ILARIA CASTELLANI

CURRICULUM VITAE

2017

Ilaria Castellani is a permanent researcher at INRIA Sophia Antipolis since 1987. She has been working successively in the teams MEIJE (1986-1999), MIMOSA (2000-2008) and INDES (2009-today). She holds a literary baccalaureate from the Liceo Classico "Michelangiolo" of Florence (1975), an MSc (Laurea) in Computer Science from the University of Pisa (1981) and a PhD in Theoretical Computer Science from the University of Edinburgh (1988). In 1999 she obtained a habilitation for an associate professorship in Italian universities. Her main research interests are in concurrency theory and language-based security, with a recent focus on session types and reversible computation. She has co-directed the PhD theses of Ana Almeida Matos and Pejman Attar.

Ilaria Castellani is the current chair of the IFIP TC1 Working Group 1.8 on Concurrency Theory (2014-2020). She is a member of the editorial board of the French journal "Technique et Science Informatiques". She has participated in several national and European projects, as well as in bilateral projects between France and Italy, France and the UK, France and India. More recently, she took part in the European ICT Cost Action BETTY on Behavioural Types (2012-2016), where she chaired the Working Group on Security. Currently, she participates in the European ICT Cost Action IC1405 on Reversible Computation (2014-2018), and in the PICS project SuCCeSS between France and the Netherlands (2016-2019). Within INRIA, she is a member of the Committee for Gender Equality and Equal Opportunities (Comité Parité et Égalité des Chances). She also participates in the Scientific Animation Committee of the Sophia Antipolis Centre. She was the deputy leader (responsable permanente) of the MIMOSA team (2000-2008).

Main Publications

I. Castellani, U. Montanari.
Graph Grammars for distributed systems.
In *Proc. Workshop on Graph-Grammars and Their Application to Computer Science*, LNCS 153, 1982.

I. Castellani, P. Franceschi, U. Montanari.
Labelled Event Structures: a model for observable concurrency.
In Proc. *IFIP TC2-Working Conference on Formal Description of Programming Concepts II* (1982). North-Holland, Amsterdam, 1983.

I. Castellani.
Bisimulations and abstraction homomorphisms.
In Proc. *TAPSOFT'85*, LNCS 185, 1985.

G. Boudol, I. Castellani.
On the semantics of concurrency: partial orders and transition systems.
In *Proc. TAPSOFT'87*, LNCS 249, 1987.

I. Castellani.
Bisimulations and abstraction homomorphisms.
Journal of Computer and System Sciences 34(2/3):210-235, 1987.

G. Boudol, I. Castellani.
Concurrency and atomicity.
Theoretical Computer Science 59:25-84, 1988.

G. Boudol, I. Castellani.
Permutation of transitions: an event structure semantics for CCS and SCCS.
In *Proc. REX School/Workshop*, LNCS 354, 1988.

G. Boudol, I. Castellani.
A non-interleaving semantics for CCS based on proved transitions.
Fundamenta Informaticae XI: 433-452, 1988.

I. Castellani, M. Hennessy.
Distributed Bisimulations.
Journal of the ACM 36(4):887-911, 1989.

G. Boudol, I. Castellani.
Three equivalent semantics for CCS.
In *Proc. LITP Spring School on Theoretical Computer Science*, LNCS 469, 96-141, 1990.

G. Boudol, I. Castellani, M. Hennessy, A. Kiehn.
Observing localities.
In *Proc. MFCS'91*, LNCS 520, 1991.

G. Boudol, I. Castellani, M. Hennessy, A. Kiehn.
A theory of processes with localities.
In *Proc. CONCUR'92*, LNCS 630, 108-122, 1992.

I. Castellani.
Observing distribution in processes.
In *Proc. MFCS'93*, LNCS 711, 321-331, 1993.

G. Boudol, I. Castellani, M. Hennessy, A. Kiehn.
Observing localities.
Theoretical Computer Science 114: 31-61, 1993.

G. Boudol, I. Castellani, M. Hennessy, A. Kiehn.
A theory of processes with localities.
Formal Aspects of Computing 6:165-200, 1994.

G. Boudol, I. Castellani.
Flow models of distributed computations: three equivalent semantics for CCS.
Information and Computation 114(2): 247-314, 1994.

I. Castellani.
Observing distribution in processes: static and dynamic localities.
Int. Journal of Foundations of Computer Science 6(4): 353-393, 1995.

R. Amadio, I. Castellani, D. Sangiorgi.
On bisimulations for the asynchronous pi-calculus.
In *Proc. CONCUR'96*, LNCS 1119, 147-162, 1996.

