

Emanuele D'Oswaldo

emanuele.dosualdo@gmail.com

🏠 Am Landgraben 6
67657 Kaiserslautern, DE
☎ +49 (0)15236704025
🌐 [bordaigorl](#)
🌐 [emanueledosualdo.com](#)

Experience

May 2015–present **Postdoctoral Researcher**, *Concurrency Theory Group*, TU Kaiserslautern, Germany

Research Interests Models of Concurrency, Model Checking, Logics, Automata, Process Algebra, Program Analysis, Semantics, Declarative Programming

Supervisor 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 (under Prof. Moreno Falaschi)
Abstract Interpretation of Universal Timed Concurrent Constraint programs

Teaching

Apr–Jul 2016 **Lecturer**, *Dept. of Computer Science*, TU Kaiserslautern, Germany
Topic Advanced Automata Theory

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

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

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

Education

2010–2015 **PhD in Computer Science**, *Merton College*, University of Oxford, UK
Thesis Verification of Message Passing Concurrent Systems
(Nominated for the 2016 *CPHC/BCS Distinguished Dissertations competition*)
Supervisor Prof. C.-H. Luke Ong

2007–2010 **M.Sc. in Computer Science**, *University of Udine*, Italy, 110/110 *cum laude*
Dissertation on static analysis 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 Üniversitesi*, Istanbul, Turkey

Awards

- 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

- LICS'16** **First-order logic with reachability for infinite-state systems**, with *Roland Meyer and Georg Zetsche*. In LICS'16, to appear.
- ESOP'16** **On Hierarchical Communication Topologies in the π -calculus**, with *Luke Ong*. In 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 Static Analysis. Vol. 7935 of LNCS. Springer. 2013.

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/>

Talks

- On Hierarchical Communication Topologies in the π -calculus**
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**
Sept 2012 University of Udine, Italy
- Towards Static Analysis for Bigraphical Reactive Systems**
Oct 2011 Bigraphs Present & Future Workshop, IT University of Copenhagen

Other skills

Languages Italian (mother tongue)
English (fluent)

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

Typesetting Experienced user of L^AT_EX, 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.