

Alberto Lluch Lafuente

– Curriculum Vitae up to June 8, 2016 –

Personal Information

Surnames	Lluch Lafuente
First name	Alberto
Work address	DTU Compute Richard Petersens Plads, Building 324 DK-2800 Kgs. Lyngby
Home address	Borgmester Jensens Allé 17 4tv DK-2100 Copenhagen (Denmark)
Telephones	+45 31241447 (cell) +45 25337509 (office) albertolluch (skype)
Email	abl@dtu.dk albertolluch@gmail.com
Homepage	www.albertolluch.com linkedin.com/in/albertolluch twitter.com/albertolluch
Nationality	Spaniard
Date of birth	13 April 1976
Gender	Male
Marital status	Married since September 2003
Family status	Two children



Summary

2014 - today	Associate Professor at DTU, Technical University of Denmark. Member of the Language-based section lead by Prof. Hanne Riis Nielson.
2009 - 2014	Assistant Professor at the IMT Institute for Advanced Studies Lucca, Italy. Member of the SysMA research unit lead by Prof. Rocco De Nicola and of the European Projects ASCENS and QUANTICOL . Teacher and supervisor at PhD level, research on formal methods, adaptive and autonomic systems.
2007 - 2009	Post-doc research collaborator of Prof. Ugo Montanari at the Department of Computer Science of the University of Pisa, Italy, granted by the European Project SENSORIA . Research activities on formal methods for service oriented computing.
2006	Analyst/Developer for the Cabel Group at Empoli, Italy. Development of interbank financial operations systems.
2003 - 2005	Post-doc research collaborator of Prof. Ugo Montanari at the Department of Computer Science, University of Pisa, granted by the European Research Training Network SEGRAVIS . Research on formal methods for global computing systems.
1999 - 2003	Ph.D. in Computer Science at the Institute of Computer Science of the University of Freiburg, Germany. Research and teaching assistant of Prof. Dr. Thomas Ottmann and Prof. Dr. Stefan Leue.
1999	Best performance award by the <i>Kutxa</i> bank at San Sebastián, Spain.
1994 - 1999	MSc in Computer Science and Engineering , Basque Country University, Spain.
1998	EU Socrates/Erasmus grant hosted at the Albert-Ludwigs Universität in Freiburg.

Scientific Highlights

Fields	<p>Formal approaches to the specification, analysis and development of systems made of concurrent, distributed, and autonomous entities. Development of novel methodologies, specification mechanisms, analysis algorithms and optimization techniques, mostly based on the use of formal methods, logics, and graphs.</p>
Main Scientific Contributions	<p>My main contribution to the scientific community is the co-invention and promotion of <i>Directed Model Checking</i>, an approach to automated software verification based on artificial intelligence techniques. I have contributed several highly influential seminal works to this field. The key idea of the approach is to improve the bug finding capabilities of model checkers by using heuristically guided state space exploration algorithms. Part of the success of this technique is that I implemented it in the SPIN model checker, arguably the most popular model checker in the research community.</p> <p>Another major contribution is the co-invention and promotion of <i>Architectural Design Rewriting</i>, a formal approach to the design of reconfigurable software systems. ADR combines techniques from the fields of software engineering and formal methods. Some main results of this approach are a methodology for specifying type-preserving architectural reconfigurations, and a methodology for defining visual representations of formal languages.</p>
Scientific Collaborations	<p>I have a rich network of collaborators, including prominent researchers such as Ugo Montanari (University of Pisa), Rocco De Nicola (IMT), José Meseguer (UIUC), and Martin Wirsing (LMU). Some of my collaborations are or have been carried out within international and national research projects.</p>
Service in Scientific Events and Journals	<p>I serve(d) in several international scientific venues as PC chair (e.g. conferences like COORDINATION and TGC and workshops/tracks at ETAPS, DISCOTEC, ACM SAC, PDP, HPCS and FM), as member of the Program Committee (e.g. CONCUR, FORTE, FACS, IJCAI), and as reviewer for international journals (e.g. ACM/IEEE transactions) and top-level conferences (e.g. ICSE, POPL). I have also served as international reviewer for several national funding agencies. I am currently Editorial Assistant of Elseviers' Journal on Logical and Algebraic Methods in Programming (JLAMP).</p>
Grants and Awards	<p>As a researcher I have received a best paper award in 2015 (IFIP International Federated Conference on Distributed Computing Techniques) and grants from European projects (SENSORIA, 2007-2009), national projects (German DFG, 1999-2003) and European training networks (SEGRAVIS, 2003-2005). As a student I won an award in 1999 for the best final average marks in Computer Science in my university, and an Erasmus grant in 1998.</p>

Work Experience

July 2014 - today Main activities Hosting Institution Sector	Associate Professor. Research and teaching activities on Computer Science DTU Technical University of Denmark, www.dtu.dk . Academy.
Dec 2009 - June 2014 Main activities Hosting Institution Sector	Assistant Professor. Research and teaching activities on Computer Science. PhD students supervision. IMT Institute for Advanced Studies Lucca, Italy, www.imtlucca.it . Academy.
Jan 2007 - Nov 2009 Main activities Hosting Institution Granting Institution Sector	Research contract holder. Research activities on formal methods for service oriented computing. Department of Computer Science of the University of Pisa, Italy, www.di.unipi.it . European Union, FP6 Integrated Project SENSORIA, sensoria.fast.de . Academy.
Apr 2006 - Dec 2006 Main activities Employer Sector	Analyst/Developer. Straight-through-processing applications for interbank financial communications. CABEL Group, Empoli, Italy, www.cabel.it . Information Technology (Banking).
Nov 2003 - Apr 2005 Main activities Hosting Institution Granting Institution Sector	Research contract holder. Research activities on formal methods for global computing systems. Department of Computer Science of the University of Pisa, Italy, www.di.unipi.it EU, European Research Training Network SEGRAVIS, www.segravis.org . Academy.
Aug 1999 - Sep 2003 Main activities Employer Granting institution Sector	Research and Teaching Assistant. Responsible for the DFG Project Ot64/13-2 <i>Heuristische Suche und Anwendung auf das Problem der Protokollvalidation</i> (Heuristic Search and its Application to Protocol Validation). Research activities on formal methods and artificial intelligence for communication systems. Teaching assistant of Prof. Dr. Prof. Thomas Ottmann and Prof. Dr. Stefan Leue. Chair of Algorithms and Data Structures lead by Prof. Dr. Thomas Ottmann at the <i>Albert-Ludwigs-Universität</i> , Germany, www.informatik.uni-freiburg.de . <i>Deutsche Forschung Gemeinschaft</i> (German Research Foundation), www.dfg.de . Academy.

