Guest Editorial

Special Issue on Papers from the

IEEE FLEPS Conference 2019

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N recent years, material printing on flexible and disposable substrates has received substantial interest for realizing low cost electronic and sensing systems on large-areas. As a result, new methods such as printing and additive manufacturing, etc. have received significant attention to develop a wide range of easily deployable systems such as displays, sensors and RFID smart tags. The technologies developed for silicon based planar electronics and solid-state sensors is also being re-purposed to meet the demands in the emerging field of flexible and printed sensors. This trend will continue as all market indicators point towards significant growth in this area. The exponential growth in flexible, printed and disposable sensor technology, the development of novel printable and solution processable nanomaterials, and the development of novel printing techniques have brought about a new wave of novel printed sensor technologies and applications. Considering this growth, it became necessary to provide a forum to discuss latest developments in the field and to bring together the academia and industry to lay future roadmap The IEEE International Conference on Flexible and Printable Sensors and Systems (IEEE FLEPS) aims to be such a forum. The 2019 conference was the first edition, started by IEEE Sensors Council, with an aim to be a premier conference in the world. The high standards of the conference will be ensured by steering committee and the track chairs formed by world leading experts in the field.

As first single-track IEEE conference on the topic, IEEE FLEPS 2019 has done a remarkable job in promoting flexible and printable sensors and systems and providing a platform for sharing and dissemination of knowledge related to all multidisciplinary aspects. The 2019 edition of the FLEPS CONFERENCE was organized during July 7-10 2019 in Glasgow – Scotland, UK. 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.

The call for papers for FLEPS 2019 attracted 122 papers and more than 150 registered participants. These papers went through a rigorous peer review process, with each paper reviewed by at least three reviewers. After reviews, all papers went through a detailed scrutiny by the Technical Program Committee (TPC) comprising of Dr. Luigi Occhipinti as chair and 18 track Co-Chairs of 9 Technical Tracks. At the end, about 98 papers were accepted for presentation as lecture (46) or poster (52). These papers represented the work by researchers from 30 countries. The papers presented at the FLEPS 2019 were spread over the 9 regular sessions, each starting with an invited talk and followed by 4 contributed talks selected by the TPC following the peer review process. The technical program also included 4 well attended tutorials. In addition, a special industry panel discussion was organized to understand the opportunities and challenges in the supply chain of flexible and printed electronics. All presented papers were published in IEEE Xplore.

The authors of accepted papers were encouraged to submit extended version of their papers, if they wished, to be included in a special issue of the Sensors Journal dedicated to the FLEPS CONFERENCE. The authors were informed that their submissions will go through the same rigorous review process again that the regular submissions to Sensors Journal do. This review process was handled by the Guest Editors of this Special Issue. Finally, from among those papers that were submitted in response to our invitations, we have accepted 14 papers for the Special Issue that you are reading right now.

We would like to thank the authors who chose to accept our invitation and submitted extended versions of their papers. We also thank all the reviewers who reviewed these papers for the Special Issue and provided detailed comments. Most of these papers went through a revision in response to reviewers’ questions and comments. We were very particular about accepting papers only after the peer review process was complete in all its rigor. Thus, these papers have come to this Special Issue through a rather long process starting with the conference paper review process that selected them first for the presentation at FLEPS 2019. We would like to express our gratitude to all those reviewers for their precious time.

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