

# Séverin Lemaignan

## *Cognition for Social Robotics*

☎ +44 117 328 5478  
☎ +44 790 798 6893 (M)  
✉ [severin.lemaignan@brl.ac.uk](mailto:severin.lemaignan@brl.ac.uk)  
<https://academia.skadge.org>  
36 years old



Scientific Focus   **Robot cognition and decision making for safe social interaction:** data-driven understanding of social interactions; explainable AI; ethics of safe human-robot interactions; robust human-robot multi-modal interaction; symbolic and sub-symbolic knowledge representation.

Keywords   **Social Robotics, Robotic Cognition, Safe & Robust Human-Robot Interaction, Cognitive Architectures**

### Education & Research Activities

- Apr. 2018– **Senior Research Fellow in Robotics and Artificial Intelligence, Bristol Robotics Lab, United Kingdom.**  
Supervision of the Human-Robot Interaction research group; Supervision of the Driverless Vehicle research group.  
Directly managing 20+ students and early career researchers.
- 2017–2018 **Lecturer in Robotics, 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 Learning 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 **Joint German-French PhD in Cognitive Robotics, LAAS-CNRS, Toulouse, France / Technical University of Munich, Germany.**  
**with High Distinction** “Summa Cum Laude” – awarded CNRS’ **Best PhD in Robotics 2012**  
Supervisors: Pr. Rachid Alami, CNRS; Pr. Michael Beetz, TUM.
- 2006–2007 **Research Engineer, INRIA, Paris, France.**  
Development of semantic-aware control architectures for autonomous vehicles.
- 2002–2006 **Joint German-French MSc of Engineering, Karlsruhe Institute of Technology / ENSAM ParisTech.**
- 2004–2005 **MSc Artificial Intelligence for Learning Technologies, University Paris V, College of Mathematics and Computer Sciences, With Honours.**

### Selected Fellowships & Grants

- 2019–2022 **InnovateUK, CAV Forth – Verification for Connected Autonomous Vehicles,**  
Principal Investigator, £600K.
- 2018–2019 **University of the West of England, Robots in Human Environment,**  
Principal Investigator, £2.5K.
- 2015–2017 **EU H2020 Marie Skłodowska-Curie Individual Fellowship,**  
Principal Investigator, € 195K.

### Awards and Honours

- HRI’2017 **Best Paper Award 'Design'.**
- HRI’2016 **Best Paper Award 'Methods and Theory'.**
- AAAI’2015 **Best Video Award in Artificial Intelligence.**
- AAAI’2014 **Best Late Breaking Report Award.**
- 2012 **Best PhD in Robotics, CNRS.**
- 2012 **PhD with High Distinction, (“Summa Cum Laude”), TU Munich.**
- Ro-Man’2010 **Best Paper Award.**

## Selected Recent Publications

As of Sept 2019, 70+ publications, 1900+ citations, *h*-index = 23, *i*10-index=38 (*Google Scholar*).

→ *Link to complete list of publications, workshops and seminars.*

- Senft, E., Lemaignan, S., Baxter, P., Bartlett, M., Belpaeme, T. **Teaching robots social autonomy from in situ human guidance** *Science Robotics* 2019.
- Sallami, Y., Lemaignan, S., Clodic, A., Alami, R. **Simulation-based physics reasoning for consistent scene estimation in an HRI context** *IEEE IROS* 2019.
- Wallbridge, C., Lemaignan, S., Senft, E., Belpaeme, T. **Generating Spatial Referring Expressions in a Social Robot: Dynamic vs Non-Ambiguous** *Frontiers in AI and Robotics* 2019.
- Winkle, K., Lemaignan, S., Caleb-Solly, P., Leonards, U., Turton, A., Bremner, P. **Effective Persuasion Strategies for Socially Assistive Robots** *ACM/IEEE HRI* 2019.
- Bartlett, M., Edmunds, C. E. R., Belpaeme, T., Thill, S., Lemaignan, S. **What Can You See? Identifying Cues on Internal States from the Kinematics of Social Interactions** *Frontiers in AI and Robotics* 2019.
- Lemaignan, S., Edmunds E. R., C., Senft, E., Belpaeme, T. **The PInSoRo dataset: Supporting the data-driven study of child-child and child-robot social dynamics** *PLOS ONE* 2018.
- Senft, E., Baxter, P., Kennedy, J., Lemaignan, S., Belpaeme, T. **Supervised Autonomy for Online Learning in Human-Robot Interaction** *Pattern Recognition Letters* 2017.
- Lemaignan, S., Warnier, M., Sisbot, E.A., Clodic, A., Alami, R. **Artificial Cognition for Social Human-Robot Interaction: An Implementation** *Artificial Intelligence* 2017.

## Supervision & Teaching Experience

**Students supervision**, Currently supervising 10+ PhD and MSc students, (click here for full list).

- N. Webb (PhD, 2019-): *Data-Driven Human Robot Interaction*
- L. Wijnen (PhD, 2019-): *Trust in Human Robot Interaction*
- M. Bartlett (PhD, 2017-): *Data-Driven Social Robotics*
- K. Winkle (PhD, 2016-): *Persuasive human-robot interactions*
- C. Wallbridge (PhD, 2016-): *Spatial reasoning for Child-Robot Interaction*
- E. Senft (PhD, 2015-2018): *Shared autonomy for social human-robot interactions*
- A. Jacq (PhD, 2014-2015): *Mutual modeling and repair strategies in HRI*
- A. Özgür (PhD, 2014-2015): *Cellulo: haptic robotics for learning*
- S. Chandra (PhD, 2013-2017): *CoWriter project: learning by teaching handwriting to a robot*
- J. Fink (PhD, 2011-2014): *Long-term acceptance of robots in daily life & anthropomorphism*

2018– **University of the West of England, senior lecturer.**

teaching at MSc level; Human-Robot Interaction, data science

2016–2018 **Plymouth University, lecturer.**

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

2018–2016 **Guest lectures & Seminars, Plymouth University, EPFL, Université de Toulouse.**

ROS, simulation, ontologies, Python/C++ software engineering, computer graphics & 3D modelling.

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

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

## Selected outreach activities

2019 **Scientific advisor for the WeTheCurious Bristol's science museum, City Lab project.**

2016– **UK & EU Robotics Weeks coordinator, University of Plymouth, University of the West of England.**

2011 **'Roboscopia' Human-Robot public theater performance, Science Day'11.**

<http://bit.ly/1LQpNWA>

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 EU-ROBOT Robotic Competition.**

## Technical Skills and Spoken Languages

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