## MESSAGE FROM THE WORKSHOP CHAIR

Welcome to EduPar 2014 proceedings, the Fourth NSF/TCPP Workshop on Parallel and Distributed Computing Education!  This event follows excellent participations in EduPar-13 in Boston, USA, in EduPar-12 in Shanghai, China, where it formally became a regular workshop of IPDPS conference, and in EduPar-11 in Alaska, USA, where it was inaugurated.  Parallel and Distributed Computing (PDC) now permeates most computing activities. The pervasiveness of computing devices containing multicore CPUs and GPUs, including home and office PCs, laptops, and mobile devices, is making even common users dependent on parallel processing. Certainly, it is no longer sufficient for even basic programmers to acquire only the traditional sequential programming skills. The preceding trends point to the need for imparting a broad-based skill set in PDC technology at various levels in the educational fabric woven by Computer Science (CS) and Computer Engineering (CE) programs as well as related computational disciplines.  However, the rapid changes in computing hardware platforms and devices, languages, supporting programming environments, and research advances, more than ever challenge educators in knowing what to include in the curriculum and what to teach in any given semester or course.

The fourth workshop invited unpublished manuscripts on topics pertaining to the teaching of PDC topics in the Computer Science and Engineering (and related) curriculum. The emphasis of the fourth workshop, as in the previous editions, continues to be on the undergraduate education.  The workshop especially sought papers that report on experience with implementing aspects of the NSF/TCPP curriculum or other novel approaches to incorporating PDC topics into undergraduate core courses that are taken by the majority of students in a program. The topics of interest included (i) Pedagogical issues in PDC, (ii) Novel ways of teaching PDC topics, (iii) Models for incorporating PDC topics in core CS/CE curriculum, (iv) Experience with incorporating PDC topics into core CS/CE courses, and (v) Pedagogical tools, programming environments, and languages for PDC.  There were two tracks in the workshop, a general track and an Early Adopter track.  Instructors who received an NSF/TCPP Early Adopter grant in the past for curriculum enhancement for inclusion of PDC topics were encouraged to submit in the second track.

We received 17 submissions toward papers and another 14 submissions toward posters.  All papers were reviewed by our excellent program committee resulting in at least three to five reviews for each submission.  My sincere thanks go to the program committee members for their hard work!  The program committee met via teleconference and selected nine regular papers.  Some of the authors who could not be accepted for papers were invited to present a poster. We will have about 15 posters during the highly popular poster session in the afternoon - bulk of these will be the experience reports and evaluations presented by the early adopters of the NSF/TCPP PDC curriculum.  New this round would be (i) 15-minute speakers' panel at the end of each session by the paper presenters to foster more in-depth and comparative discussions, and (ii) a separate 1-hour session to discuss current status and future direction of this workshop series and the associated NSF/TCPP curriculum initiative on PDC education.  We will also have a keynote by Randy Katz of UC Berkeley.

This effort is in coordination with NSF/TCPP curriculum initiative for CS/CE undergraduates (http://www.cs.gsu.edu/~tcpp/curriculum/index.php) and its upcoming NSF-supported Center for Parallel and Distributed Computing Curriculum Development and Educational Resources (CDER).  Travel for all the early adopters are supported by National Science Foundation (NSF) and Intel. We thank NSF for their continued support for the NSF/TCPP PDC curriculum initiative, the early adopter competitions (stipend, travel), and the EduPar workshop series.  We also thank Intel for their support for the initiative, particularly for the international early adopter institutions, and nVIDIA for contributing GPU cards to several early adopters.  My heartfelt thanks go to my co-organizers Anshul Gupta, Arny Rosenberg, Alan Sussman and Chip Weems for their tireless efforts.

Visit the EduPar-14 website at http://cs.gsu.edu/~tcpp/curriculum/?q=edupar  where you will also find the updated technical program and the complete online proceedings.  These include slides for the keynote session as well as papers and presentation slides of the contributed papers and all the posters.

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# WORKSHOP ORGANIZATION

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*Program Committee:*

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