Alberto Lluch Lafuente - DTU Orbit (23/04/2018)

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Department of Applied Mathematics and Computer Science - Associate Professor
Formal Methods

Publications:

A coordination language for databases
Publication: Research - peer-review › Journal article – Annual report year: 2016

Asynchronous Distributed Execution of Fixpoint-Based Computational Fields
Publication: Research - peer-review › Journal article – Annual report year: 2018

Automated specification and verification of Web-based applications
ter Beek, M. H. & Lluch Lafuente, A. 2017 In : Journal of Logical and Algebraic Methods in Programming. 87, p. 51-51
Publication: Research › Editorial – Annual report year: 2017

Many-to-Many Information Flow Policies
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Microservices: Yesterday, Today, and Tomorrow
Publication: Research - peer-review › Journal article – Annual report year: 2017

Preface for the special issue on Interaction and Concurrency Experience 2015
Publication: Research - peer-review › Editorial – Annual report year: 2017

Preface: Special section on Graph Inspection and Traversal Engineering (GRAPHITE 2014)
Publication: Research › Editorial – Annual report year: 2017

Statistical Model Checking for Product Lines
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

A Fixpoint-Based Calculus for Graph-Shaped Computational Fields
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

AVOCLOUDY: a simulator of volunteer clouds
Sebastio, S., Amoretti, M. & Lluch Lafuente, A. 2015 In : Software: Practice & Experience. 46, 1, p. 3-30
Replicating Data for Better Performances in X10
Publication: Research - peer-review › Book chapter – Annual report year: 2016

Statistical analysis of probabilistic models of software product lines with quantitative constraints
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

The SCEL Language: Design, Implementation, Verification
Publication: Research - peer-review › Book chapter – Annual report year: 2015

Tools for Ensemble Design and Runtime
Publication: Research - peer-review › Book chapter – Annual report year: 2015

A computational field framework for collaborative task execution in volunteer clouds
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

Can We Efficiently Check Concurrent Programs Under Relaxed Memory Models in Maude?
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Modelling and analyzing adaptive self-assembly strategies with Maude
Publication: Research - peer-review › Journal article – Annual report year: 2014

Proceedings 3rd Workshop on GRAPH Inspection and Traversal Engineering (GRAPHITE 2014)
Publication: Research - peer-review › Book – Annual report year: 2014

Proceedings of the 7th Interaction and Concurrency Experience (ICE 2014)
Publication: Research - peer-review › Book – Annual report year: 2014

Proceedings of the 8th Symposium on Trustworthy Global Computing (TGC 2013)
Publication: Research - peer-review › Book – Annual report year: 2014

Programming and Verifying Component Ensembles
Modelling and analyzing adaptive self-assembling strategies with Maude

On structured model-driven transformations

State Space c-Reductions of Concurrent Systems in Rewriting Logic

A formal support to business and architectural design for service-oriented systems

A Lewisian approach to the verification of adaptive systems

Hierarchical models for service-oriented systems

Internet e Web 2.0
Lluch Lafuente, A. 2011

Towards a Maude Tool for Model Checking Temporal Graph Properties

A formalisation of Adaptable Pervasive Flows

A Graph Syntax for Processes and Services

An Algebra of Hierarchical Graphs
An algebra of hierarchical graphs and its application to structural encoding
Publication: Research - peer-review › Journal article – Annual report year: 2010

Counterpart semantics for a secondorder mu-calculus
(Lecture Notes in Computer Science, Vol. 6372).
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Exploiting the hierarchical structure of rule-based specifications for decision planning
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Rewriting nested graphs, through term graphs
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

A service-oriented UML profile with formal support
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Hierachical Design Rewriting with Maude
Publication: Research - peer-review › Conference article – Annual report year: 2009

On Symbolic Semantics for Namedecorated Contexts
Publication: Research - peer-review › Conference article – Annual report year: 2009