Projects

Member	European FP7-ICT STREP project QUANTICOL (A Quantitative Approach to Management and Design of Collective and Adaptive Behaviours), around 2.5M EUR, 48 months (2013-today).
Member	Italian PRIN Project CINA (Compositionality, Interaction, Negotiation and Autonomicity for the future ICT), around 0.5M EUR, 48 months (2013-today).
Member	European FP7-ICT Integrated Project 257414 ASCENS (Autonomic Service-Component Ensembles), around 6M EUR, 48 months (2010-today).
Member	European FP6-ICT Integrated Project Project SENSORIA (Software Engineering for Service Oriented Applications), 60 months (2005-2009).
Member	European Research Training Network 2-2001-00346 SEGRAVIS (Syntactic and Semantic Integration of Visual Modelling Techniques), 48 months (2002-2006).
Member	German DFG Research Project Ot64/13-2 (Heuristic Search and its Application to Protocol Validation), 50 months (1998-2003).
Collaborator	European FET project ALLOW (Adaptable Pervasive Flows).
Collaborator	European FET project PROFUNDIS (Proofs of Functionality for Mobile Distributed Systems).
Collaborator	European FET project AGILE (Architectures for Mobility).
Collaborator	Italian FIRB project TOCAI.IT (Knowledge Technologies for Enterprise Internet Aggregation).
Collaborator	Italian PRIN project IPODS (Interacting Processes in Open-ended Distributed Systems).
Collaborator	Italian PRIN project SisteR (Reduction Systems: Synthesis, Refinement and Verification).
Collaborator	Italian Project CNR-SP4 (High Quality Software Architectures for WAN Global Computing).
Collaborator	German DFG project <i>Heuristic Search</i> Ed 74/3.
Collaborator	German DFG project <i>Directed Model Checking</i> Ed 74/2.

Conference Organization

PC chair	Int'l IFIP International Conference on Coordination Models and Languages (COORDINATION 2016).
PC chair	Int'l FM Workshop on Automated Specification and Verification of Web Systems (WWV 2015).
PC chair	Int'l DISCOTEC Workshop Interaction and Concurrency Experience (ICE 2013-15).
PC chair	Int'l ETAPS Workshop on Graph Inspection and Traversal Engineering (GRAPHITE 2014).
PC chair	Int'l Symposium on Trustworthy Global Computing (TGC 2013).
PC chair	Int'l HPCS Workshop on Modeling and Simulation of P2P and Autonomic Systems (MOSPAS 2013).
SC member	Int'l Conf. on Parallel, Distributed and network-based Processing: Formal Approaches (4PAD 2015).
Track chair	Int'l Conf. on Parallel, Distributed and network-based Processing: Formal Approaches (4PAD 2014).
Track chair	Int'l ACM Symp. on Applied Computing: Service-Oriented Architectures & Programming (SOAP '14-'15).
Organizer	Int'l Summer School on Self-Awareness in Autonomic Computing (AWASS 2013).
PC member	Int'l Conference on Concurrency Theory (CONCUR 2016).
PC member	Int'l Joint Conference on Artificial Intelligence (IJCAI 2016).
PC member	Global Conference on Artificial Intelligence (GCAI 2016).
PC member	Int'l Workshop on FORMAL methods for the quantitative Evaluation of Collective Adaptive Systems (FORECAST 2016).
PC member	Int'l Workshop on Formal Approaches to Parallel and Distributed Systems (4PAD 2016).
PC member	Int'l ACM Symposium on Applied Computing – track on Service-Oriented Architectures and Programming (SOAP 2016).
PC member	Int'l Workshop on Adaptive Services for the Future Internet (WAS4FI 2015).
PC member	Int'l Workshop on Petri nets for Adaptive Discrete-Event Control Systems (ADECS 2015).
PC member	Int'l Workshop on Formal verification for self-* systems (VERY* 2015).
PC member	Int'l Workshop on Formal Methods for Industrial Critical Systems (FMICS 2015).
PC member	Int'l ETAPS Workshop on Graphs as Models (GAM 2015).
PC member	Int'l Workshop on Distributed Adaptive Systems (DAS 2015, 2106).
PC member	Int'l Conf. on Formal Techniques for Distributed Objects, Components and Systems (FORTE 2014).
PC member	Int'l Symposium on Formal Aspects of Component Software (FACS 2014-15).
PC member	Int'l ETAPS Workshop on Rewriting Logic and its Applications (WRLA 2014, 2016).

PC member	Int'l Workshop on Web Services and Formal Methods (WS-FM 2013).
PC member	Int'l Symposium on Trustworthy Global Computing (TGC 2011-12, 2014-15).
PC member	Int'l ICAPS Workshop on Model Checking and Automated Planning (MOCHAP 2014-15).
PC member	Int'l HPCS Workshop on Modeling and Simulation of P2P and Autonomic Systems (MOSPAS 2014).
PC member	Int'l ETAPS Workshop on Graph Inspection and Traversal Engineering (GRAPHITE 2011).
PC member	Int'l Workshop Interaction and Concurrency Experience (ICE 2010-12,216).
PC member	Int'l Workshop on Model Checking Software (SPIN 2007, 2011, 2016).
PC member	Int'l ESOC Workshop on Adaptive Services for the Future Internet (WAS4FI 2014).
PC member	Int'l ETAPS Workshop on Graph Transformation and Visual Modelling Languages (GT-VMT 2010-11).

Teaching Activities

S2015-16	<i>Programming in C++</i> , BSc/MSc/PhD, DTU, 5 ETCS, ~100 students
F2014-15	<i>Model Checking</i> , MSc, DTU, 7.5 ETCS, ~20 students.
J2015	<i>Introduction to Distributed Applications</i> , BSc, DTU, 5 ETCS, ~50 students.
F2012, F2013, S2014	<i>Model Checking</i> , PhD, IMT, 6 ETCS, ~10 students.
W2013	<i>Introduction to Formal Verification</i> , PhD, GISS, 3 ETCS, ~10 students.
F2013	<i>Specification and Verification with Maude</i> , PhD, IMT, 2 ETCS, ~10 students.
S2011-13, W2013	<i>Algorithms and their complexity</i> , PhD, IMT, 2 ETCS, ~10 students.
S2011 and 2013	<i>Model Checking with SPIN</i> , Invited lecture, MSc, University of Pisa, ~4 students.
S2012	<i>A white-box perspective on Adaptation</i> , Invited lecture in the AWASS Summer School on Awareness in Autonomic Systems at Edinburgh (UK), ~30 students.
S2010	<i>Methods and Tools for Algebraic Verification</i> , PhD, IMT, 4 ETCS, ~10 students.
F2008	<i>Rigorous Software Development via Model Checking</i> , PhD Seminar Series, ~10 students, Teaching assistant of Prof. Gianluigi Ferrari at the University of Pisa.
S2002-03	<i>Computational Geometry</i> , MSc, University of Freiburg, 6 ECTS, ~50 students.
F2001	<i>Introduction to Applied Computer Science</i> , MSc, University of Freiburg, 6 ECTS, ~50 students.
S2000	<i>Computer Networks</i> , BSc, University of Freiburg, 6 ECTS, ~10 students.

