The 27th WoTUG CPA Conference

Sunday 5 – Wednesday 8 September 2004

Call for Papers

Conference theme

Communicating Process Architectures (CPA) describes a process-oriented approach to system abstraction and design, in which concurrency is natural and normal. The aim of the conference is to stimulate ideas and discussion relevant to the engineering of such systems, and in particular to the achievement of *scalability* (in both function and performance) and integrity (reliability, dependability, and security against error).

Traditionally, concurrency is usually considered an advanced and difficult topic. As a result, it is all too often neglected in the engineering of software. A premise underlying this conference is that it should not be neglected in either tuition or use, and need not be difficult, given the right model. Concurrency forms a vital part of the natural abstraction of the world around us, where autonomous agents continually interact at all levels of granularity. It is simply too important to ignore.

Security (against error) in concurrent systems is a major element in the conference theme for two reasons. First, concurrency extends the scope for error. Second, applications are now commonly distributed, highly interactive, and intolerant of error. The development of new methods, or adaptation of old methods, for the engineering of such systems forms another important focus.

Specific interests include (but are by no means limited to):

- theoretical support (CSP, π-calculus, ASP, …)

- verification and model-checking (FDR, SPIN, …)

- methods and tools (B, BSP, SPARK, …)

- programming languages (occam, Handel-C, Honeysuckle, …)

- program environments (JCSP, CCSP, CTJ, …)

- distributed application environments (GRID, clusters, web services, …)

- machine architecture (multiprocessor chips, VLIW, instruction set design for multi-threading, h/w scheduling, link and router design, …)

- illustrative applications (scientific, embedded, real-time, safety-critical, mobile, …).

History and inspiration

The origin for the inspiration of the CPA series of conferences, which began as the OUG-X, and later WoTUG-X series, is the *Theory of Communicating Sequential Processes* (CSP) of C A R Hoare. This gave rise to the design of the occam programming language and the Transputer – an entire computer on a single chip that could be composed with others to construct scalable systems. The combination of new theory, programming language, and system architecture, represented an unprecedented opportunity and challenge to systems engineering methodology. The OUG/WoTUG/CPA conferences have sought to answer that challenge and help meet the opportunity. The proceedings of the last seventeen have been published by IOS Press, as part of their Concurrent Systems Engineering Series. They have fostered an extended international research and development community over the years, and have significantly contributed to many successful commercial applications.

CSP embodies many ideas, all whole-heartedly endorsed by the CPA community. These include the pursuit of *simplicity and security* (against error), and the overriding importance of clear, precise, and consistent, *abstraction*.

Outline organization

Paper submission   16 May 2004

Paper acceptance   13 June 2004

CRC submission   27 June 2004

Registration fee is £330, non-refundable, and includes breakfast, lunch, dinner and refreshments. Single rooms are available at a cost of £30 per night. A very limited number of double rooms are available at a cost of £45 per night. A limited number of student registrations are available at the discounted rate of £190, at the discretion of the organising committee. A signed letter from either supervisor or deparment head must accompany the registration form testifying status.

Programme

This will comprise two full day, one half day, and two evening sessions. Each day will begin with a keynote talk. **A. W. Roscoe,** Professor and Head of Department at Oxford University Computing Laboratory and author of *The Theory and Practice of Concurrency*, and **Dr. Michael Goldsmith,** Managing Director of Formal Systems (Europe) Ltd, have agreed to speak.

Details of how to submit a paper for the conference can be found at: http://cms.brookes.ac.uk/computing/cpa2004

Three ways to book

Post the completed booking form to:
Hollie Noonan, Centre for Continuing Education,
Oxford Brookes University, Harcourt Hill Campus, Oxford OX2 9AT.

Fax the completed booking form to **01865 488601.**

Telephone 01865 488608 to provisionally reserve a place, then post or fax the completed form to confirm your place.

Please book by Friday 13 August 2004.

Booking form
CPA Conference 2004

Sunday 5 – Wednesday 8 September 2004

Please reserve me a place at this conference.
I understand the fee will be £330 (fee includes breakfast, lunch, dinner and refreshments)

Please reserve me accommodation for _____ nights at a cost of £_____

Title .... First name...

Surname ....

Address ....

....

.... Postcode ....

Day-time telephone .... Fax ....

Email address ....

Organisation ....

Occupation ....

Special dietary/mobility requirements...

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Please tell us where you saw this conference advertised ....

....

Please indicate any other areas of interest to you. We will then advise you of short courses/conferences planned on this topic. ....

....

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i)   your purchase order; or

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For further details please contact:

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Email: hrnoonan@brookes.ac.uk

A full refund will be given for cancellations received in writing at least 1 week prior to the conference.

No refunds will be made for cancellations received less than 1 week prior to the conference. Non-arrivals will be charged the full fee.

A substitute delegate is welcome at no extra charge.

Oxford Brookes University reserves the right to alter the programme without notice.

1313_02/04

Communicating Process Architectures 2004

Call for papers

A joint conference between WoTUG and
Oxford Brookes University

**Sunday 5 – Wednesday 8
September 2004**

hosted at Oxford Brookes University
Headington Campus
Gipsy Lane
Oxford