Preface

Invited Presentation: "Logic Wins!"
Jean Goubault-Larrecq

A Spatial-Epistemic Logic for Reasoning about Security Protocols
Bernardo Toninho and Luís Caires

On the Decidability of Non Interference over Unbounded Petri Nets
Eike Best, Philippe Darondeau and Roberto Gorrieri

Covert channel detection using Information Theory
Loïc Hélouët and Aline Roumy

This volume contains the proceedings of the 8th Workshop on Security Issues in Concurrency (SecCo’10). The workshop was held in Paris, France on August 30th, 2010, as a satellite workshop of CONCUR’10. Previous editions of this workshop have been organized in Eindhoven (2003), London (2004), San Francisco (2005), Lisbon (2007), Toronto (2008) and Bologna (2009).

The aim of the SecCo workshop series is to cover the gap between the security and the concurrency communities. More precisely, the workshop promotes the exchange of ideas, trying to focus on common interests and stimulating discussions on central research questions. In particular, we called for papers dealing with security issues (such as authentication, integrity, privacy, confidentiality, access control, denial of service, service availability, safety aspects, fault tolerance, trust, language-based security, probabilistic and information theoretic models) in emerging fields like web services, mobile ad-hoc networks, agent-based infrastructures, peer-to-peer systems, context-aware computing, global/ubiquitous/pervasive computing.

We received 4 submissions (an unusually low number for SecCo), including one short paper. However all papers were of good quality; the three long papers were accepted for this volume (one with corrections) and the short one was presented at the workshop. We also had two great invited talks by Jean Goubault-Larrecq and Sjouke Mauw. The reviews have been carried out by the program committee of SecCo’10, which consisted of

- Kostas Chatzikokolakis, (University of Eindhoven, Netherlands; co-chair)
We would like to thank all the persons that contributed to SecCo'10. First of all, the program committee, the invited speakers, the authors and all the participants that attended the workshop. We are also very grateful to the CONCUR'10 organizers, for taking care of all the local organization. We thank the editors of EPTCS (who will publish these proceedings electronically in the EPTCS series).

Eindhoven and Nancy, August 5, 2010

Kostas Chatzikokolakis
Véronique Cortier

"Logic Wins!"

Jean Goubault-Larrecq (ENS Cachan, France)

Clever algorithm design is sometimes superseded by simple encodings into logic. In particular, we claim that it is particularly simple to encode sound abstractions of security protocols in $H_1$, a decidable fragment of first-order Horn clauses. After reviewing a variant of Nielson, Nielson and Seidl's work on $H_1$ and the spi-calculus, we describe a verification algorithm designed with the same spirit, and which applies to hardware circuit descriptions written in VHDL. We shall describe the new challenges posed by VHDL, in particular the particular semantics of 'wait' instructions, and the effect of signal updates and of timeouts.