Student Supervision

PhD supervision	Marina Andric, PhD student at IMT Lucca, thesis on “ <i>Data Sharing and Replication for Relaxed High-Performance Computing</i> ”, 2013-today.
PhD supervision	Stefano Sebastio, PhD student at IMT Lucca, thesis on “ <i>Models and Self-* Strategies for Volunteer Clouds</i> ”, 2011-2014.
PhD supervision	Andrea Vandin, PhD at IMT Lucca, thesis on “ <i>Specification and Analysis of Systems with Dynamic Structure</i> ”, Now Post-Doc at the University of Southampton (UK).
PhD examination (external)	Lenz Belzner, PhD candidate at LMU München, thesis on “ <i>Simulation-based autonomous systems in discrete and continuous domains</i> ”, 2016.
PhD examination (internal)	Omar Saad Kulieb Almousa, PhD candidate at the Technical University of Denmark, thesis on “ <i>Security Protocols: Specification, Verification, Implementation, and Composition</i> ”, 2016.
PhD examination (internal)	Marieta Georgieva Ivanova, PhD candidate at the Technical University of Denmark, thesis on “ <i>Modelling Socio-Technical Aspects of Organisational Security</i> ”, 2016.
PhD examination (external)	Lucian Bentea, PhD candidate at the University of Oslo, thesis on “ <i>Formal Modeling and Analysis of Probabilistic Real-Time Systems in Rewriting Logic</i> ”, 2015.
PhD examination (external)	Florian Leitner-Fischer, PhD candidate at the University of Konstanz, thesis on “ <i>Causality Checking of Safety-Critical Software and Systems</i> ”, 2015.
PhD examination (internal)	Roberto Vigo, PhD candidate at the Technical University of Denmark, thesis on “ <i>Availability by Design</i> ”, 2015.
PhD examination (internal)	Qurat Nizamani, PhD candidate at the University of Leicester, thesis on “ <i>Directed Model Checking of Security Protocols</i> ”, 2011.
PhD examination (external)	Pedro Cámara, PhD candidate at the University of Málaga (Spain), thesis on “ <i>Model Checking for Verification of Avionics Software</i> ”, 2013.
PhD evaluation	Member of the evaluation committee of Luca Sani and Giovanni Accongiagioco, PhD candidates supervised by Luciano Lenzi (University of Pisa).
BSc supervision	Irena Guergiova, BSc student at the University of Pisa, co-supervised with Roberto Bruni, thesis on an Eclipse-based graphical editor for Maude, 2010.
BSc supervision	Bruno Zizzi, BSc student at the University of Pisa, co-supervised with GianLuigi Ferrari, thesis on a tool for teaching&learning internet communication protocols, 2009.
BSc supervision	Giovanni Campo, BSc student at the University of Pisa, co-supervised with Fabio Gadducci, thesis on encoding the π -calculus into a graph transformation tool, 2008.

Education and Training

May 2004	School on Foundations of Visual Modelling Techniques by the European Research Training Network SEGRAVIS held at the international research center <i>Schloss Dagstuhl</i> in Germany.
Aug 1999 - Jun 2003	PhD on formal methods and artificial intelligence for communication systems at the Albert-Ludwigs-Universität in Freiburg (Germany), partially granted by the <i>Deutsche Forschung Gemeinschaft</i> (German Research Foundation).
Thesis title	Directed Search for the Verification of Communication Protocols.
Level achieved	<i>Sehr gut</i> (Optimal).
Academic year 1998/1999	European Community Socrates/Erasmus grant hosted at the Albert-Ludwigs-Universität in Freiburg (Germany).
1994 - 1999	<i>Ingeniero en Informática</i> (Master of Science in Computer Science Engineering) at the University of the Basque Country (Spain).
Thesis title	Analysis of Transport Protocols in Hybrid Networks.
Level achieved	Thesis Performance: 10/10 <i>Matrícula de Honor</i> . Average performance: 8,11/10. Awarded prize by the <i>Kutxa</i> bank at San Sebastián (Spain) for best final average performance in <i>Ingeniero en Informática</i> at the University of the Basque Country (Spain).
1994	High School Graduation at the <i>Deutsche Schule San Alberto Magno</i> at San Sebastián (Spain).
1987 - 1993	Computer programming courses at the <i>Colegio Católico Santa María</i> at San Sebastián (Spain).

Personal Skills and Competences

Mother tongue(s)	Spanish.
Other language(s)	Italian (native), English (fluent), German (fluent), Basque (basic), Danish (basic).
Computer skills and competences	Programming experience in Ada, Alloy, Assembly, Basic/Visual Basic, C/C++, CGI, Cobol, Java, JavaScript, HTML, Lisp, Maude, Pascal, PHP, Prolog, ILE RPG, SQL, TCL/TK, UML, XML and others; User-, system- and development-level experience with the operating systems Unix/Linux, Mac, Windows, iSeries (AS/400).

Additional Information

Volunteering	Volunteering at the <i>ARCA onlus</i> (<i>Associazione Amici Animali e Ambiente</i>) at Empoli from February 2005 until July 2006.
--------------	--

Publications

- | | |
|---------|---|
| Scholar | http://scholar.google.it/citations?user=df9bzkoAAAAJ&hl=en |
| DBLP | http://www.informatik.uni-trier.de/~ley/db/indices/a-tree/l/Lluch=Lafuente:Alberto.html |
| Scopus | http://www.scopus.com/authid/detail.url?authorId=9245337700 |
| WoS | http://www.researcherid.com/rid/G-4413-2011 |
- Publication Record in Scientific Databases**
- Books**
- B1 Alberto Lluch Lafuente, Marco Righi, "Internet e Web 2.0", *UTET*, 2011, ISBN 978-8860083418.
- Edited Volumes**
- V4 Alberto Lluch Lafuente, Jos'e Proenca, "Proceedings of the IFIP International Conference on Coordination Models and Languages (COORDINATION 2016)", *Lecture Notes in Computer Science (LNCS), 2016*.
- V10 Sophia Knight, Ivan Lanese, Alberto Lluch-Lafuente, Ana Sokolova, "Proceedings 8th Interaction and Concurrency Experience (ICE 2015)", *Electronic Proceedings in Theoretical Computer Science (EPTCS)*.
- V9 Maurice Ter Beek, Alberto Lluch-Lafuente, "Proceedings 11th International Workshop on Automated Specification and Verification of Web Systems (WWV 2015)", *Electronic Proceedings in Theoretical Computer Science (EPTCS)*.
- V8 Ivan Lanese, Alberto Lluch Lafuente, Ana Sokolova, Hugo Torres Vieira, "Special Issue on Interaction and Concurrency Experience (ICE 2014)", *Journal of Logical and Algebraic Methods in Programming*, Elsevier.
- V7 Marco Carbone, Ivan Lanese, Alberto Lluch Lafuente, Ana Sokolova, "Special Issue on Interaction and Concurrency Experience (ICE 2013)", *Science of Computer Programming*, Elsevier.
- V6 Mario Braveti, Alberto Lluch Lafuente, Manuel Mazzara, Fabrizio Montesti, Ilun Yu, "Special Issue on Service Oriented Architectures and Programming", *Journal of Internet Services and Information Security*, Volume 5, Issue 1, ISSN: 2182-2069, 2015.
- V5 Alberto Lluch Lafuente, Emilio Tuosto, "Special Issue on 4PAD/WF-FM 2013", *Journal on Service Computing and Applications*, Springer, ISSN 1863-2394, 2015.
- V4 Martín Abadi, Alberto Lluch Lafuente, "Proceedings of the 8th Symposium on Trustworthy Global Computing (TGC 2013)", *Lecture Notes in Computer Science (LNCS), Volume 8358, ISBN 978-3-319-05118-5, 2014*.
- V3 Ivan Lanese, Alberto Lluch-Lafuente, Ana Sokolova, Hugo Torres Vieira, "Proceedings 7th Interaction and Concurrency Experience (ICE 2014)", *Electronic Proceedings in Theoretical Computer Science (EPTCS)*, Volume 166, ISSN 2075-2180, 2014.
- V2 Dragan Bosnacki, Stefan Edelkamp, Alberto Lluch-Lafuente, Anton Wijs, "Proceedings 3rd Workshop on GRAPH Inspection and Traversal Engineering (GRAPHITE 2014)", *Electronic Proceedings in Theoretical Computer Science (EPTCS)*, Volume 159, ISSN 2075-2180, 2014.
- V1 Marco Carbone, Ivan Lanese, Alberto Lluch Lafuente, Ana Sokolova, "Proceedings of the 6th Interaction and Concurrency Experience (ICE 2013)", *Electronic Proceedings in Theoretical Computer Science (EPTCS)*, Volume 131, ISSN 2075-2180, 2013.
- International Journals**
- J11 Stefano Sebastio, Michele Amoretti, Alberto Lluch Lafuente, "AVOCLOUDY: A Simulator of Volunteer Clouds", *in press, Software: Practice and Experience, Wiley*, ISSN 0038-0644, 2015.
- J10 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch Lafuente, Andrea Vandin "Modelling and analyzing adaptive self-assembling strategies with Maude", *International Journal on the Science of Computer Programming*, Volume 99, ISSN 0167-6423, Elsevier, 2015.
- J9 Roberto Bruni, Alberto Lluch Lafuente, Ugo Montanari, "Constraint Design Rewriting", *Science of Computer Programming*, ISSN 0167-6423, Volume 97, 2015.
- J8 Fabio Gadducci, Alberto Lluch Lafuente, Andrea Vandin, "Counterpart Semantics for a Second-Order mu-Calculus", *Fundamenta Informaticae*, volume 118, pages 177-205, ISSN 0169-2968, 2012.

