

I2MTC 2019

The IEEE I2MTC—International Instrumentation and Measurement Technology Conference—is the flagship conference of the IEEE Instrumentation and Measurement Society (IMS) and is dedicated to advances in measurement methodologies, measurement systems, instrumentation, and sensors in all areas of science and technology. I2MTC acts as a catalyst to promote interactions between industry and academia. These features make I2MTC a unique event and one of the most important conferences in the field of instrumentation and measurement. A wide spectrum of research results was presented, with potential practical applications in current industrial technology, as well as industry and application driven developments. There were 413 delegates from all over the world who participated in the 2019 conference, making it the largest ever conference in Australasia in the field of instrumentation and measurement. It was also the first time ever that this conference was held in Australasia!

The Venue

This year's conference was held at the Grand Millennium Hotel in Auckland, New Zealand, from 20 to 23 May 2019. Auckland is the 'financial capital' and the largest city of New Zealand. One-third of the nation's population lives here. It is a vibrant global city with top class educational and research establishments, advanced industries, modern architectures, as well as diverse mix of cultures, landscapes and tastes. Nestled between two harbors, Auckland is an amazing place of bays, beaches, islands, and vineyards. Auckland boasts strong Polynesian traditions and is alive with cultural and ethnic diversity.

2019 Theme

The 2019 I2MTC theme was *The Lords of the IMS: Expanding the Frontiers of Metrology Innovations*. It was not a sheer coincidence that Monday, May 20, 2019 was also the World Metrology Day, commemorating the anniversary of the signing of the Meter Convention in 1875!

The Technical Program

I2MTC 2019 drew enormous interest worldwide. 573 papers were submitted for the conference which went through the full review process. The highest number of papers were received

from China (248) followed by Italy (49) and New Zealand (30). The review process is designed to ensure high quality of accepted papers. To minimize the burden on authors, we continued the approach of having only three possible outcomes of the review: accept, minor revision, or reject. At the end of this process, 330 papers were accepted for presentation at I2MTC 2019, leading to an acceptance rate of 61.2%. A special thanks to all of the authors for choosing I2MTC to receive their high-quality papers, and to all the reviewers for their hard work and dedication to evaluate the papers and provide valuable comments.

Papers were presented in five parallel oral tracks and poster sessions. New horizons were explored through the topics selected for the main tracks, complemented by special sessions, tutorials and plenary talks. Apart from the traditional fields of measurement and instrumentation, such as measurement theory, data acquisition and metrology, there were tracks on hot topics such as agriculture and forestry, environment, energy and power. I2MTC 2019 also featured poster presentation of 21 accepted TIM papers and 13 accepted late-results papers.

Our Technical Program Co-Chairs, Prof. Vincenzo Piuri, Prof. Andrew Taberner, and Prof. Melanie Ooi, did a stellar job of putting together a very strong technical program. We would like to thank them from the core of our hearts. Their job was one of the hardest and most challenging. Each paper had to be allocated to reviewers, the received review reports analyzed, decisions made, and then the final fine-tuned program put together.

Special Sessions and Mini-Symposium

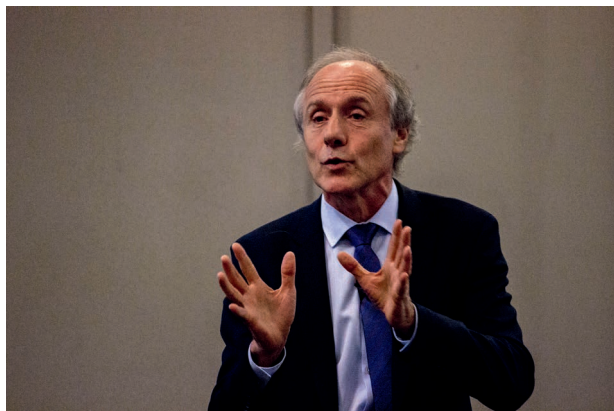
Traditionally, the special sessions allow in-depth discussions on niche topics. The Special Sessions Co-Chairs, Prof. Adam Osseiran, Dr. Ian Platt, and Prof. Kurt Barbé, coordinated the process of soliciting special session proposals and evaluating them through a rigorous process. There were nine special sessions in the conference program on topics ranging from NDT&E of structural health to power quality measurement and biological instrumentation. It is very heartening to note that the Technical Committees (TC) of the IMS played a very active role in proposing and organizing several of the sessions.

