

Séverin Lemaignan

Research Associate
Cognition for Social Robotics

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34 years old



Scientific Focus

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.

PhD Title *Grounding the Interaction: Knowledge Representation for Interactive Robots*

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

Education and Research Activities

- 2015– **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.**

Awards and Honors

- **Best Paper 'Methods and Theory' Award, HRI'2016**
- Awarded the prestigious **European Marie Skłodowska-Curie Individual Fellowship** to conduct research on Theory of Mind applied to robots
- **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

Selected Publications

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.

Supervision & Teaching Experience

Students supervision.

- C. Wallbridge (PhD, 2016-): *Spatial reasoning for Child-Robot Interaction*
- E. Senft (PhD, 2015-): *Machine learning approaches to social human-robot shared control*
- F. Garcia (MSc, 2015): *Real-time attention assessment*
- 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*
- S. Chandra (PhD, 2013-2014): *CoWriter project: learning by teaching handwriting to a robot*
- J. Fink (PhD, 2013-2014): *Long-term acceptance of robots in daily life, Anthropomorphism*
- P. Tsemengue, M. Chouayakh (MSc, 2010): *Natural language processing & understanding*

2016 **Lecturer, Plymouth University.**

Humanoid & Mobile Robots (including Kalman filtering, bipedal walking, 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.

Scientific Engagement & Dissemination Activities

2017 **Theme chair & Programme Committee, HRI 2017.**

2016 **Associate Editor, IROS 2016.**

2016 **Programme Committee, HRI 2016.**

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,**
<http://devsor2013.sciencesconf.org>.

2012 **Steering Committee, Intl. Workshop on MORSE and its Applications.**

Main Outreach Actions

- 2011 **'Roboscopia' Human-Robot public theater performance, Science Day'11.**
<http://bit.ly/1LQpNWA>
- 2008–2012 **Robotics Science Day Coordinator, LAAS-CNRS.**
- 2008–2011 **Vice-president of Toulouse's Cognitive Science Student Association .**
www.incognu.fr
- 2008–2009 **Science communicator at South African SciFest festival.**
- 1997–2012 **Leading role at 'Planète Sciences' non-profit, Head of the Robotics Department 2006-2007 – Executive Committee 2008-2011 – Science Camps leader (with BAFA certification) – Coordinator on the EUROBOT Robotic Competition .**
<http://www.planete-sciences.org/>

Technical Skills and Spoken Languages

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| Robotics | <ul style="list-style-type: none">Expert in cognitive robotics and human-robot interactionExpert in symbolic knowledge representationExpert PR2, Pepper, Nao developerContributor to ROS, OpenCVLead dev. MORSE simulator | Programming | <ul style="list-style-type: none">Python, modern C++, Haskell, Prolog, SmallTalkOpen-source enthusiast
GitHub:
github.com/severin-lemaignan |
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Languages

French	Native
English	Fluent
German	Advanced

TOEIC score 925/990
DSH