- J7 Roberto Bruni, Alberto Lluch Lafuente, Ugo Montanari, "On Structured Model-Driven Transformations", *Festschrift in honour of Manfred Broy's 60th birthday, International Journal of Software and Informatics*, Volume 2, Number 1-2, ISSN 1673-7288, Institute of Software, the Chinese Academy of Sciences, 2011.
- J6 Roberto Bruni, Fabio Gadducci, Alberto Lluch Lafuente, "An Algebra of Hierarchical Graphs and its Application to Structural Encoding", *Scientific Annals of Computer Science*, Volume XX, pages 53-96, ISSN 1843-8121, 2010.
- J5 Dragan Bošnački, Stefan Leue, Alberto Lluch Lafuente, "Partial-Order Reduction for General State Exploring Algorithms", *International Journal on Software Tools for Technology Transfer*, ISSN 1433-2779, Volume 11, Number 1, pages 39-51, 2009.
- J4 Roberto Bruni, Alberto Lluch Lafuente, Ugo Montanari, Emilio Tuosto, "Style-Based Architectural Reconfigurations", *Bulletin of the European Association on Theoretical Computer Science (EATCS)*, ISSN 0252-9742, Number 94, pages 161-180, 2008.
- J3 Alberto Lluch Lafuente, Ugo Montanari, "Quantitative mu-calculus and CTL defined over Constraint Semirings", *International Journal on Theoretical Computer Science*, ISSN 0304-3975, Volume 346, Issue 1, pages 135-160, 2005.
- J2 Stefan Edelkamp, Stefan Leue, Alberto Lluch Lafuente, "Partial-Order Reduction and Trail Improvement in Directed Model Checking", *International Journal on Software Tools for Technology Transfer*, ISSN 1433-2779, Volume 6, Number 4, pages 277-301, 2004.
- J1 Stefan Edelkamp, Stefan Leue and Alberto Lluch Lafuente, "Directed Explicit-State Model Checking in the Validation of Communication Protocols", *International Journal on Software and Tools for Technology Transfer*, ISSN 1433-2779, Volume 5, Numbers 2-3, pages 247-267, 2004.

International Conferences, Symposia and Workshops

- E43 Maurice H. ter Beek, Axel Legay, Alberto Lluch-Lafuente, Andrea Vandin, "Statistical Analysis of Probabilistic Models of Software Product Lines with Quantitative Constraints", *19th International Software Product Line Conference (SPLC'15)*, ACM, 2015.
- E42 Xi Wu, Ximeng Li, Alberto Lluch-Lafuente, Flemming Nielson, Hanne Riis Nielson, "Klaim-DB: A Modeling Language for Distributed Database Applications", *17th IFIP WG 6.1 International Conference on Coordination Models and Languages (COORDINATION 2015)*, *Lecture Notes in Computer Science*, Volume 9037, 2015.
- E41 Alberto Lluch-Lafuente, Michele Loreti, Ugo Montanari, "A Fixpoint-Based Calculus for Graph-Shaped Computational Fields", *17th IFIP WG 6.1 International Conference on Coordination Models and Languages (COORDINATION 2015)*, Volume 9037, *Lecture Notes in Computer Science*, 2015.
- E40 Marina Andric, Rocco De Nicola, Alberto Lluch-Lafuente, "Replica-Based High-Performance Tuple Space Computing", *17th IFIP WG 6.1 International Conference on Coordination Models and Languages (COORDINATION 2015)*, Volume 9037, *Lecture Notes in Computer Science*, 2015.
- E39 Maurice H. ter Beek, Axel Legay, Alberto Lluch-Lafuente, Andrea Vandin, "Quantitative Analysis of Probabilistic Models of Software Product Lines with Statistical Model Checking", *6th International Workshop on Formal Methods and Analysis in Software Product Line Engineering (FMSPLE'15)*, ACM, 2015.
- E38 Alessandro Celestini, Alberto Lluch Lafuente, Philip Mayer, Stefano Sebastio, and Francesco Tiezzi, "Reputation-based Cooperation in the Clouds", *8th IFIP WG 11.11 International Conference on Trust Management (IFIP TM 2014)*, *Lecture Notes in Computer Science*, 2014.
- E37 Michele Amoretti, Alberto Lluch Lafuente, Stefano Sebastio, "A Computational Field Framework for Collaborative Task Execution in Volunteer Clouds", *9th International ICSE Symposium on Self-Engineering for Self-Adaptive Systems (SEAMS'14)*, *IEEE Computer Society*, 2014.
- E36 Maurice Ter Beek, Alberto Lluch Lafuente, Marinella Petrocchi "Combining Declarative and Procedural Views in the Specification and Analysis of Product Families", *4th International Workshop on Formal Methods and Analysis in Software Product Line Engineering (FMSPLE'13)*, ACM, 2013.
- E35 Michele Amoretti, Alberto Lluch Lafuente, Stefano Sebastio, "A cooperative approach for distributed task execution in autonomic clouds", *21st Euromicro International Conference on Parallel, Distributed, and Network-Based Processing (PDP'13)*, *IEEE Computer Society*, 2013.
- E34 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch Lafuente, Andrea Vandin, "Adaptable Transition Systems", *21st International Workshop on Algebraic Development Techniques (WADT'12)*, *Lecture Notes in Computer Science*, Volume 7841, 2013.

