Curriculum Vitae

Bruno Lacerda

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RESEARCH INTERESTS

Sequential decision making, probabilistic model checking, multi-robot systems, service robotics, temporal logics, discrete event systems.

RESEARCH POSITIONS

September 2017 - Present: *Postdoctoral Research Assistant in Robotics*. University of Oxford, Oxford, United Kingdom.

Contribution to Projects:

- Offshore Robotics for Certification of Assets (ORCA). *UK Research and Innovation*.
- Robotics and Artificial Intelligence for Nuclear (RAIN). *UK Research and Innovation.*

Service:

- Co-organiser of the Oxford Robotics Research Group Seminars.

April 2013 - September 2017: *Research Fellow in Intelligent Robotics*. University of Birmingham, Birmingham, United Kingdom.

Contribution to Projects:

- Spatio-Temporal Representations and Activities for Cognitive Control in Long-Term Scenarios (STRANDS). *EU-FP7*.
- Novel Dynamic Vehicle Scheduling and Path Planning Algorithms for Mobile Robotic and AGV Warehouse Order Picking. *TSB Smart Award.*
- Learning the structure and dynamics of human environments to support intelligent mobile robot behaviour. *EPSRC First Grant.*

Teaching:

- 2015/2016, 2016/2017, Semester 2: Two lectures on multi-robot coordination for the Robot Programming module.
- 2014/2015, Semester 1: Part of the lecturer team for the Intelligent Robotics module.
- 2013/2014, Semester 1: Part of the demonstrator team for the Foundations of Computer Science module.

September 2008 - December 2008: *Research Grantee.* Örebro University, Örebro, Sweden.

Contribution to Projects:

- Ecology of Physically Embedded Intelligent Systems.

March 2008 - August 2008: *Research Grantee.* Instituto Superior Técnico, Lisbon, Portugal.

Development of translation tool between two xml representations of Petri nets. Development of research agenda and proposal for PhD application.

EDUCATION

2009 - 2013: *Doutoramento (PhD) in Electrical and Computer Engineering (Pass with merit).* Instituto Superior Técnico, Lisbon, Portugal.

Thesis: *"Supervision of Discrete Event Systems Based on Temporal Logic Specifications".*

Advisor: Prof. Pedro U. Lima.

Research visits:

- 09/2011 - 12/2011: University of California at Los Angeles, Los Angeles, CA, USA, hosted by Prof. Paulo Tabuada.

- 03/2010 - 06/2010: Universidad Carlos III de Madrid, Madrid, Spain, hosted by Prof. Miguel A. Salichs.

2002 - 2007: *Mestrado (MSc) in Mathematics and Applications.* Instituto Superior Técnico, Lisbon, Portugal.
Thesis: *"Linear-Time Temporal Logic Control of Discrete Event Systems".*
Advisors: Prof. Pedro U. Lima, Prof. Francisco M. Dionísio.
2002 - 2007: *Licenciatura (BSc) in Applied Mathematics and Computation.* Instituto Superior Técnico, Lisbon, Portugal.

INVITED TALKS
February 2017: Workshop on Formal Methods in AI, University of Naples "Federico II", Italy.
March 2017: Computer Science Department Seminar Series, University of Liverpool, UK.
June 2017: Robolog Workshop, IRISA, Rennes, France.
September 2017: Full-day Tutorial at 4th "Lucia" PhD School on AI and Robotics, Lisbon, Portugal.

AWARDED FUNDING
May 2016 - July 2016: Research Visit to Delft University of Technology.
LES & EPS PERCAT Career Development Competition (University of Birmingham) - £400 (maximum awardable amount).
Ramsay Research Travel Fund (School of Computer Science, University of Birmingham) - £1500.
September 2011 - December 2011: Research Visit to University of California at Los Angeles.
Funding for PhD Student Visits Abroad (Fundação para a Ciência e Tecnologia) - €3065.
March 2010 - June 2010: Research Visit to University Carlos III de Madrid.
Funding for PhD Student Visits Abroad (Fundação para a Ciência e Tecnologia) - €1735.

REVIEWING
Program Committee Member: AAMAS (2014, 2016 - 2018); ICAPS (2016-2018); IJCAI (2017, 2018); AAAI (2018); ECAI (2016, 2018); AAAI Robotics Fellowships (2015, 2016).
Journal Reviewing: IEEE Trans. on Automatic Control (TACON); IEEE Robotics & Automation Magazine (RAM); Discrete Event Dynamic Systems (DEDS); IEEE Trans. on Automation Science and Engineering (T-ASE); IEEE Control Systems Letters (L-CSS); IEEE Trans. on Systems, Man, and Cybernetics (SMC); IEEE Trans. on Intelligent Systems (IS).
Conference Reviewing: TACAS; DARS; ICRA; IROS; CASE; CDC; ACC.

SELECTED PUBLICATIONS
[1] "Simultaneous Task Allocation and Planning Under Uncertainty". Fatma Faruq, Bruno Lacerda, Nick Hawes and David Parker. In *IROS 2018*.
[2] "Multi-Objective Policy Generation for Mobile Robots Under Probabilistic Time-Bounded Guarantees". Bruno Lacerda, David Parker and Nick Hawes. In *ICAPS 2017*.
[3] "Optimal Policy Generation for Partially Satisfiable Co-Safe LTL Specifications". Bruno Lacerda, David Parker and Nick Hawes. In *IJCAI* 2015.
[4] "On the Notion of Uncontrollable Marking in Supervisory Control of Petri Nets". Bruno Lacerda and Pedro U. Lima. *IEEE Trans. on Automatic Control,* Vol. 59, No. 11, 2014.
[5] "Designing Petri Net Supervisors from LTL Specifications". Bruno Lacerda and Pedro U. Lima. In *RSS 2011*.