Foreword

Welcome to the 10th Anniversary of the International Symposium on Low Power Electronics and Design (ISLPED).

ISLPED was born in its current form in 1996 through the merger of the International Symposium on Low Power Electronics (ISLPE) and the International Symposium on Low Power Design (ISLPD), each having had two previous editions before the merger. Since its inception, ISLPED has been the premier forum for presentation of advances in all aspects of low power design and technologies, including devices and circuits, logic and micro-architecture, design tools and methodologies, system-level design, and software. The last decade has clearly established power consumption as a primary concern for a wide range of electronic and computing devices, and if left un-checked, power-related issues threaten to de-rail the progress of semiconductor technologies.

This year’s 10th anniversary of ISLPED will be marked by an exciting technical program. Industry luminaries Dennis Buss, Vice President of Silicon Technology Development at TI, and Steve Smith, Vice President of the Digital Enterprise Group at Intel, will deliver plenary talks about low power design from an industrial perspective. The technical program is a rich mixture of academic and industrial papers contributed by researchers from all over the world. The program includes 53 paper presentations and 19 posters, which were selected by the program committee from a record 233 submissions. Five papers have been selected as finalists for a Best Paper Award. The winner of the award will be announced before the end of the conference, based on evaluations of the papers in the proceedings, as well as the presentation made during the conference. Two embedded tutorials will focus on issues in ultra-wideband radio design, and low-power design in FPGAs, while two special sessions will feature invited talks that consider multi-core processing architectures for the power-constrained era, and application drivers such as pervasive and wearable computing. The Low-power Design Contest received several original, power-aware designs from universities and research organizations. The best of these submissions will be featured in a special session at the symposium. An industry sponsored cash award will be presented to each selected design entry.

The conference banquet will feature a panel that re-unites some of the “Founding Fathers” of ISLPED, who started the symposium 10 years ago. The panelists will reminisce about advances in low-power design in the past decade, and will provide their visions of the future for this field and its impact on the semiconductor and electronics industries.

Many thanks to the Technical Program Committee for all the hard work they put into the paper selection process. We would also like to thank all the additional reviewers for their contributions. All papers were reviewed through a double-blind review process. The technical program committee met in April at the UC-Irvine campus to discuss the reviews and perform the final paper selection. Thanks are also due to the members of the organizing committee for all their hard work behind the scenes: Vijay Narayanan as Treasurer, Payam Heydari as Local Arrangements Chair, Mahmut Kandemir and Jihong Kim as Publicity Chairs, David Scott and Massoud Pedram as Design Contest Chairs, and Diana Marculescu as Exhibits Chair. Thanks to Gary Li from the University of Virginia for helping with the paper submission and review website. The symposium has received generous financial support from Cadence, IBM, Intel, Magma Design Automation, Sequence Design, Synopsys, and Texas Instruments. We would also like to acknowledge the ACM staff for administrative support and the Sheridan Printing staff for assistance with the Proceedings.

ISLPED is sponsored by ACM SIGDA and the IEEE Circuits and Systems Society. It receives technical co-sponsorship from the IEEE Solid State Circuits and the IEEE Electron Devices Societies.

We hope that you will find the symposium stimulating and enjoyable.

Kaushik Roy and Vivek Tiwari
General Co-chairs

Anand Raghunathan and Mircea Stan
Technical Program Co-chairs
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