- E33 Alberto Lluch Lafuente, José Meseguer, Andrea Vandin, "State Space c-Reductions of Concurrent Systems in Rewriting Logic", *International Conference on Formal Engineering Methods (ICFEM'12)*, Lecture Notes in Computer Science, Volume 7635, 2012.
- E32 Fabio Gadducci, Alberto Lluch Lafuente, Andrea Vandin, "Exploiting over- and under-approximations for infinite-state counterpart models", *International Conference on International Conference on Graph Transformation (ICGT'12)*, Lecture Notes in Computer Science, Volume 7562, 2012.
- E31 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch Lafuente, Andrea Vandin, "Modelling and analyzing adaptive self-assembling strategies with Maude", *International Workshop on Rewriting Logic and its Applications (WRLA'12)*, Lecture Notes in Computer Science, Volume 7571, 2012.
- E30 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch Lafuente, Andrea Vandin, "A Conceptual Framework for Adaptation", *15th International Conference on Fundamentals of Software Engineering (FASE'12)*, Lecture Notes in Computer Science, Volume 7212, 2012.
- E29 Roberto Bruni, Alberto Lluch Lafuente, "Evaluating the performance of model transformation styles with Maude", *8th International Symposium on Formal Aspects of Component Software (FACS'11) Lecture Notes in Computer Science*, Volume 7253, 2012.
- E28 Alberto Lluch Lafuente, Andrea Vandin, "Towards a Maude Tool for Model Checking Temporal Graph Properties", *5th International Workshop on Graph Transformation and Visual Modeling Techniques (GT-VMT'10)*, ECEAAST(41), 2011.
- E27 Fabio Gadducci, Alberto Lluch Lafuente, Andrea Vandin "Counterpart semantics for a second-order mu-calculus", *International Conference on Graph Transformation (ICGT'10)*, *Lecture Notes in Computer Science*, 2010, Volume 6372, 2010.
- E26 Artur Boronat, Roberto Bruni, Alberto Lluch Lafuente, Ugo Montanari, Generoso Paolillo, "Exploiting the hierarchical structure of rule-based specifications for decision planning", *International Conference on Formal Techniques for Distributed Systems (FMOODS/FORTE'10)*, Lecture Notes in Computer Science, Volume 6117, 2010.
- E25 Roberto Bruni, Fabio Gadducci, Alberto Lluch Lafuente, "An Algebra of Hierarchical Graphs", *5th Symposium on Trustworthy Global Computing (TGC'10)*, *Lecture Notes in Computer Science*, 2010, Volume 6084, 2010.
- E24 Roberto Bruni, Fabio Gadducci, Alberto Lluch Lafuente, "A Graph Syntax for Processes and Services", *9th International Workshop on Web Services and Formal Methods (WS-FM'09)*, *Springer Lecture Notes in Computer Science*, Volume 4912.
- E23 Antonio Bucchiarone, Alberto Lluch Lafuente, Annapaola Marconi, Marco Pistore, "A formalisation of Adaptable Pervasive Flows", *9th International Workshop on Web Services and Formal Methods (WS-FM'09)*, *Springer Lecture Notes in Computer Science*, Volume 4912.
- E22 Martin Wirsing, Ugo Montanari, Roberto Bruni, Matthias Hölzl, Nora Koch, Alberto Lluch Lafuente, Philip Mayer, and Andreas Schroeder, "A service-oriented UML profile with formal support", *7th International joint Conference on Service Oriented Computing ICSOC/ServiceWave 2009*.
- E21 Andrea Bracciali, Roberto Bruni, Alberto Lluch Lafuente, "On Symbolic Semantics for Name-decorated Contexts", *Proceedings of the 1st Interaction and Concurrency Experience (ICE'08)*, *Elsevier Electronic Notes in Theoretical Computer Science*, Volume 229, Issue 3, Issue 22, ISSN 0304-3975, 2009. .
- E20 Roberto Bruni, Alberto Lluch Lafuente, Ugo Montanari, "Hierarchical Design Rewriting with Maude", *Proceedings of the 7th International Workshop on Rewriting Logic and its Applications (WRLA'08)*, *Elsevier Electronic Notes in Theoretical Computer Science*, Volume 238, Issue 3, 2009.
- E19 Roberto Bruni, Alberto Lluch Lafuente, Ugo Montanari, Emilio Tuosto, "Service Oriented Architectural Design", *Proceedings of the 3rd International Symposium on Trustworthy Global Computing (TGC'07)*, *Springer Lecture Notes in Computer Science*, Volume 4912, 2008.
- E18 Fabio Gadducci, Alberto Lluch Lafuente, "Graphical Encoding of a Spatial Logic for the pi-calculus", *Proceedings of the 2nd Conference on Algebra and Coalgebra in Computer Science (CALCO'07)*, *Springer Lecture Notes on Computer Science*, Volume 4624, ISBN 978-3-540-73857-2, 2007.
- E17 Alberto Lluch Lafuente, "Towards Model Checking Spatial Properties with SPIN", *Proceedings of the 14th International SPIN Workshop on Model Checking Software (SPIN'07)*, *Springer Lecture Notes on Computer Science*, Volume 4595, ISBN 978-3-540-73857-2, 2007.

