Welcome to Kingston, Canada, and the 19th IEEE International Conference on Program Comprehension!

Program comprehension is an essential part of software engineering. It is necessary when one enhances, reuses, inspects, reengineers, migrates or maintains a software system. The International Conference on Program Comprehension (ICPC) is a leading conference in the area of program understanding, software analysis, reverse engineering, software evolution and software visualization. Over the years, ICPC has provided a vital forum for researchers and practitioners to present and discuss the latest advances in the art and practice of program comprehension.

ICPC 2011 received more than 90 submissions in all categories, including full papers, short papers, posters, tool demonstrations, industrial challenge entries and student papers. Of these, 63 were full technical papers. All papers were reviewed by at least three members of the Program Committee. The discussions were rigorous and sometimes vigorous. We owe a debt of gratitude to these tireless members of the community. We had many excellent submissions and could not accept them all. Ultimately, we selected a set of papers that were technically strong, represented a good cross section of the community, and would foster discussion. The program includes 18 full research papers (acceptance rate 28.6%), seven short papers, four posters, five tool demonstrations and 10 student symposium papers. These numbers are in line with previous years, thus maintaining the good reputation of ICPC and ensuring a high-quality conference. The best papers at ICPC 2011 will be invited to submit extended, revised versions to the journal Information and Software Technology.

This year, we introduce two new elements: an industrial challenge problem and a student research symposium. At ICPC2010 in Braga, Portugal, a panel of participants from industry was convened in an attempt to make our research more directly relevant. Building on that initial effort, Andrew Begel of Microsoft Research and Jochen Quante of Robert Bosch GmbH have set an industrial challenge that is open to all attendees. Participants were invited use their program comprehension tools to find and fix a bug in a robot controller, as set out by the Industrial Track Chairs. The Student Research Symposium seeks to be a venue for students at all levels, from undergraduate to graduate, to share their research. The symposium has been organized by Denys Poshyvanyk and Massimiliano di Penta. Ten papers from the symposium are included in these proceedings.

The keynote speakers this year are Leon Moonen, research scientist at Simula Research Laboratory in Norway, who will address us on “Building a Better Map: Wayfinding in Software Systems” and Margaret Burnett of the Oregon State University in USA, who will speak on “Males and Females Developing Software: Are Programming Tools Getting in the Way?” Each of these presentations reflects a key aspect of program comprehension, tools and human factors. We hope that you find these keynotes entertaining and inspirational.

We are continuing with a tradition established at last year’s ICPC of recognizing an influential paper that was published at the conference ten years ago. The Most Influential Paper from IWPC2001 was awarded to "SHriMP Views: An Interactive Environment for Exploring Java Programs" by Margaret-Anne Storey, Casey Best, and Jeff Michaud. This was an unusual choice, as it was a tool demonstration. Nevertheless, it was the overwhelming choice of the organizing committee. The work symbolized by SHriMP, such as the design approach, the empirical studies, and the implementation, raised the bar for program comprehension research.

We would like to thank those who contributed to the success of this event, including the authors who submitted papers to the conference, the program committee members and external referees for their excellent and timely reviewing work and their help in promoting the conference and the ICPC steering committee for their direction, comments, and support during the process of making ICPC 2010 become a reality.

We are also indebted to the many individuals that contributed to the ICPC 2011 conference program: in particular, Hausi Muller and Sukanya Ratanotayanon as Poster and Demo chairs; Rainer Koschke and Michael...
Collard as working session chairs; Jochen Quante and Andrew Begel as industrial track chairs; Denys Poshvyvanyk and Massimiliano Di Penta as student symposium chairs; Chanchal K. Roy as finance chair; and Minhaz Fahim Zibran as web chair.

We would like to thank the IEEE Computer Society for their continued support including Brookes Little and Juan Guerrero. We would especially like to thank the generous financial support of RIM, Computer Associates, the University of Saskatchewan, and Reverse Engineering Forum. Above all we would like to thank the attendees that make the conference what it is.

Thomas Dean
ICPC 2011 General Chair

Susan Elliott Sim
Filippo Ricca
ICPC 2011 Program Chairs