

## Preface

This thirty-third *Communicating Process Architectures* conference, CPA 2011, takes place at the University of Limerick, 19-22 June, 2011. It is hosted by Lero, the Irish Software Engineering Research Centre, and (as for CPA 2009) co-located with FM 2011 (the 17<sup>th</sup> International Symposium on Formal Methods). Also co-located this year are SEW-34 (the 34<sup>th</sup> Annual IEEE Software Engineering Workshop) and several specialist Workshops.

We are very pleased this year to welcome *Gavin Lowe*, Professor of Computer Science at the University of Oxford Computing Laboratory, as our keynote speaker. His research over the past two decades has made significant contributions to the field of concurrency, with special emphasis on CSP and the formal modelling of computer security. His paper addresses a long-standing and crucial issue for this community: the verified implementation of CSP external choice, with no restrictions.

We have also received a good set of papers covering many of the key issues in modern computer science, which all seem to concern concurrency in one form or another these days. Inside, you will find papers on concurrency models and their theory, pragmatics (the effective use of multicores), language ideas and implementation (for mobile processes, generalised forms of choice), tools to assist verification and performance, applications (large scale simulation, robotics, web servers), benchmarks (for scientific and distributed computing) and, perhaps most importantly, education. They reflect the increasing relevance of concurrency both *to express and manage complex problems* as well as *to exploit readily available parallel hardware*.

Authors from all around the world, old hands and new faces, PhD students and professors will be gathered here this week. We hope everyone will have a good time and engage in many stimulating discussions and much learning – both in the formal sessions of the conference and in the many opportunities afforded by the evening receptions and dinners, which are happening every night, and into the early hours beyond.

We thank the authors for their submissions and the Programme Committee for their hard work in reviewing the papers. We also thank Mike Hinchey at Lero for inviting CPA 2011 to be part of the week of events surrounding FM 2011 and for being so helpful during the long months of planning. Finally, we thank Patsy Finn and Susan Mitchell, also at Lero, for all the detailed – and *extra* – work they put in researching and making all the special arrangements we requested for CPA.

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