- E16 Paolo Baldan, Andrea Corradini, Barbara König, Alberto Lluch Lafuente, "A Temporal Graph Logic for Abstractions of Graph Rewriting Systems", *Proceedings of the 18th International Workshop on Algebraic Development Techniques (WADT'06)*, Springer Lecture Notes in Computer Science, Volume 4409, 2007.
- E15 Stefan Edelkamp, Shahid Jabbar, Alberto Lluch Lafuente, "Heuristic Search for the Analysis of Graph Transition Systems", *Proceedings of the 3rd International Conference on Graph Transformation (ICGT'06)*, Springer Lecture Notes in Computer Science, Volume 4178, 2006.
- E14 Dragan Bošnački, Stefan Leue, Alberto Lluch Lafuente, "Partial-Order Reduction for General State Exploring Algorithms", *Proceedings of the 13th International SPIN Workshop on Model Checking Software (SPIN'06)*, Springer Lecture Notes on Computer Science, Volume 3925, 2006.
- E13 Dan Hirsch, Alberto Lluch Lafuente, Emilio Tuosto, "A Logic for Application Level QoS", *Proceedings of the 3rd Workshop on Quantitative Aspects of Programming Languages (QAPL'05)*, Elsevier Electronic Notes on Theoretical Computer Science, Volume 5, Issue 2, ISSN 0304-3975, 2005.
- E12 Fabio Gadducci, Alberto Lluch Lafuente, "Graphical Verification of a Spatial Logic for the pi-calculus", *Proceedings of the 1st Workshop on Graph Transformation for Verification and Concurrency (GTVC'05)*, Elsevier Electronic Notes in Theoretical Computer Science, Volume 142, ISSN 0304-3975, 2005.
- E11 Gianluigi Ferrari, Alberto Lluch Lafuente, "A Logic for Graphs with QoS", *Proceedings of the 1st Workshop on Views On Designing Complex Architectures (VODCA'04)*, Elsevier Electronic Notes in Theoretical Computer Science, Volume 142, ISSN 0304-3975, 2006.
- E10 Stefan Edelkamp, Shahid Jabbar, Alberto Lluch Lafuente, "Cost-Algebraic Heuristic Search", *Proceedings of the 20th National Conference on Artificial Intelligence (AAAI'05)*, ISBN 978-1-57735-236-5, AAAI Press / The MIT Press, 2005.
- E9 Stefan Edelkamp, Shahid Jabbar, Alberto Lluch Lafuente, "Action Planning for Graph Transition Systems", *Proceedings of the 1st ICAPS Workshop on Verification and Validation of Model-Based Planning and Scheduling Systems (VVPS'05)*, AAAI Press, 2005.
- E8 Javier Rubio-Loyola, Joan Serrat, Marinos Charalambides, Paris Flegkas, Georgu Pavlou, Alberto Lluch Lafuente, "Using Linear Temporal Logic for Goal-Oriented Policy Refinement Frameworks", *Proceedings of the 6th IEEE Workshop on Policies for Distributed Systems and Networks (POLICY'05)*, ISBN 0-7695-2265-3, IEEE Computer Society, 2005.
- E7 Alberto Lluch Lafuente, Ugo Montanari, "Quantitative mu-calculus and CTL based on Constraint Semirings", *Proceedings of the 2nd Workshop on Quantitative Aspects of Programming Languages (QAPL'04)*, Elsevier Electronic Notes on Theoretical Computer Science, Volume 112, ISSN 0304-3975, 2005.
- E6 Stefan Edelkamp, Alberto Lluch Lafuente, "Abstraction in Directed Model Checking", *Proceedings of the 1st ICAPS Workshop on Connecting Planning Theory with Practice*, Whistler, 2004.
- E5 Alberto Lluch Lafuente, "Symmetry Reduction and Heuristic Search for Error Detection in Model Checking", *Proceedings of the 2nd Workshop on Model Checking and Artificial Intelligence (MOCHART'03)*, AAAI Press, 2003.
- E4 Alberto Lluch Lafuente, Stefan Leue and Stefan Edelkamp, "Partial Order Reduction in Directed Model Checking", *Proceedings of the 9th International SPIN Workshop on Model Checking Software (SPIN'02)*, Springer Lecture Notes on Computer Science, Volume 2318, 2002.
- E3 Stefan Edelkamp, Alberto Lluch Lafuente and Stefan Leue, "Trail-Directed Model Checking", *Proceedings of the 1st Workshop on Software Model Checking (SOFTMC'01)*, Elsevier Electronic Notes on Theoretical Computer Science, Volume 55, Number 3, ISSN 0304-3975, 2001.
- E2 Stefan Edelkamp, Alberto Lluch Lafuente and Stefan Leue, "Directed Explicit Model Checking with HSF-SPIN", *Proceedings of the 8th International SPIN Workshop on Model Checking Software (SPIN'01)*, Springer Lecture Notes on Computer Science, Volume 2057, 2001.
- E1 Stefan Edelkamp, Alberto Lluch Lafuente and Stefan Leue, "Protocol Verification with Heuristic Search", *Proceedings of the AAAI Spring Symposium on Model-Based Validation of Intelligence*, ISBN 1-57735-132-0, 2001.

Book Chapters

- C10 Rocco De Nicola, Diego Latella, Alberto Lluch Lafuente, Michele Loreti, Andrea Margheri, Mieke Massink, Andrea Morichetta, Rosario Pugliese, Francesco Tiezzi, Andrea Vandin, "The SCEL Language: Design, Implementation, Verification", *Software Engineering for Collective Autonomic Systems*, Springer Lecture Notes in Computer Science, 2015.

- C9 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Matthias Hölzl, Alberto Lluch Lafuente, Andrea Vandin, Martin Wirsing, "Reconciling White-Box and Black-Box Perspectives on Behavioral Self-adaptation", *Software Engineering for Collective Autonomic Systems, Springer Lecture Notes in Computer Science*, 2015.
- C8 Dhaminda B. Abeywickrama, Jacques Combaz, Vojtech Horky, Jaroslav Keznikl, Jan Kofron, Alberto Lluch Lafuente, Michele Loreti, Andrea Margheri, Philip Mayer, Valentina Monreale, Ugo Montanari, Carlo Pincioli, Petr Tuma, Andrea Vandin, Emil Vassev, "Tools for Ensemble Design and Runtime", *Software Engineering for Collective Autonomic Systems, Springer Lecture Notes in Computer Science*, 2015.
- C7 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch-Lafuente, Andrea Vandin, "A White Box Perspective on Behavioural Adaptation. Software, Services, and Systems", *Software, Services, and Systems - Essays Dedicated to Martin Wirsing on the Occasion of His Retirement from the Chair of Programming and Software Engineering, Springer Lecture Notes in Computer Science*, 2015.
- C6 Yehia Abd Alrahman, Marina Andric, Alessandro Beggiato, Alberto Lluch-Lafuente, "Can We Efficiently Check Concurrent Programs Under Relaxed Memory Models in Maude?", *WRLA 2014, Springer Lecture Notes in Computer Science*, 2014.
- C5 Rocco De Nicola, Alberto Lluch Lafuente, Michele Loreti, Andrea Morichetta, Rosario Pugliese, Valerio Senni, Francesco Tiezzi, "Programming and Verifying Component Ensembles", *Festschrift in honor of Joseph Sifakis, Springer Lecture Notes in Computer Science*, 2014.
- C4 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch Lafuente, "On GS-Monoidal Theories for Graphs with Nesting", *Festschrift in honor of Manfred Nagl, Springer Lecture Notes in Computer Science*, 2008.
- C3 Roberto Bruni, Fabio Gadducci, Andrea Corradini, Alberto Lluch Lafuente, Ugo Montanari "Hierarchical models for service-oriented systems", *Rigorous Software Engineering for Service-Oriented Systems, Results of the SENSORIA project on Software Engineering for Service-Oriented Computing, Springer Lecture Notes in Computer Science*, Volume 6582, 2011.
- C2 Roberto Bruni, Howard Foster, Alberto Lluch Lafuente, Ugo Montanari, Emilio Tuosto, "A formal support to business and architectural design for service-oriented systems", *Rigorous Software Engineering for Service-Oriented Systems, Results of the SENSORIA project on Software Engineering for Service-Oriented Computing, Springer Lecture Notes in Computer Science*, Volume 6582, 2011.
- C1 Roberto Bruni, Antonio Bucchiarone, Stefania Gnesi, Dan Hirsch, Alberto Lluch Lafuente, "Graph-Based Design and Analysis of Dynamic Software Architectures", *Concurrency, Graphs and Models. Essays Dedicated to Ugo Montanari on the Occasion of His 65th Birthday, Springer Lecture Notes in Computer Science*, Volume 6065, 2008.

