

TeaConc'2006

Workshop on Teaching Concurrency

27 June 2006 - Turku, Finland

Satellite workshop of

[ATPN'2006](#) - 27th Int. Conf. on Applications and Theory of Petri nets and Other Models of Concurrency, and

[ACSD'2006](#) - 6th Int. Conf. on Application of Concurrency to System Design

Organizers:

Søren Christensen and Luís Gomes

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MOTIVATION

The **main goal** of the workshop is to create a **forum for discussion** on the ways that models of concurrency can be taught at undergraduate/graduate levels.

On one hand, the workshop will focus on the application of Petri nets and other models of concurrency to educational issues reporting on specific pedagogical experiences, and **on the other hand** will take advantage of cross-fertilization between teaching experiences in different application domains.

As a **post-workshop goal**, we hope to set-up a web database of materials to be used in teaching activities (course syllabus, curricula, slides, exercises, lab structure, tool usage, experiences) tuned to specific teaching areas.

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TOPICS OF INTEREST

Topics of interest include (but are not limited to):

- How to teach concurrency (with Petri nets and other formalisms)
- Comparisons between Petri nets and other models of concurrency (from a pedagogical perspective)
- Mappings between Petri Net models and other models with pedagogical purposes
- Selection and evaluation of related tools for pedagogical purposes
- Experiences on how to use models of concurrency within several disciplines and application areas:
 - Distributed Systems
 - Software engineering
 - Programming languages
 - Protocol specification and verification
 - Hardware design
 - Synchronous and asynchronous circuit design
 - Manufacturing systems
 - Automation systems
 - Workflow systems

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PROGRAM COMMITTEE

Mordechai (Moti) Ben-Ari, Israel

Søren Christensen, (co-chair), Denmark

Jordi Cortadella, Spain

Jörg Desel, Germany

Susanna Donatelli, Italy

João Miguel Fernandes, Portugal

Luís Gomes, (co-chair), Portugal

Jens Jørgensen, Denmark

Sadatoshi Kumagai, Japan

Charles Lakos, Australia

José Lastra, Finland

Alexander H. Levis, USA

Daniel Moldt, Germany

Angelo Perkusich, Brasil

Laure Petrucci, France

Antti Valmari, Finland

Wil van der Aalst, The Netherlands

Alex Yakovlev, UK

Bernardo Wagner, Germany

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Program highlights

We are fortunate to have two outstanding keynote speakers:

Antti Valmari, *Tampere Univ. of Technology, Finland*

Teaching mathematically demanding computer science topics to software engineering students: Is there any reason? Is there any hope?

Alex Yakovlev, *Univ. of Newcastle, UK*

Coping with concurrency in hardware: teaching experiences

Closing Panel discussion on:

Does Concurrency have the place in curricula that it deserves?

*Panelists: Jonathan Billington (moderator), Lars Kristensen,
Daniel Moldt, Laure Petrucci*

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Program (Morning)

- | | |
|---------------|---|
| 8:50 - 9:00 | Opening remarks: Luis Gomes |
| 9:00 – 10:30 | Session Chair: Sadatoshi Kumagai |
| 9:00 - 10:00 | Invited talk
Antti Valmari
Teaching mathematically demanding computer science topics to software engineering students: Is there any reason? Is there any hope? |
| 10:00 - 10:30 | Andrei Lobov, Corina Popescu, Diego Rodriguez, and Jose L. Martinez Lastra
A Graphical Environment for Modeling and Analysis of Concurrent Systems in Manufacturing: An Educational Perspective. |
| 10:30 - 11:00 | Coffee break |
| 11:00 – 12:00 | Session Chair: Lucia Pomello |
| 11:00 - 11:30 | João Paulo Barros and Luís Gomes
Teaching Concurrency Through Petri Nets and Model Composition |
| 11:30 - 12:00 | Antti Valmari
Teaching Concepts of Compositional Concurrency with State Machines |

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Program (Afternoon)

- | | |
|---------------|---|
| 13:30 – 15:00 | Session Chair: Luis Gomes |
| 13:30 - 14:30 | Invited talk
Alex Yakovlev
Coping with concurrency in hardware: teaching experiences |
| 14:30 - 15:00 | Hana Kubátová
Teaching Principles of Petri Nets in Hardware Courses and Student's Projects |
| 15:00 - 15:30 | Coffee break |
| 15:00 – 16:50 | Session Chair: Jonathan Billington |
| 15:30 - 16:00 | Luís Gomes and Anikó Costa
Using Concurrency Modeling Formalisms within System-on-a-Programmable-Chip Design |
| 16:00 - 16:50 | Panel discussion
Does Concurrency have the place in curricula that it deserves?
Panelists: Jonathan Billington (moderator), Lars Kristensen, Daniel Moldt, Laure Petrucci |
| 16:50 – 17:00 | Concluding remarks |