A. Arnold, I. Castellani.
An algebraic characterization of observational equivalence (Note).
Theoretical Computer Science 156: 289-299, 1996.

I. Castellani, G. Q. Zhang.
Parallel product of event structures.
Theoretical Computer Science 179: 203-215, 1997.

R. Amadio, I. Castellani, D. Sangiorgi.
On Bisimulations for the asynchronous pi-calculus.
Theoretical Computer Science 195(2): 291-324, 1998.

I. Castellani, M. Hennessy.
Testing theories for asynchronous languages,
In *Proc. FST-TCS'98*, LNCS 1530, 1998.

I. Castellani, M. Mukund, P.S.Thiagarajan.
Synthesizing distributed transition systems from global specifications.
In *Proc. FST-TCS'99*, LNCS 1738, 1999.

I. Castellani.
Process algebras with localities.
In J. Bergstra, A. Ponse and S. Smolka editors, *Handbook of Process Algebra*,
Chapter 15, pages 945-1045. North-Holland, Amsterdam, 2001.

G. Boudol, I. Castellani.
Noninterference for concurrent programs.
In *Proc. ICALP'01*, LNCS 2076, 382-395, 2001.

G. Boudol, I. Castellani.
Noninterference for Concurrent Programs and Thread Systems.
Theoretical Computer Science 281(1): 109-130, 2002.

R. Amadio, G. Boudol, F. Boussinot, I. Castellani.
Reactive concurrent programming revisited.
In *Proc. Workshop "Algebraic Process Calculi: the first twenty five years and*

beyond", ENTCS 162:49-60, 2006.

I. Castellani.
State-oriented noninterference for CCS.
In *Proc. SecCo'07*, ENTCS 194(1): 39-60, 2007.

A. Almeida Matos, G. Boudol, I. Castellani.
Typing noninterference for reactive programs.
Journal of Logic and Algebraic Programming 72: 124-156, 2007.

S. Capecchi, I. Castellani, M. Dezani-Ciancaglini, T. Rezk.
Session Types for Access and Information Flow Control.
In *Proc. CONCUR'10*, LNCS 6269, 237-252, 2010.

S. Capecchi, I. Castellani, M. Dezani-Ciancaglini.
Information Flow Safety in Multiparty Sessions.
In *Proc. EXPRESS'11*, EPTCS 64: 16-30, 2011.

V. Bono, S. Capecchi, I. Castellani, M. Dezani-Ciancaglini.
A Reputation System for Multirole Sessions.
In *Proc. TGC'11*, LNCS 7173, pp. 1-24, 2012.

P. Attar, I. Castellani.
Fine-Grained and Coarse-Grained Reactive Noninterference.
In *Proc. TGC'13*, LNCS 8358, 2013.

S. Capecchi, I. Castellani, M. Dezani-Ciancaglini.
Typing Access Control and Secure Information Flow in Sessions.
Information and Computation 238: 68-105, Special Issue on
Security and Rewriting Techniques, 2014.

I. Castellani, M. Dezani-Ciancaglini, J. A. Perez.
Self-Adaptation and Secure Information Flow in Multiparty Structured
Communications: A Unified Perspective.
In *Proc. BEAT'14*, EPTCS 162: 9-18, 2014.

M. Bartoletti, I. Castellani, P. Deniélou, M. Dezani-Ciancaglini, S. Ghilezan, J.
Pantovic, J. A. Pérez, P. Thiemann, B. Toninho, H. Torres Vieira.
Combining behavioural types with security analysis.
J. Log. Algebr. Meth. Program. 84(6): 763-780, Special Issue on Open Problems in
Concurrency Theory, 2015.

I. Castellani, M. Dezani-Ciancaglini and U. de' Liguoro.
Secure Multiparty Sessions with Topics.
In *Proc. PLACES'16*, EPTCS 211: 1-12, 2016.

I. Castellani, M. Dezani-Ciancaglini, J. A. Perez.
Self-Adaptation and Secure Information Flow in Multiparty Structured
Communications.

Formal Aspects of Computing 28(4): 669-696, 2016.

S. Capecchi, I. Castellani, M. Dezani-Ciancaglini.
Information Flow Safety in Multiparty Sessions.
Mathematical Structures in Computer Science 26(8):1352-1394, Cambridge
University Press, 2016.

I. Castellani, M. Dezani-Ciancaglini and P. Giannini.
Concurrent Reversible Sessions.
In *Proc. CONCUR'17*, LIPIcs 85, pp. 30:1-30:17, 2017.