and Technology, Saudi Arabia)

Front-End Circuit Modeling for Low-Z Capacitance Measurement Applications
Matthias Flatscher (Graz University of Technology, Austria)
Markus Neumayer (Graz University of Technology, Austria)
Thomas Bretterklieber (Graz University of Technology, Austria)
Hannes Wegleiter (Graz University of Technology, Austria)

13:00 - 15:10
Industrial applications 1
Room: 201F
Chairs: Marco Faifer (Politecnico di Milano, Italy), Stefano Rinaldi (University of Brescia, Italy)

A Multisensor Fusion and Integration System Design and its Application
Feng Ding (CRIQ & Machine Design and Productivity, Canada)
Philippe Gagné (CRIQ, Canada)
Hubert Talbot (CRIQ, Canada)
Claude Lejeune (CRIQ, Canada)

Thursday, May 26th

An Online Weld Seam Tracking Sensor Based on Laser Vision for Friction Stir Welding
Li Wu, Xiang Li, Xiaobo Chen and Juntong Xi (Shanghai Jiao Tong University, P.R. China)
Huade Zhang (Shanghai Aerospace Equipment Manufacturing Factory, P.R. China)

Localization of Passive UHF RFID Tags on Assembly Line Based on Phase Difference
Chenyang Li (Southeast University, P.R. China)
Lingfei Mo (Southeast University, P.R. China)
XiuJuan Xie (Chengxian College, P.R. China)

Measurement and Standardization for Emerging Photovoltaic
Shu-Tsung Hsu (ITRI, Taiwan)
Yean-San Long (ITRI, Taiwan)
Teng-Chun Wu (ITRI, Taiwan)

Traceability of High Voltage Power Measurements Under Difficult Operating Conditions
Eddy So (National Research Council of Canada, Canada)
Farnoosh Rahmatian (NuGrid Power Corporation, Canada)

15:10 - 15:30
Coffee Break
Room: 101AB

15:30 - 17:40
Image Processing and Computational Intelligence Techniques 2
Room: 201A
Chair: Maurizio Bevilacqua (Cranfield University, United Kingdom)

A new range image generation method based on mathematical morphology for complicated polyhedron in 3D space
Deming Kong (Yanshan University, P.R. China)
Xiaoyu Chen (Yanshan University, P.R. China)

Egomotion estimation for monocular camera visual odometer
Maurizio Bevilacqua (Cranfield University, United Kingdom)
A. Starr (Cranfield University, United Kingdom)
Antonios Tsourdos (Cranfield University, United Kingdom)

Geometric Calibration of Focused Light Field Camera For 3-D Flame Temperature Measurement
Jun Sun (Southeast University, P.R. China)
Chuanlong Xu (Southeast University, P.R. China)
Md. Moinul Hossain (University of Strathclyde & IEEE, IET Member, United Kingdom)
Biao Zhang (Southeast University, P.R. China)
Shimin Wang (Southeast University, P.R. China)
Hong Qi (Harbin Institute of Technology, P.R. China)
Heping Tan (Harbin Institute of Technology, P.R. China)

A Joint Dictionary-Based Method for Single Image Super-Resolution
Jun Hu (University of Ottawa, Canada)
Jiying Zhao (University of Ottawa, Canada)

Thursday, May 26th

Measurement of coal particle combustion behaviors in a drop tube furnace through high-speed imaging
Xiaojing Bai (North China Electric Power University, P.R. China)
Gang Lu (University of Kent, United Kingdom)
Tom Bennet (University of Nottingham, United Kingdom)
Yizhun Peng (Tianjin University of Science and Technology, P.R. China)
Hao Liu (University of Nottingham, United Kingdom)
Carol Eastwick (University of Nottingham, United Kingdom)
Yong Yan (University of Kent, United Kingdom)

15:30 - 17:40
SPECIAL SESSION: Advanced Measurement and Instrumentation for NDT&E
Room: 201B
Chair: Sergey Kharkovsky (University of Western Sydney & UWS, Australia)

Detection of the crack by reducing the influence of the magnetic domain based on the MOI
Lulu Tian (University of Electronic Science and Technology of China, P.R. China)
Yuhua Cheng (University of Electronic Science and Technology of China & School of Automation Engineering, P.R. China)
Chun Yin (University of Electronic Science and Technology of China & School of Automation Engineering, P.R. China)
Yongzhao Xia (University of Electronic Science and Technology of China, P.R. China)
Yiyun Huang (University of Electronic Science and Technology of China, P.R. China)
Libing Bai (University of Electronic Science and Technology of China, P.R. China)

