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Distributed Computing in Sensor Systems

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Message from the General Chair

We are pleased to present the proceedings of DCOSS 2010, the IEEE International Conference on Distributed Computing in Sensor Systems, the sixth event in this annual conference series. The DCOSS meeting series covers the key aspects of distributed computing in sensor systems, such as high-level abstractions, computational models, systematic design methodologies, algorithms, tools and applications.

We are greatly indebted to the DCOSS 2010 Program Chair, Rajmohan Rajaraman, for overseeing the review process and composing the technical program. We appreciate his leadership in putting together a strong and diverse Program Committee covering various aspects of this multidisciplinary research area.

We would like to thank the Program Committee Vice Chairs, Thomas Moscibroda, Adam Dunkels, and Anna Scaglione, as well as the members of the Program Committee, the external referees consulted by the Program Committee, and all of the authors who submitted their work to DCOSS 2010. We also wish to thank the keynote speakers for their participation in the meeting.

Several volunteers contributed significantly to the realization of the meeting. We wish to thank the organizers of the workshops collocated with DCOSS 2010 as well as the DCOSS Workshop Chair, Sotiris Nikolettseas, for coordinating workshop activities. We would like to thank Neal Patwari and Michael Rabbat for their efforts in organizing the poster and demonstration session. Special thanks to Chen Avin for handling conference publicity, to Animesh Pathak for maintaining the conference website, and to Zachary Baker for his assistance in putting together this proceedings volume. Many thanks also go to Germaine Gusthiot for handling the conference finances. We would like to especially thank Jose Rolim, DCOSS Steering Committee Chair. His invaluable input in shaping this conference series, making various arrangements and providing overall guidance are gratefully acknowledged.

Finally, we would like to acknowledge the sponsors of DCOSS 2010. Their contributions enabled this successful conference. The research area of sensor networks is rapidly evolving, influenced by fascinating advances in supporting technologies. We sincerely hope that this conference series will serve as a forum for researchers working in different, complementary aspects of this multidisciplinary field to exchange ideas and interact and cross-fertilize research in the algorithmic and foundational aspects, high-level approaches as well as more applied and technology-related issues regarding tools and applications of wireless sensor networks.

June 2010

Bhaskar Krishnamachari

Message from the Program Chair

This proceedings volume includes the accepted papers of the 6th International Conference on Distributed Computing in Sensor Systems. DCOSS 2010 received 76 submissions in three tracks covering the areas of algorithms, systems and applications. During the review procedure three (or more) reviews were solicited for all papers. After a fruitful exchange of opinions and comments at the final stage, 28 papers (36.8% acceptance ratio) were accepted.

The research contributions in this proceedings span diverse important aspects of sensor networking, including energy management, communication, coverage and tracking, time synchronization and scheduling, new programming paradigms, medium access control, sensor deployment, data security, and mobility. A multitude of novel algorithmic design and analysis techniques, systematic approaches and application development methodologies are proposed for distributed sensor networking, a research area in which complementarity and cross-fertilization are of vital importance.

I would like to thank the three Program Vice-Chairs, Thomas Moscibroda (Algorithms), Adam Dunkels (Systems and Applications), and Anna Scaglione (Signal Processing and Information Theory) for agreeing to lead the review process in their track and for an efficient and smooth cooperation. I would also like to thank the members of the strong and broad DCOSS 2010 Program Committee, as well as the external reviewers who worked with them. I wish to thank the Steering Committee Chair Jose Rolim and the DCOSS 2010 General Chair Bhaskar Krishnamachari for their trust and valuable contributions in organizing the conference, as well as the Proceedings Chair, Zachary Baker, for his tireless efforts in preparing these conference proceedings.

June 2010

Rajmohan Rajaraman

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