IEEE ISSNIP

Sensing the Future

Proceedings of the

2013 IEEE Eighth International Conference on Intelligent Sensors, Sensor Networks and Information Processing

2–5 April 2013 • Melbourne, Australia

Editors:

M. Palaniswami
C. Leckie
S. Kanhere
J. Gubbi

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WELCOME MESSAGE

On behalf of the organising and technical program committees of the IEEE Eighth International Conference on Intelligent Sensors, Sensor Networks and Information Processing — IEEE ISSNIP 2013, it is our great pleasure to welcome you to Melbourne and to this exciting multi-disciplinary technical program. This event has been made possible through the support and direction of IEEE Sensors Council and the Australian Research Council (ARC) Research Network on Intelligent Sensors, Sensor Networks and Information Processing (www.issnip.unimelb.edu.au). This year's event continues to build on the success of this established conference series and on the research momentum generated in this important interdisciplinary area. We hope you find the technical program and the plenary and invited talks enjoyable and very beneficial, as we review the state of sensor and sensor network technologies and explore research challenges in light of emerging application domains.

New sensing technologies and sensor networks is one of technologies that will shape the future of humankind. While there is significant understanding of biological sensor processing and artificial smart information processing (AI) regarding isolated single sensor systems, not much is known about multi-sensor interlinked systems. Recognizing its significance, billions of dollars are currently invested in this work. The broad research agenda of this conference will cover three major themes: Smart Sensors, Sensor Networks, and Information Processing in Sensor Networks, as applied to defence, environment, and health care. Our speakers will address the tools and techniques for development of smart sensor systems and sensor networks. This year emphasis is on smart sensors and the emerging smart city research. Substantial and multidisciplinary in nature scientific challenges must be overcome in order to realize the enormous potential of sensor networks..

The technical program of this eighth conference in the ISSNIP series features an interesting mix of tracks, workshops, and special sessions targeting Defence, Healthcare, and the Environment. It includes special sessions on the emerging Internet of Things, intelligent sensors in structural health monitoring, and point of care devices, as well as dedicated workshops on RFID and sensor fusion and tracking. There are four tutorials, including one on a new topic of particle filters for random set models.

We are honoured to have high profile speakers from academia, industries, and government organisations, who will cover different perspectives of sensing research. IEEE ISSNIP 2013 received a pleasing 205 abstracts and 157 full submissions from 32 countries. The full paper submissions were subjected to multiple independent peer review, resulting in 93 papers (representing 23 countries) recommended for presentation.

We acknowledge the generous support of all our sponsors, as well as IEEE and ARC's vision in fostering this inter-disciplinary event. We duly recognise the work by the committee chairs in helping create such a strong program across such a broad range of areas. We also express our gratitude to all the technical program committee members and reviewers who gave their valuable time in providing critical reviews. The conference would not have been possible without the help of the organising committee and the volunteers, and we thank them all most sincerely.

Prof. M. Palaniswami
Prof. V. Lumelsky
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