

# Séverin Lemaignan

*Lecturer*  
*Cognition for Social Robotics*

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<https://academia.skadge.org>  
35 years old



Scientific Focus **Robot cognition and decision making for social interaction:** human-robot multi-modal interaction; theory of mind for robots; symbolic and sub-symbolic knowledge representation.

Keywords **Robotic Cognition, Human-Robot Interaction, Cognitive Architectures**

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## Education and Research Activities

- Sept. 2017– **Lecturer in Robotics and Artificial Intelligence, Plymouth University, Plymouth, United Kingdom.**
- 2015–2017 **EU Marie Skłodowska-Curie Post-doctoral fellow, Centre for Neural Systems and Robotics, Plymouth University, Plymouth, United Kingdom.**  
Development and Implementation of a Theory of Mind for robots.
- 2013–2015 **Post-doctoral fellow, CHILI, EPFL, Lausanne, Switzerland.**  
Interaction with Robots in Educational Environments – Supervision of the robotic group.
- 2012–2013 **Post-doctoral fellow, LAAS-CNRS, Toulouse, France.**  
Spatial and Temporal Reasoning for Cognitive Robotic Architectures.
- 2008–2012 **German-French PhD in Cognitive Robotics, LAAS-CNRS, Toulouse, France / IAS-TUM, Munich, Germany.**  
**with High Distinction** “Summa Cum Laude” – awarded CNRS’ **Best PhD in Robotics 2012**  
Supervisors: Pr. Rachid Alami, CNRS Senior Researcher, Pr. Michael Beetz, TUM Senior Researcher.
- 2006–2007 **Research Engineer, INRIA, Paris, France.**  
Development of semantic-aware control architectures for autonomous vehicles.
- 2002–2006 **German-French MSc of Engineering, Karlsruhe Institute of Technology / ENSAM ParisTech.**  
Final project: Ontologies and distributed systems for industrial processes.
- 2004–2005 **MSc Artificial Intelligence for Learning Technologies, University Paris V, College of Mathematics and Computer Sciences, With Honours.**

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## Awards and Honours

- **Best Paper Award 'Design', HRI'2017**
- **Best Paper Award 'Methods and Theory', HRI'2016**
- **AAAI 2015 Best Video Award in Artificial Intelligence**
- **Best Late Breaking Report Award, HRI'2014**
- **Best PhD in Robotics, CNRS 2012**
- **PhD with High Distinction** (“Summa Cum Laude”), TU Munich 2012
- **Best Paper Award, ROMAN'2010**
- **Gold Medal** (top ten students), ENSAM ParisTech 2006

## Fellowships & Grants

- 2015–2017 **EU H2020 Marie Skłodowska-Curie Individual Fellowship,**  
Principal Investigator, € 195 000.

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## Selected Publications

As of Feb 2018, 1200+ citations, *h*-index = 17 (*Google Scholar*).

See *my website* for the complete list of publications, workshops and seminars.

### International peer-reviewed journals

- Lemaignan S., Warnier M., Sisbot E. A., Clodic A., Alami R., **Artificial Cognition for Social Human-Robot Interaction: An Implementation**, *Artificial Intelligence*, 2016.
- Lemaignan S., Jacq A. and Hood D., Garcia F., Dillenbourg P., **Learning by Teaching a Robot: The Case of Handwriting**, *IEEE Robotics and Automation Magazine*, 2016.
- Lemaignan S., Ros R., Sisbot E. A., Alami R., Beetz M., **Grounding the Interaction: Anchoring Situated Discourse in Everyday Human-Robot Interaction**, *International Journal of Social Robotics*, 2011.

### International peer-reviewed conference articles

- Lemaignan S., Garcia F., Jacq A., Dillenbourg P., **From Real-time Attention Assessment to “With-me-ness” in Human-Robot Interaction**, *HRI*, 2016. **Best Paper Award**
- Lemaignan S., Ros R., Alami R., Beetz M., **What are you talking about? Grounding dialogue in a perspective-aware robotic architecture**, *ROMAN*, 2011.
- Lemaignan S., Ros R., Mösenlechner L., Alami R., Beetz M., **ORO, a knowledge management module for cognitive architectures in robotics**, *IROS* 2010.

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## Supervision & Teaching Experience

**Students supervision**, (click here for full list).

- C. Wallbridge (PhD, 2016-): *Spatial reasoning for Child-Robot Interaction*
- E. Senft (PhD, 2015-): *Machine learning approaches to social human-robot shared control*
- A. Jacq (PhD, 2014-2015): *Mutual modeling and repair strategies in HRI*
- A. Özgür (PhD, 2014-2015): *Cellulo: haptic robotics for learning*
- D. Hood (MSc, 2014): *CoWriter project: Getting Nao to write on a tactile tablet*

2016– **Lecturer, Plymouth University.**

teaching at BSc & MSc level robotics, including HRI, ROS, Kalman filtering, localisation and planning, control architectures

2013–2016 **Guest lectures, Plymouth University, EPFL.**

RGB-D cameras for HRI, Introduction to computer graphics & 3D modelling.

2008–2016 **Support lectures in robotics, Plymouth University, EPFL, LAAS-CNRS, Université de Toulouse.**

ROS, robotic simulation, ontologies, Python, software engineering.

2008–2011 **Teaching assistant, INSA Toulouse, Écoles des Mines de Paris.**

Prolog, Ontology Modeling, Java, ADA, SQL, Mechatronics.

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## Scientific Engagement & Dissemination Activities

- 2018 **Programme Committee, IJCAI 2018.**
- 2017 **alt.HRI chair, HRI 2017.**
- 2016– **Associate Editor, IROS 2016, 2017, 2018.**
- 2016– **Programme Committee, HRI 2016, 2017, 2018.**
- 2016 **Programme Chair, Workshop on Cognitive Architectures for Social HRI, HRI 2016.**
- 2013 **Steering Committee, Intl. Workshop on MORSE for HRI, HRI 2014.**
- 2013 **Programme Committee, Workshop on Developmental Social Robotics, IROS 2013.**
- 2012 **Steering Committee, Intl. Workshop on MORSE and its Applications.**

### Selected keynotes and invited talks

- 2017 **Of Cognition and Social Robots, University of Edinburgh.**
- 2018 **From Children Free-play to Robot AI, keynote @ AAAI Fall Symposium'18.**

### Selected outreach activities

- 2011 **'Roboscopia' Human-Robot public theater performance, Science Day'11.**  
<http://bit.ly/1LQpNWA>
- 2008–2012 **Robotics Science Day Coordinator, LAAS-CNRS.**
- 2008–2011 **Toulouse's Cognitive Sciences Students Association, Co-chair.**
- 2008–2009 **South African SciFest festival, Science facilitator.**
- 1997–2012 **Executive Committee & Head of Educational Robotics, Planète Sciences, including coordination of the EUROBOT Robotic Competition .**

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## Technical Skills and Spoken Languages

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| Robotics | <ul style="list-style-type: none"><li>Expert in cognitive robotics and human-robot interaction</li><li>Expert in symbolic knowledge representation</li><li>Expert PR2, Pepper, Nao developer</li><li>Contributor to ROS, OpenCV</li><li>Lead dev. MORSE simulator</li></ul> | Programming | <ul style="list-style-type: none"><li>Python, modern C++, Prolog, SmallTalk</li><li>Open-source enthusiast<br/>GitHub:<br/><a href="https://github.com/severin-lemaignan">github.com/severin-lemaignan</a></li></ul> |
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### Languages

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| French  | Native   |
| English | Fluent   |
| German  | Advanced |

TOEIC score 925/990

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