Position Papers

- P6 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch Lafuente, Andrea Vandin "Adaptation is a Game", *Tiny Transactions in Computer Science*, Volume 2, 2013.
- P5 Alberto Lluch Lafuente, "A Lewisian Approach to the Verification of Adaptive Systems", *Conference on David Lewis "Another world is possible", Rivista Italiana di Filosofia Analitica Junior, Vol 2, No 2 (2011), ISSN 2037-4445*, 2011.
- P4 Roberto Bruni, Andrea Corradini, Fabio Gadducci, Alberto Lluch Lafuente, Ugo Montanari, "Rewriting nested graphs, through term graphs", *20th International Workshop on Algebraic Development Techniques WADT 2010*, 2010.
- P3 Alberto Lluch Lafuente, "Specification and Analysis with Hierarchical Graphs", *Proceedings of the Dagstuhl Seminar on Graph Search Engineering*, Schloss Dagstuhl Proceedings, 2009.
- P2 Roberto Bruni, Alberto Lluch Lafuente, "Ten virtues of structured graphs", *Proceedings of the Eighth International Workshop on Graph Transformation and Visual Modeling Techniques (GT-VMT 2009)*, Electronic Communications of the EASST. 2009.
- P1 Roberto Bruni, Alberto Lluch Lafuente, Ugo Montanari, Emilio Tuosto, "Architectural Design Rewriting as an Architecture Description Language", Position paper at the *The Rise and Rise of the Declarative Datacentre research meeting*, Microsoft Research Cambridge, 2008.

Thesis

- T2 Alberto Lluch Lafuente, "Directed Search for the Verification of Communication Protocols", PhD Thesis, *Freiburger Dokument Server, Institute of Computer Science, University of Freiburg*, 2003.

T1 | Alberto Lluch Lafuente, "Analysis of Transport Protocols in Hybrid Networks", Master Thesis, *Instituto de Informática, Universidad del País Vasco*, June 1999.

Recent and Selected Talks

Invited Talks

- IT5 “Can we efficiently verify concurrent programs under relaxed memory models in Maude?”, Grenoble, 2014, Int’l ETAPS Workshop on Rewriting Logic and its Applications (WRLA 2014).
- IT4 “State Space c-Reductions of Concurrent Systems”, Rome, 2013, International ETAPS Workshop on Graph Inspection and Traversal Engineering (GRAPHITE 2013).
- IT3 “A white-box perspective on Adaptation”, Edinburgh, 2012, International Summer School on Self-Awareness in Autonomic Computing Systems (AWASS 2012).
- IT2 “A conceptual framework for Adaptation”, Leicester, 2011, Invited seminar at the Department of Computer Science of the University of Leicester.
- IT1 “Specification and Analysis with Hierarchical Graphs”, Schloss Dagstuhl (Germany), 2010, International Seminar on Graph Inspection and Traversal Engineering.

Presentations of Papers at International Events

- PT10 “State Space c-Reductions of Concurrent Systems”, Tallin, 2012, International Workshop on Rewriting Logic and its Applications (WRLA 2012).
- PT9 “Evaluating the performance of model transformations styles”, Oslo, 2011, International Conference on Formal Aspects of Component Software (FACS 2011).
- PT8 “Exploiting the hierarchical structure of rule-based specifications for decision planning”, Amsterdam, 2010, International Conference on Formal Techniques for Distributed Systems (FMOODS/FORTE 2010).
- PT7 “A Graph Syntax for Processes and Services”, Bologna, 2009, International Workshop on Web Services and Formal Methods (WS-FM 2009).
- PT6 “A service-oriented UML profile with formal support”, Stockholm, 2009, International joint Conference on Service Oriented Computing ICSOC/ServiceWave 2009.
- PT5 “Hierarchical Design Rewriting with Maude”, Budapest, 2009, International Workshop on Rewriting Logic and its Applications (WRLA 2008).
- PT4 “Towards Model Checking Spatial Properties with SPIN”, Berlin, 2007, International SPIN Workshop on Model Checking Software (SPIN 2007).
- PT3 “A Logic for Graphs with QoS”, Bertinoro, 2004, Workshop on Views On Designing Complex Architectures (VODCA 2004).
- PT2 “Quantitative mu-calculus and CTL based on Constraint Semirings”, Barcelona, 2004, Workshop on Quantitative Aspects of Programming Languages (QAPL 2004).
- PT1 “Partial Order Reduction in Directed Model Checking”, Grenoble 2002, International SPIN Workshop on Model Checking Software (SPIN 2002).

Presentations at Project Meetings

- PM5 “Discretionary Information Flow Control for Choreographies”, London, 2015, COST Action BETTY.
- PM4 “A Semiring-valued Temporal Logic”, Aalborg, 2014, Denmark-China project IDEA4CPS.
- PM3 “Collaborative Task Execution in Volunteer Clouds”, Bologna, 2014, Italian project CINA.
- PM2 “On Adaptation”, Lausanne, 2013, European project QUANTICOL.
- PM1 “Adaptable Transition Systems”, Prague, 2013, meeting of the European project ASCENS.

Reviews

Grant Proposals

NWO	Netherlands Organisation for Scientific Research.
FCT	Fundazione per la Scienza e la Tecnologia, Portugal.
IRF	The Icelandic Research Fund.
UEFISCDI	Romanian Executive Agency for Higher Education, Research, Development and Innovation Funding.

Books

MKP	Book, Morgan Kaufmann Publishers (Elsevier), 2011.
-----	--

Journal Papers

TAAS	ACM Transactions on Autonomous and Adaptive Systems, '12, ACM press
TOSEM	ACM Transactions on Software Engineering and Methodology, '12, ACM press
TSE	The IEEE Transactions on Software Engineering, '10, IEEE.
TCAD	The IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems '13, IEEE.
STVR	Int'l Journal on Software Testing, Verification & Reliability, '11, Wiley.
FAOC	Int'l Journal on Formal Aspects of Computing, '15 Springer.
SCP	Int'l Journal on Science of Computer Programming, '11-'15, Elsevier.
DKE	Int'l Journal on Data & Knowledge Engineering, '09, Elsevier.
FI	Int'l Journal Fundamenta Informaticae, '06, IOS Press.
STTT	Int'l Journal on Software Tools for Technology Transfer, '09, Springer.
TCS	Int'l Journal on Theoretical Computer Science Journal, '05,'13,'14 Elsevier.
IS	Int'l Journal on Information Sciences, '12, Elsevier.
JVLC	Int'l Journal of Visual Languages and Computing, '11, Elsevier.
JCM	Int'l Journal of Computer Mathematics, '12, Taylor & Francis.
JLAMP	Int'l Journal on Logic and Algebraic Methods in Programming, '12,'14,'15 Elsevier.
SOSYM	Int'l Journal on Software and System Modeling, '04, Springer.
ACTA	Acta Informatica, '11, Springer.
ACCY	Acta Cybernetica, '14, University of Szeged