Fault Diagnosis of Wind Turbine using Local Mean Decomposition and Synchrosqueezing Transforms
Yanjie Guo (Xi'an Jiaotong University, P.R. China)
Xuefeng Chen (Xian Jiaotong University, P.R. China)
Shibin Wang (The State Key Laboratory for Manufacturing Systems Engineering, Xi'an Jiaotong University, P.R. China)
Xiang Li (Xi'an Jiaotong University, P.R. China)
Ruonan Liu (Xi'an Jiaotong University, P.R. China)

Fault Diagnosis from Visualization Perspective Using Stream Statistics
Ang Yang (Xi'an Jiaotong University, P.R. China)
Yu Wang (Xi'an Jiaotong University, P.R. China)
Yanyang Zi (Xi'an Jiaotong University, P.R. China)
Jinglong Chen (Xi'an Jiaotong University, P.R. China)
Jun Pan (Xi'an Jiaotong University, P.R. China)
Yusheng Liu (China Petroleum Pipeline Engineering Corporation, P.R. China)

Application of Variational Mode Decomposition Based Demodulation Analysis in Gearbox Fault Diagnosis
Dong Zhang (School of Mechanical Engineering, University of Science and Technology Beijing, P.R. China)
Zhipeng Feng (University of Science and Technology Beijing, P.R. China)

A Replica Consistency Detection Method for Text Images Based On Multi-Feature Assessment
Qianli Zhong (University of Electronic Science and Technology of China(UESTC), P.R. China)
Jiasheng Hao (University of Electronic Science and Technology of China (UESTC), P.R. China)
Lu Yang (University of Electronic Science and Technology of China (UESTC), P.R. China)
Yuanzhe Yao (University of Electronic Science and Technology of China(UESTC), P.R. China)

Thursday, May 26th

15:30 - 17:40
Sensors, Actuators, Transducers, and Sensor Fusion 2
Room: 201C
Chairs: Bruno Andò (University of Catania, Italy), Boby George (Indian Institute of Technology Madras, India)

Transfer Function of Fluidic System in Liquid-Circular Angular Accelerometer
Siyuan Cheng (School of Automation, Beijing Institute of Technology, P.R. China)
Meng-Yin Fu (Beijing Institute of Technology, P.R. China)
Meiling Wang (Beijing Institute of Technology, P.R. China)
Xin Zheng (The third Academic of Aerospace and Technology Group of China, P.R. China)
Xiang Li (School of Automation, Beijing Institute of Technology, P.R. China)
Meifeng Xiao (School of Automation, Beijing Institute of Technology, P.R. China)

Solution-processed finger-type organic proximity sensor with high displacement resolution
Jung-Sung Liao, Kuan-Hsun Wang, Hsiao-Wen Zan and Hsin-Fei Meng (National Chiao Tung University, Taiwan)
Ping-Hung Yeh (Tamkang University, Taiwan)
Chuang-Chuang Tsai (National Chiao Tung University, Taiwan)
Wilfried Hortschitz (Danube University Krems, Austria)
Harald Steiner (Center for Integrated Sensor Systems, Austria)
Thilo Sauter (Danube University Krems, Austria)

Micro Droplet Generated by Dual-Differential Piezoelectric Ejection for Powder-Based 3D Printer
Cheng-Ru Li (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Hsin-Yi Tsai (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Wen-Ning Chuang (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Min-Wei Hung (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Kuo-Cheng Huang (Instrument Technology Research Center, Taiwan)

Mode Filter for LED-Based Absorption Spectroscopy
Marian Rabe (University of Rostock, Germany)
Hendrik Krüger (University of Rostock, Germany)
Eric Ebert (University Rostock & Universität Rostock, Germany)
Nils Damaschke (University of Rostock, Germany)
Hartmut Ewald (University of Rostock, Germany)

Tuning the Fabrication Parameters of Multi-walled Carbon Nanotubes-Epoxy based Flexible Strain Sensitive Composites
Abdulkadir Sanli (Technische Universität Chemnitz, Germany)
Jyothi Jennifer Kurian (Technische Universität Chemnitz, Germany)
Müller Christian (Technische Universität Chemnitz, Germany)
Olfa Kanoun (Chemnitz University of Technology, Germany)

Thursday, May 26th

15:30 - 17:40
Measurement of Electric and Magnetic Quantities
Room: 201D
Chair: Euler Tavares Macedo (Federal University of Paraíba, Brazil)

