Séverin Lemaignan

Post-doctoral Fellow, Cognition for Human-Robot Interaction

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Scientific Interests

Scientific Focus Knowledge representation systems and their importance for robots' cognition; human-robot multi-modal interaction; robot cognition and decision making.

PhD Title Grounding the Interaction: Knowledge Representation for Interactive Robots

Keywords Robotic Cognition, Human-Robot Interaction, Grounding, Ontologies

Education and Research Activities

2013- **Post-doctoral fellow**, CHILI, EPFL, Lausanne, Switzerland. Interaction with Robots in Educational Environments

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 (Cum Suma Laude).

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 Engineering degree**, Karlsruhe TH, Fakultät für Maschinenbau / École Nationale Supérieur des Arts et Métiers, Gold Medal (top ten students). Final project: Ontologies and distributed systems for industrial processes.

2004–2005 M.S. degree IT Environments for Education ("Environnements Informatiques pour l'Apprentissage Humain"), University Paris V, College of Mathematics and Computer Sciences, With Honours.

Selected Publications

See my website for the complete list of publications, workshops and seminars. International peer-reviewed journals

Lemaignan, S. and Ros, R. and Sisbot, E. A. Alami, R. and Beetz M., Grounding the Interaction: Anchoring Situated Discourse in Everyday Human-Robot Interaction, International Journal of Social Robotics, 2011.

Book chapters

Lemaignan, S. and Alami, R. and Pandey, A. K. and Warnier, M. and Guitton, J., Towards Grounding Human-Robot Interaction in Bridges between the Methodological and Practical Work of the Robotics and Cognitive Systems Communities - From Sensors to Concepts Editors: Amirat, T. and Chibani, A. and Zarri, G. P.. Springer Publishing. 2012.

International peer-reviewed conference articles (6-8 pages)

- Lemaignan, S. and Ros, R. and Alami, R. and Beetz, M., What are you talking about? Grounding dialogue in a perspective-aware robotic architecture, *ROMAN*, 2011.
- Lemaignan, S. and Ros, R. and Mösenlechner, L. and Alami, R. and Beetz, M.,
 ORO, a knowledge management module for cognitive architectures in robotics, IROS 2010.
- Ros, R. and Lemaignan, S. and Sisbot, E. A. and Alami, R. and Steinwender, J. and Hamann, K. and Warneken, F., Which One? Grounding the Referent Based on Efficient Human-Robot Interaction, ROMAN. 2010. Best paper award.

Teaching Experience

2008–2013 Support lectures in robotics, EPFL, LAAS-CNRS, Université de Toulouse. Tutorials on ROS, robotic simulation, ontologies, Python, software development...

2008–2011 Teaching assistant, INSA Toulouse.

Tutorials in Prolog, Ontology Modeling, Java, ADA, SQL.

2006–2007 **Teaching assistant**, École des Mines de Paris.

Tutorials in mechatronics.

2006- Educative Robotics Trainings.

As head of the Educational Robotics department at the non-for-profit Planète Sciences organization, I've tutored numerous classes on Educational Robotics with teachers and science communicators.

Technical Skills and Spoken Languages

Robotics Experienced PR2, Nao dev. Programming Python, C++,
Contributor to ROS, OpenCV Languages Prolog, SmallTalk
Lead dev. MORSE simulator

GitHub github.com/severin-lemaignan

Languages

French Native

English Expert TOEIC score 925/990

German Advanced DSH

Dissemination Activities

Workshops

- 2013 Program Committee, Workshop on Developmental Social Robotics, IROS 2013, http://devsor2013.sciencesconf.org.
- 2012 Steering Committee, Intl. Workshop on MORSE and its Applications.
- 2008-2009 Steering Committee, Cognitive Sciences' Young Researchers Conference 2009, http://fresco.risc.cnrs.fr/cjcsc2009/.

Outreach

- $2008-2012 \quad \textbf{Robotics Science Day Coordinator}, \ \textit{LAAS-CNRS}.$
- 2008-2011 Vice President of Toulouse's Cognitive Science Student Association . www.incognu.fr
- 2008–2009 Science Communicator at South African SciFest festival.
 - 1997- Involvement at Planète Sciences, Head of the Robotics Department in 2006-2007 Executive Committee member since 2008 Science Camps leader (with BAFA certification) Coordinator on the EUROBOT Robotic Competition .

 http://www.planete-sciences.org/