Conference Themes and Goal

Communicating Process Architectures addresses many of the key issues in modern computer science and its application. In broad terms, the conference themes will concern concurrency - at all levels of software and hardware granularity. The goal of the conference is to stimulate discussion and ideas as to the role concurrency will play in the future generation of scalable computer infrastructure and applications - where scaling means the ability to ramp up functionality (i.e. stay in control as complexity increases) as well as physical metrics (such as performance).

Traditionally, concurrency has been taught and considered and experienced as an advanced and difficult topic. The thesis underlying this conference is that this tradition is wrong. The natural world operates through the continuous interaction of massive numbers of autonomous agents at all levels of granularity (astronomic, human, subatomic). If modern computer science finds concurrency hard, then it is not doing it right - discuss! It is time for concurrency to mature into a simple discipline that can be used everyday.

Conference Structure and Call

Communicating Process Architectures will run a mix of submitted and invited papers during the day, with workshops and/or tutorials in the evenings. Submitted papers have been refereed by the Programme Committee. The conference proceedings will be published by IOS Press as part of their Concurrent Systems Engineering series.

The accepted papers address the conference themes and goals as discussed above. Specific areas include, but are not limited to:

- theory - getting the underlying model right (CSP, pi-calculus, channels, monitors, semaphores, BSP, barriers, buckets...);
- concurrent design patterns and tools (built upon the above);
- safety and security issues (race-hazards, deadlock, livelock, process starvation, ...);
- language issues (Java™, CSP libraries for Java/C/C++, occam™, Handel-C™, ...);
- system issues (lightweight multithreading kernels, lightweight external communications/interrupts, ...)
- processor issues (instruction sets for zero-cost multithreading, VLIW, multiprocessor chips, software cache control, ...)
- specialised hardware issues (link and router technologies, FPGAs, ...);
- shared-memory -v- message-passing paradigms (unification?), SMP and virtual SMP architectures;
- supercomputing from commodity components (cluster computing, Internet grids, ...);
- applications: scientific (including graphics and GUIs), engineering (including embedded, real-time and safety-critical), business (including mobile and e-commerce) and
- home (including entertainment);
- global architectural issues (vertical integration of all the above);

This conference is the 25th in the series of WoTUG conferences, which have consistently proven to be a valuable meeting place for all those interested in the problems and opportunities thrown up by parallel computing and concurrency. The delegates and speakers reflect a wide spectrum of disciplines - theoreticians, software engineers, hardware engineers, tool builders and applications specialists - and we meet in a relaxed, exciting, friendly and highly productive atmosphere ... often till very late the next morning!

Registration Fees

The registration fee will be announced closer the time, however, this will include:

- accommodation for the nights of the 15, 16, 17 September 2002;
- all meals, starting with the evening meal on Sunday night, through to Wednesday lunch;
- conference dinner;
- one copy of the conference proceedings.

We are not at the moment accepting registration for delegates. Instructions on how to register will be issued after the notification of acceptance.

Submission Information and Dates

Submissions are now solicited of papers reporting original work in any areas relating to the CPA 2002 conference themes. Papers should be complete or near completion (i.e. there should be sufficient information available to enable the Programme Committee to referee the submission with due diligence). No special formatting style is required at this stage. However, accepted papers will have to adhere to the CPA 2002 format. It is therefore recommended that submissions be made in that style as there is only a short period between final (or conditional) acceptance and the camera-ready deadline. Referees reports will be fed back to all authors of submitted papers. Papers must be submitted by email to:

`cpa2002@wotug.org`

The submissions must be either Postscript, PDF or MS Word Docs and be emailed either as attachments or uuencoded gzips.

Submission of full papers	10 June 2002
Tutorial / workshop proposals	10 June 2002
Notification of acceptance	24 June 2002
Camera-ready submission	15 July 2002

Table 1: Important Dates

Conference Chairs

James Pascoe and **Roger Loader**

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Tel: +44-118-9875123 ext. 7626
Email: cpa2002@wotug.org

Vaidy Sunderam

Department of Math & Computer Science
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Student Bursaries

WoTUG is sponsoring a limited number of Student Bursaries, worth 100 sterling. To qualify, you must be registered as a student at a Higher Education institution, not in receipt of a salary and obtain a supporting letter from your academic supervisor. Please fax this to the Conference Chairs before you register - you will be given a reference number to quote on your registration form. The bursaries will be awarded in FIFO scheduling to qualifying applicants until they run out.

Published Proceedings

The Proceedings will be published by IOS Press, Netherlands as part of the Concurrent Systems Engineering Series (ISSN 1383-7575). Style sheets for papers for CPA-2002, including LaTeX and MS Word templates, will be available to authors of accepted papers.

Programme Committee

- Professor Peter Welch, University of Kent at Canterbury, UK. (WoTUG Chair)

- Dr. Alastair Allen, University of Aberdeen, UK.
- Professor Hamid Arabnia, University of Georgia, Athens, Georgia, USA.
- Professor Andre Bakkers, University of Twente, The Netherlands.
- Richard Beton, Roke Manor Research Ltd., UK.
- Professor Jan F. Broenink, University of Twente, The Netherlands
- Dr. Alan Chalmers, University of Bristol, UK.
- Professor Peter Clayton, Rhodes University, South Africa.
- Dr. Barry Cook, 4Links Ltd., UK.
- Dr. Janet Edwards, Loughborough University of Technology, UK.
- Ruth A. Ivimey-Cook, ARM Ltd., Cambridge, UK.
- Christopher Jones, British Aerospace, Warton Aerodrome, UK.
- Professor Jon Kerridge, Napier University, UK.
- Dr. Tom Lake, InterGlossa, UK.
- Dr. Adrian E. Lawrence, Loughborough University, UK.
- Dr. Roger J. Loader, The University of Reading, UK.
- Professor David May FRS, University of Bristol, UK.
- Stephen Maudsley, Esgem Ltd, UK.
- Dr. Majid Mirmehdi, University of Bristol, UK.
- Dr. Henk Muller, University of Bristol, UK.
- Professor Chris Nevison, Colgate University, New York, USA.
- Professor Patrick Nixon, University of Strathclyde, UK.
- Dr. Brian O'Neill, Nottingham Trent University, UK.
- James Pascoe, The University of Reading, UK.
- Dr. Roger Peel, University of Surrey, UK.
- Professor Nan Schaller, Rochester Institute of Technology, New York, USA.
- Professor G. S. Stiles, Utah State University, Utah, USA.
- Professor V. S. Sunderam, Emory University, Atlanta, Georgia, USA.
- Øyvind Teig, Kongsberg Maritime Ship Systems, Trondheim, (KMSS), Norway.
- Professor Rod Tosten, Gettysburg University, USA.
- Dr. Stephen J Turner, Nanyang Technological University, Singapore.
- Professor Paul Tymann, Rochester Institute of Technology, New York, USA.
- Paul Walker, 4Links Ltd, UK.
- Dr. Hugh Webber, Defence Evaluation Research Agency, Malvern, UK.

WoTUG

Communicating Process Architectures - 2002

Sunday 15th September (evening) to Wednesday 18th September (lunchtime)

The University of Reading
United Kingdom

`http://www.wotug.org`

In association with The British Computer Society Parallel Processing Specialist Group