The Optic-Voltage Measurement System Based on the Ground Potential Crystal Compensation
ZeXing Dong (Huazhong University of Science and Technology, P.R. China)
Xia Xiao (Huazhong University of Science and Technology, P.R. China)
Yan Xu (Huazhong University of Science and Technology, P.R. China)
Yu Zhang (Huazhong University of Science and Technology, P.R. China)

Sine-wave parameter estimation in the shortened measurement time using DC DFT coefficient
Dušan Agrež (University of Ljubljana, Slovenia)

Characteristic estimation of High Voltage Transmission Line conductors with simultaneous Magnetic Field and Current measurements
Arsalan Habib Khawaja (University of Electronic Science and Technology of China, P.R. China)
Qi Huang (University of Electronic Science and Technology of China, Hong Kong)

Measurement of Ground-level Charge Density Under a HVDC Conductor with Presence of Fine Particles
Zhilong Zou (North China Electric Power University, P.R. China)
Yong Ju (North China Electric Power University, P.R. China)
Xu Zhang (North China Electric Power University, P.R. China)
Xiang Cui (North China Electric Power University, P.R. China)
Tiebing Lu (North China Electric Power University, P.R. China)

15:30 - 17:40
Signal Processing Techniques
Room: 201E
Chairs: Kurt Barbé (VUB, Belgium)

A Magnetic Ranging Aided Dead-Reckoning Indoor Positioning System for Pedestrian Applications
Valter Pasku (University of Perugia, Italy)
Alessio De Angelis (University of Perugia, Italy)
Antonio Moschitta (University of Perugia, Italy)
Paolo Carbone (University of Perugia, Italy)
John-Olof Nilsson (Royal Institute of Technology, Sweden)
Satyam Dwivedi (KTH Royal Institute of Technology, Sweden)
Peter Händel (Royal Institute of Technology, Sweden)

Construction of optimal dual-tree complex wavelet for bonding quality detection of explosive composite structure
Yue Si (Xi'an Jiaotong University, P.R. China)
Zhousuo Zhang (Xi'an Jiaotong Universit, P.R. China)

Electric Differential Control for Electric Vehicles Based on EMD Method
Yiming Cui (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Xin Zhang (Harbin Institute of Technology, P.R. China)
Yan Wang (Harbin Institute of Technology, P.R. China)
Miao Zhang (Harbin Institute of Technology, P.R. China)

Thursday, May 26th

State of Charge Estimation of a LiFePO4 Battery: A Dual Estimation Approach Incorporating Open Circuit Voltage Hysteresis
Thomas Gallien (Graz University of Technology, Austria)
Georg Brasseur (Graz University of Technology, Austria)

An ARMA time series approach for analyzing long memory dynamics in measurements
Kurt Barbé (VUB, Belgium)

15:30 - 17:40
Industrial applications 2
Room: 201F
Chair: Octavian Adrian Postolache (Instituto de Telecomunicações, Lisboa/IT & Instituto Universitario de Lisboa, ISCTE-IUL, Portugal)

FTIR In-situ Growth Process Monitoring of MOCVD Epitaxial System
Yung-Hsiang Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Wei-Chun Chen (Instrument Technology Research Center, Taiwan)
Hung-Pin Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chien-Nan Hsiao (Instrument Technology Research Center, Taiwan)
Fong-Zhi Chen (Instrument Technology Research Center, National Applied Research Laboratories, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)
Chin-Ming Chug (Hsintek Optical Instrument Corporation, Taiwan)

Detection of Ice on Power Cables Based on Image Texture Features
Binglin Li (University of Manitoba, Canada)
Gabriel Thomas (University of Manitoba, Canada)
Dexter Williams (Manitoba Hydro International, Canada)

Measuring Depth Profile of Ion Implanted Silicon Wafers by Multi-Wavelength Raman Spectroscopy
C. Lien (Center for Measurement Standards, Industrial Technology Research Institute, Taiwan)
Cho Fan Hsieh (Industrial Technology Research Institute, Taiwan)
Hung-Sen Wu (CMS/ITRI, Taiwan)
Teng-Chun Wu (ITRI, Taiwan)

A Stereoscopic Rig for Speed Enforcement
Aleksej Makarov (Vlatacom & University of Oxford, Serbia)
Vojislav Lukić Vlatacom, Serbia)
Saša Vujić (Vlatacom, Serbia)
Bhaskar Choubey (University of Oxford, United Kingdom)

Surface Profile from Focus with Different Image Filters
Ming-Hsing Shen (Chungli Factory I & Delta, Taiwan)
Wei-Chung Wang (Department of Power Mechanical Engineering, National Tsing Hua University, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)

17:40 – 17:55
Closing Session