Emanuele D'Osualdo

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 bordaigorl

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Current position

From Apr 2017	**Research Associate**, *Program Specification and Verification Group*, Imperial College London, UK
Research Interests	Models of Concurrency, Process Algebra, Program Analysis, Model Checking, Semantics, Declarative Programming.

Experience

May 2015–Apr 2017	**Postdoctoral Researcher**, *Concurrency Theory Group*, TU Kaiserslautern, Germany
Topic	Logics and Automata for Infinite State Model Checking (with Prof. Roland Meyer)
Nov 2014–May 2015	**Research Assistant**, *Saïd Business School*, University of Oxford, UK
	Design and implementation of a web application for the visualisation and simulation of a labour market model
Apr–Jul 2010	**Research Assistant**, *University of Siena*, Italy (with Prof. Moreno Falaschi)
	Abstract Interpretation of Universal Timed Concurrent Constraint programs

Education

2010–2015	**PhD in Computer Science**, *University of Oxford*, Merton College, UK
Thesis	Verification of Message Passing Concurrent Systems
Supervisor	Prof. C.-H. Luke Ong
Awards	Winner of the 2016 BCS/CPHC Distinguished Dissertation award
2007–2010	**M.Sc. in Computer Science**, *University of Udine*, Italy, 110/110 *cum laude*
	Dissertation on static analisys of Bigraphs by Abstract Interpretation
2004–2007	**B.Sc. in Computer Science**, *University of Udine*, Italy, 110/110 *cum laude*
	Dissertation about Monads and Arrows in Haskell
Oct 2007–Mar 2008	**Exchange Student (Erasmus)**, *Istanbul Bilgi Universitesi*, Istanbul, Turkey

Awards

2016	**Winner of the Distinguished Dissertation award**, *BCS/CPHC*, UK
	Best British PhD dissertation in Computer Science selected by the Council of Professors and Heads of Computing, and the BCS Academy of Computing.
2004–2010	**Scatcherd European Scholarship**, *University of Oxford*, UK
	University wide scholarship, covering fees and living costs.
2004–2010	Student of **Scuola Superiore**, *University of Udine*, Italy
	University wide scholarship for excellent students lasting five years. Members are annually reviewed and required to attend extra courses. See scuolasuperiore.uniud.it.

Selected Publications

CSF'17 **Deciding Secrecy of Security Protocols for an Unbounded Number of Sessions: The Case of Depth-bounded Processes**, with *Luke Ong and Alwen Tiu*. In Proc. of CSF'17, to appear.

LICS'16 **First-order Logic with Reachability for Infinite-State Systems**, with *Roland Meyer and Georg Zetzsche*. In Proc. of Symposium on Logic in Computer Science, ACM. 2016.

ESOP'16 **On Hierarchical Communication Topologies in the π-calculus**, with *Luke Ong*. In Proc. of European Symposium on Programming. Vol. 9632 of LNCS. Springer. 2016.

SAS'13 **Automatic Verification of Erlang-Style Concurrency**, with *Jonathan Kochems and Luke Ong*. In Proc. of Static Analysis. Vol. 7935 of LNCS. Springer. 2013.

Teaching

Apr 2016–current **Lecturer**, *Dept. of Computer Science*, TU Kaiserslautern, Germany
Courses – Advanced Automata Theory (Summer Semester 2016)
– Concurrency Theory (Winter Semester 2016/2017)

May–Jul 2015 **Teaching Assistant**, *Dept. of Computer Science*, TU Kaiserslautern, Germany
Subject Concurrency Theory

Jun 2013–Mar 2014 **Tutor** at *Merton College*, University of Oxford, UK
Subjects Concurrent Programming, Imperative Programming 2

2011–2014 **Teaching Assistant**, *Dept. of Computer Science*, University of Oxford, UK
Subjects Imperative Programming (Scala), Concurrent Programming (Scala), Functional Programming (Haskell), Concurrency (CSP).

Talks

On Hierarchical Communication Topologies in the π-calculus
Dec 2016 IMDEA Software, Madrid
Aug 2016 Nanyang Technological University, Singapore
Aug 2016 CPDS Workshop, NUS, Singapore
Mar 2016 D-CON'16, Universität des Saarlandes, Saarbrücken, Germany
Feb 2016 OASIS Seminar, University of Oxford
Feb 2016 Imperial College, London

Precise Abstractions of Concurrent Systems
Aug 2014 University of Southampton

Automatic Verification of Erlang-Style Concurrency
Jan 2013 Student Short Talk Session at POPL'13, Rome
Sept 2012 University of Udine, Italy

Towards Static Analysis for Bigraphical Reactive Systems
Oct 2011 Bigraphs Present & Future Workshop, IT University of Copenhagen

Academic Activities

Reviewer TLCA'11, MFCS'12, POPL'12, TAMC'12, DMC'14, VMCAI'14, CONCUR'15, FSTTCS'15, LICS'15, NETYS'16, TACAS'16, Information and Computation.

Software Projects

Soter An Haskell program for automatic static analysis of Erlang modules, developed with Jonathan Kochems.

Demo `http://mjolnir.cs.ox.ac.uk/soter/`

JamesBound An experimental type system (and playground) for the π-calculus (implementing the ESOP'16 paper).

Sources `http://github.com/bordaigorl/jamesbound`

LaborSim A JavaScript/D3.js webapp simulating an agent computing model of the individual dynamics of firms and workers in the labor market.

Website `http://oguerr.com/laborsim/`

Other skills

Languages Italian (native speaker)
English (fluent)

Programming Haskell, Python, JavaScript   *Good Knowledge*
Scala, Java, Erlang   *Basic Knowledge*

Typesetting Experienced user of LaTeX, BEAMER and TikZ.

Music Studied violin for more than ten years playing Classical Music and Jazz.
Studied Musical Composition from 2000 to 2005 at the conservatory of Udine.