Partial-order reduction for general state exploring algorithms
Publication: Research - peer-review › Journal article – Annual report year: 2009

Specification and Analysis with Hierarchical Graphs
Publication: Research - peer-review › Book chapter – Annual report year: 2009

Ten virtues of structured graphs
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

Architectural Design Rewriting as an Architecture Description Language
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008
Graph-Based Design and Analysis of Dynamic Software Architectures
Publication: Research - peer-review › Book chapter – Annual report year: 2008

On GS-Monoidal Theories for Graphs with Nesting
Publication: Research - peer-review › Book chapter – Annual report year: 2008

Service Oriented Architectural Design
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Style-Based Architectural Reconfigurations
Publication: Research - peer-review › Journal article – Annual report year: 2008

A Temporal Graph Logic for Abstractions of Graph Rewriting Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

Graphical Encoding of a Spatial Logic for the pi-calculus
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

Towards Model Checking Spatial Properties with SPIN
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

A Logic for Application Level QoS
Publication: Research - peer-review › Conference article – Annual report year: 2006

A logic for graphs with QoS
Publication: Research - peer-review › Conference article – Annual report year: 2006

Heuristic Search for the Analysis of Graph Transition Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2006
Partial-Order Reduction for General State Exploring Algorithms
Publication: Research - peer-review › Article in proceedings – Annual report year: 2006

Action Planning for Graph Transition Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Cost-Algebraic Heuristic Search
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Graphical encoding of a spatial logic for the pi-calculus
Publication: Research - peer-review › Conference article – Annual report year: 2005

Quantitative μ-calculus and CTL defined over constraint semirings
Publication: Research - peer-review › Journal article – Annual report year: 2005

Quantitative μ-calculus and CTL Based on Constraint Semirings
Publication: Research - peer-review › Conference article – Annual report year: 2005

Using Linear Temporal Logic for Goal-Oriented Policy Refinement Frameworks
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Abstraction in Directed Model Checking
Publication: Research › Article in proceedings – Annual report year: 2004

Directed explicit-state model checking in the validation of communication protocols
Publication: Research - peer-review › Journal article – Annual report year: 2004

Partial-order reduction and trail improvement in directed model checking
Publication: Research - peer-review › Journal article – Annual report year: 2004

Symmetry Reduction and Heuristic Search for Error Detection in Model Checking
Publication: Research - peer-review › Article in proceedings – Annual report year: 2003

Partial Order Reduction in Directed Model Checking
Directed Explicit Model Checking with HSF-SPIN

Protocol Verification with Heuristic Search

Trail-Directed Model Checking

Projects:

**Formal methods for Secure Trust Infrastructures**
Birkedal, R., Mödersheim, S. A. & Lluch Lafuente, A.
01/12/2016 → 05/01/2018
Project: PhD

**LIGHTTest foundation**
Bjerregaard, M. O., Mödersheim, S. A. & Lluch Lafuente, A.
01/09/2016 → 06/09/2016
Project: PhD

**Cognitive and Perceptive Cameras - Compilation system**
Jensen, N. B., Probst, C. W., Karlsson, S., Lluch Lafuente, A., Kessler, C. W. & Sestoft, P.
01/10/2013 → 18/01/2017
Project: PhD

**Stochastic Model Checking of Socio-Technical Models**
01/07/2013 → 23/11/2016
Project: PhD

**Modelling Socio-Technical Aspects of Organizational Security**
Ivanova, M. G., Probst, C. W., Lluch Lafuente, A., Gollmann, D. & Schürmann, C.
15/01/2013 → 20/04/2016
Project: PhD

**Modeling and Verifying eID Protocols (Future ID)**
15/12/2012 → 24/02/2016
Project: PhD

**Portable and Predictable Performance Heterogeneous Embedded Manycores - Upper Level System stack**
01/10/2012 → 21/01/2016
Project: PhD
Cyber-Physical Systems secure communication protocols
01/12/2011 → 04/03/2015
Project: PhD