Papers at International Events

IJCAI	Int'l Joint Conferences on Artificial Intelligence, '09, AAAI Press.
FOSSACS	Int'l Conf. on Foundations of Software Science and Computation Structures, '09,'12,'14 Springer.
CALCO	Int'l Conference on Algebras and Coalgebras, '07, '09, '11, '13, Springer.
CONCUR	Int'l Conference on Concurrency Theory, '06, '07, '08, '12, Springer.
ATPN	Int'l Conference on Application and Theory of Petri Nets, '09-10, Springer.
FSEN	Int'l Conference on Fundamentals of Software Engineering, '09-11,'13 Springer.
SOFSEM	Int'l Conference on Current Trends in Theory and Practice of Computer Science, '09, Springer.
ICGT	Int'l Conference on Graph Transformation, '08, '10, Springer.
ICSE	Int'l Conference on Software Engineering, '12, ACM Press.
FASE	Int'l Conference on Fundamental Approaches to Software Engineering, '13-'14, Springer.
AMAST	Int'l Conference on Algebraic Methodology and Software Technology, '08, Springer.
FLACOS	Int'l Conference on Formal Languages and Analysis of Contract Oriented Software, '11, EPTCS.
COORDINATION	Int'l Conference on Coordination Models and Languages, '05, '08, '12, Springer.
FORTE,FMOODS	Int'l Conference on Formal Techniques for Distributed Systems, '02, '12, '14 Springer.
FSTTCS	Int'l Conference on Foundations of Software Technology and Theoretical Computer Science, '13.
iFM	Int'l Conference on Integrated Formal Methods, '12,'14, Springer.
ICFEM	Int'l Conference on Formal Engineering Methods, '14, Springer.
MFCS	Int'l Conference on Mathematical Foundations of Computer Science, '14, Springer.
TCS	Int'l Conference on Theoretical Computer Science, '14, Springer.
FM	Int'l Conference on Formal Methods, '14, Springer.
ACSD	Int'l Conference on Application of Concurrency to System Design, '11-'12, '14, IEEE Comp. Society.
PDP	Int'l Conference on Parallel, Distributed and Network-Based Techniques, '15, IEEE Comp. Society.
SPLC	Int'l Conference on Software Product Lines, '15, ACM Press.
ECOWS	European Conference on Web Services, '10, IEEE Computer Society Press.
Euro-Par	European Conference on Parallel Processing, '14, Springer.

ICTAC	Int'l Colloquium on Theoretical Aspects of Computing, '09, '14, Springer.
SAC	Int'l Symposium on Applied Computing, '09-'12,'14, ACM Press.
POPL	Int'l Symposium on Principles of Programming Languages, '09, ACM Press.
LICS	Int'l Symposium on Logic in Computer Science, '14-'15, ACM Press.
FCT	Int'l Symposium on Fundamentals of Computation Theory '11, Springer.
DEVS	Int'l Symposium on Theory of Modeling & Simulation, '10, SCS.
FACS	Int'l Symposium on Formal Aspects of Component Software, '11, '15, Springer.
TGC	Int'l Symposium on Trustworthy Global Computing, '07, '10-12, '14-'15 Springer.
ESOP	European Symposium on Programming, '09, '13, Springer.
WADT	Int'l Workshop on Algebraic Development Techniques, '08, '10, '12 Springer.
RULE	Int'l Workshop on Rule-Based Programming, '08, Elsevier.
LDTA	Int'l Workshop on Language Description, Tools and Applications, '08, Elsevier.
Mospas	Int'l HPCS Workshop Modeling and Simulation of Peer-to-Peer and Autonomic Systems, '14, IEEE.
SPIN	Int'l Workshop on Software Model Checking, '05-07, '11, Springer.
TERMGRAPH	Int'l Workshop on Computing with Terms and Graphs, '09, Elsevier.
SOS	Int'l Workshop on Structural Operational Semantics, '09, EPTCS.
SECCO	Int'l Workshop on Security Issues in Concurrency, '09, EPTCS.
WSFM	Int'l Workshop on Web Services and Formal Methods, '09, '13, Springer.
WRLA	Int'l Workshop on Rewriting Logic and its Applications, '10, '12, '14, Springer.
GTVMT	Int'l Workshop on Graph Transformation and Visual Modelling Languages, '10-11, ECEAST.
ICE	Int'l Workshop on Interaction and Concurrency Experience, '10-12, EPTCS.
FOCLASA	Int'l Workshop on Foundations of Coordination Languages and Self Adaptation, '12, EPTCS.
GAM	Int'l ETAPS Workshop on Graphs as Models, '15, EPTCS.
MoChAP	Int'l ICAPS Workshop on Model Checking and Automated Planning , '14-'15, AAAI Press.
FMICS	Int'l Workshop on Formal Methods for Industrial Critical Systems, '15, Springer.
ADECS	Int'l Workshop on Petri Nets for Adaptive Discrete Event Control Systems, '15.
VERY*	Int'l Workshop on formal verification for self-* system, '15, Springer, IEEE
WAS4FI	Int'l Workshop on Adaptive Services for the Future Internet, '15, Springer.
DAS	Int'l Workshop on Distributed Adaptive Systems, '15, IEEE.
NWPT	Nordic Workshop on Programming Theory.

Selected Software Projects

MESSI	MESSI (Maude Ensemble Strategies Simulator and Inquirer) is a tool for the design, validation and performance evaluation of self-assembly strategies with Maude . Such strategies are crucial mechanisms that allow groups of simple individual entities to act as a single complex entity exhibiting emergent behaviours. Notable examples include bacteria or insect swarms, modular and self-assembling robots and software components with dynamic coupling mechanisms. The MESSI tool exploits the declarative and reflective features of the Maude language and the Maude tool framework for the analysis. In particular the tool can be combined with the parallel statistical model checker PVeStA to estimate quantitative properties of self-assembly strategies. The tool is available for download at sysma.lab.imtlucca.it/tools/ensembles/ .
C-Reducer	The c-Reducer is a tool for automatic c-reduction of object based modules for the Maude system . State space c-reductions exploit equivalence relations on states (possibly capturing system regularities) that preserve behavioral properties, and explore the induced quotient system. This is done by means of a canonizer function, which maps each state into a (non necessarily unique) canonical representative of its equivalence class. The approach is very general and supports not only traditional symmetry reductions, but also name reuse and name abstraction. The c-reducer tool implements part of the approach in Maude. The tool is available for download at sysma.lab.imtlucca.it/tools/c-reducer/ .
ADR	Architectural Design Rewriting (ADR) is a research approach for the design of reconfigurable software systems, conceived in the spirit of conciliating software architectures and process calculi by means of graphical methods. It has been applied to service oriented high-level modelling languages and process calculi . The tool support of ADR is strongly based on the Maude language and engine. A prototypical version was presented at an international workshop and is available for download at www.albertolluch.com/adr .
HSF-SPIN	HSF-SPIN is an experimental model checker that can be seen as an extension of the SPIN model checker with artificial intelligence techniques. The tool implements various heuristics and algorithms to guide automated verification of a software model towards bugs. In some cases, it is able to find shorter bug traces and to explore larger models than the original SPIN. The tool has been used to support results presented at various international journals and events and is available for download at www.albertolluch.com/research/tools .
AAM	AAM is an industrial software application that supports straight-to-processing of interbank financial communications . Incoming communications (mainly fund transfers) coming from various sources and in heterogeneous formats (like those of the Society for Worldwide Interbank Financial Telecommunication) are uniformly introduced into the bank database system, offering a transparent view to banking operators. The application runs in Italian headquarters of various National and International banks running software of the Cabel Group (www.cabel.it).

Selected Management and Administrative Experience

evaluation member	PhD scholarships assessment committee, DTU 2015-2016.
director's delegate	Administrative staff evaluation procedure, IMT 2011-2013.
evaluation member	Post-doc positions selection committees, IMT 2011, 2013.
evaluation member	IT staff selection committee, IMT 2011-2013.
member	Committee for the review of the research money regulation, IMT 2013.
member	IT committee and LAB working group, IMT 2010-2011.
member	Committee for research support and acquisition, IMT 2009-2010.
assistant member	Academic board, IMT 2009-2011.
assistant member	PhD admission procedures, IMT 2009 - 2013.