Message from the Program Co-Chairs

Welcome to the 14th edition of *Compilers, Architectures and Synthesis for Embedded Systems – CASES’11*. We are very pleased with this year's program which includes a special session on biochips, several invited talks and an exciting keynote by Arvind who is the Johnson Professor of Computer Science and Engineering at MIT. We are also following a new format where each two-hour session has three papers and a final half hour poster session for more close one-on-one interaction with the presenters in the session. Please take advantage of this format to leave no question unanswered!

CASES is proud to be a founding member of one of the three central conferences of Embedded Systems Week (ESWEEK) which was first organized in 2006. This year, ESWEEK is being held in Taipei, home of a wide proliferation of embedded systems and technology companies.

Out of 61 submissions, the CASES program committee accepted 23. We organized the papers into a single track of nine sessions spread over three days. The program committee spent extra time this year in two full-day meetings – one virtual and one face to face – to finalize the program. All in all, members of the program committee spent approximately 16 hours meeting and discussing the papers to make sure all decisions were based on actual technical considerations and not just the raw scores from reviewers.

As we reviewed the submissions, program committee discussions and the emergent program, a few trends point to exciting possibilities for meaningful advances in the state of the art in embedded systems architecture and software. Foremost among these is the convergence of the erstwhile communities of electronic design automation and computer architecture. The algorithms, methods and tools community which were already in sync in the compiler domain are finding new common ground and new ways of looking at computer architectures from chip level to complete systems. Indeed, Arvind's keynote talk for CASES represents such a shift: a quintessential computer architect who is devising new methods for capture, modeling and synthesis of interfaces between hardware and software. Another trend is made possible by substantial technical gains in parallelization and virtualization methods in embedded systems. Just as microprocessors strictly surpassed mainframes in terms novel architectural features in the mid-1990s, the embedded systems community is at the threshold of surpassing sophistication, value and utilization of methods for virtualization and security. Our session on this subject along with an invited talk by Gernot Heiser of NICTA reflect this trend. We have assembled a program that reflects these trends and goes far beyond to describe the latest in thinking, demonstration and practice in compilers, architecture and software for embedded systems. No doubt you will enjoy these discussions as much as we had fun in putting such a program together.

We would like to close by thanking all of those who have worked so hard to make this year's program possible, including first of all the excellent program committee members and also all the ESWEEK volunteers especially the General Chairs Samarjit Chakraborty and Ahmed Jerraya, the Local Arrangement Chairs Chung-Ta King and Tei-Wei Kuo, and the Publication Chair Roman Lysecky.

**Rajesh Gupta**  
*CASES’11 Program Co-Chair*

**Vincent John Mooney III**  
*CASES’11 Program Co-Chair*
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Vincent John Mooney III (Georgia Institute of Technology & Nanyang Technical University)

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