Guest Editorial
Special Issue on Selected Papers From the IEEE Sensors 2017 Conference

Since 2002, the IEEE Sensors Conference has been held in a different country every year during the last two decades, keeping a tradition of going to different geographical regions of IEEE. During this time, the IEEE Sensors Conference has become one of the premier global events on sensors and addressing the whole range from principles, design and fabrication to interfacing, data-extraction, applications, and systems. The most recent conference of this series, the IEEE Sensors 2017 Conference was held October 29 – November 1, 2017, at Scottish Events Campus (SEC) in Glasgow, Scotland, U.K. This was the first visit of the IEEE Sensors conference to the U.K. Glasgow is the largest city in Scotland, famous for its scientific and engineering heritage. The city is home to great inventions, from the development of penicillin to the first long distance television transmission and is a world-leading research city.

Continuing the new 3-page peer-reviewed conference papers format introduced in 2016, the conference solicited high quality papers and received a great response from our community. The conference received a total of 995 submissions, of which 598 were presented during the conference, resulting in an acceptance ratio of about 60%. The accepted papers were divided into oral (199) and poster (399) presentations depending upon author preference, suitability, session planning and similar considerations. Submissions were mostly from academia (~85%), with a growing participation from research facilities and government laboratories (~10%) and industry (~5%). Submitted papers have come from all regions of IEEE, with about 45% from Europe, 39% from Asia/Pacific, 13% from North America and about 4% from Latin America and Middle East/Africa. With 20 tracks, including 12 regular tracks, a new “Sensors in Industrial Practices” track to capture industrial contributions, six Focused sessions, and a Live Demos session; 3 Keynote presentations, an Open Posters session, the conference was packed with exciting presentations, posters and demos highlighting all areas of sensors.

2017 was the third year in which we continued the successful Industry Day program, held on Wednesday, October 1, 2017. The morning session of Industry speakers discussed sensors and systems for precision agriculture and aquaculture, while the afternoon session focused on sensors and systems for precision healthcare and medicine. During the lunch break on October 1, 2017, there was also a lunch time panel discussion, where eminent panelists, all with industrial background, discussed the importance of precision, calibration and traceability in the sensors world. Industry Day was arranged with the assistance of local partners CENSIS (Innovation Centre for Sensor and Imaging Systems) and the Scottish Engineering Hall of Fame. For the first time, IEEE Sensors Conference directly engaged with public. With support from the IEEE Sensors Council, the conference connected with the public by highlighting the local scientific heritage and the role sensors have played in advancing the fundamental research by local scientific heroes. This was implemented through posters displayed at Glasgow subway stations during October 23 – November 5, 2017. It is encouraging that the IEEE Sensors Council has decided to continue this initiative for the IEEE Sensors conferences in the future.

The success of IEEE Sensors 2017 is due to the dedication of more than 750 (693 reviewers+ 20 Organizing committee + 26 Track Chairs + 13 Focused Track Chairs + 2 Demo Chairs) volunteers. All accepted papers went through the peer-review process, each paper receiving four or more reviews, and those accepted were published in the conference proceedings in IEEE Xplore. The review process was handled by Track Chairs and Technical Program Committee (TPC) Co-Chairs – Prof. Ravinder Dahiya and Prof. Srinivas Tadigadapa. Based on the reviewers’ scores, only the authors in the top 4% of the accepted abstracts were invited to submit their expanded papers to the Special Issue of the IEEE SENSORS JOURNAL. After rigorous peer review, according to the editorial procedures of the journal, 17 of these top papers were approved for this highly selective special issue.

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