The theme for the World Metrology Day 2019 was *The International System of Units - Fundamentally Better*. In keeping with

this theme, the Measurement Standards Laboratory (MSL) of New Zealand organized a mini symposium on *SI for the 21st Century*. There were four presentations in this symposium including one by Dr. Lindsey Mackay of the National Measurement Institute, Australia. We would like to thank Dr. Farzana Masouleh and her colleagues at MSL for organizing the symposium. Special thanks to MSL also for sponsoring a keynote speaker.

The Keynote Presentations

We were very lucky to have three eminent scientists who graciously accepted to deliver keynote addresses during the conference. We would like to extend our sincere thanks and gratitude to all of the keynote speakers for sparing their valuable time to address the delegates. Dr. Alan Finkel, Chief Scientist of Australia, delivered a talk on *The Measure of an Incurable Engineer*, Dr. Michael de Podesta, from the NPL Temperature and Humidity Group, UK, talked about *Redefining the Kilogram, the Kelvin, the Ampere and the Mole: Why You Should Care Even Though You Won't Notice*, and Prof. Cather Simpson from the University of Auckland's Physics and Chemistry Department delivered her presentation on the topic of *Photonics*



Dr. Alan Finkel delivering a keynote address.



Dr. Michael de Podesta delivering a keynote address.

Transforming 21st Century Sensing. We would also like to extend our sincere thanks to Prof. Juliet Gerrard, Chief Science Advisor to the Prime Minister of New Zealand, who kindly agreed to grace the opening ceremony as the chief guest of honor. All of the keynote presentations were very well attended, and the feedback to all of the speakers was excellent.

The Tutorials

Some years ago we started the tradition of organizing free tutorials on the first day of the conference. Over the years, these tutorials have become very popular with the attendees, especially students. This year was no exception: almost 200 delegates registered to attend the tutorials. Our Tutorial Co-Chairs, Prof. Octavia Dobre and Prof. Eric Matson, worked very hard to line up a very interesting program of tutorial sessions which were presented by eminent scientists and practitioners. Three of these tutorials were delivered by industry specialists.

The Social Events

An evening welcome reception was held for all of the delegates on Tuesday, 21 May in the foyer of the hotel. It was very well attended. Delegates mingled with each other over drinks and food. On Wednesday, 22 May, the gala dinner was held at the Auckland War Memorial Museum. The venue is one of New Zealand's most important museums and war memorials. Its collections concentrate on New Zealand's national, natural, and military history. The evening started with a traditional Maori welcome, followed by drinks and snacks which were served in the museum foyer in the ground floor. Delegates freely moved around and browsed the exhibits. Later, the delegates moved to the event center on the upper floor of the museum. A traditional Maori cultural show enthralled the audience, after which they tucked into a delicious buffet meal.



Traditional Maori welcome at the Gala dinner.

The Sponsors

We are delighted to have so many sponsors and exhibitors for I2MTC. We would like to say a big thank you and express deep gratitude to our silver patrons—the Auckland Bioengineering Institute, National Instruments, and RF Test Solutions & ADLINK; our keynote patron—the Measurement Standards Laboratory; and the exhibitors—Massey University, Chosun University, and VICOM. Support from the sponsors and

exhibitors was of key importance to organize this conference successfully. Our deep gratitude and thanks also go to the Tourism New Zealand (TNZ) and Auckland Tourism, Events and Economic Development (ATEED) for their immense support during the various stages of the conference preparation.

Please plan to join us in Dubrovnik, Croatia from 25-28 May, 2020 for I2MTC 2020! Additional information may be found at <https://i2mtc2020.ieee-ims.org/>.