Séverin Lemaignan

Lecturer
Cognition for Social Robotics

☎ +44 7907986893
✉ severin.lemaignan@plymouth.ac.uk
https://academia.skadge.org
34 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**

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.

Awards and Honors

- **Best Paper Award 'Design'**, HRI'2017
- **Best Paper Award 'Methods and Theory'**, 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 Disctinction** ("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 **'Roboscopie' 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

Robotics
- Expert in cognitive robotics and human-robot interaction
- Expert in symbolic knowledge representation
- Expert PR2, Pepper, Nao developer
- Contributor to ROS, OpenCV
- Lead dev. MORSE simulator

Programming
- Python, modern C++, Haskell, Prolog, SmallTalk
- Open-source enthusiast GitHub: `github.com/severin-lemaignan`

Languages

French	Native	
English	Fluent	*TOEIC score 925/990*
German	Advanced	*DSH*