OXFORD BROOKES UNIVERSITY

Communicating Process Architectures 2004

Sunday 5 – Wednesday 8 September 2004

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 regarding 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.

Programme outline

The *CPA 2004* programme is hosted at Oxford Brookes University and comprises 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 *Theory and Practice of Concurrency*, and **Michael Goldsmith,** Managing Director of Formal Systems (Europe) Ltd, have agreed to speak.

A late bar each evening and conference dinner will provide ample opportunity to relax, socialise, and discuss issues informally.

Contributions invited

Contributions are invited on any field or topic related to the conference theme. Topics addressed in the past include:

- 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, …).

A contribution may be a presentation of novel ideas or accomplishments, an advanced tutorial on an existing method, or leading a seminar on some outstanding difficulty or controversy.

For further details, see **http://cms.brookes.ac.uk/computing/cpa2004**

Enquiries and submissions should be made to **cpa2004@brookes.ac.uk**.

Deadline for submission: **16 May**

Call for Papers

WoTUG