

# Séverin Lemaignan

*Senior Scientist*  
*Social Modelling and AI for Robots*

+34 613 02 64 36 (M)  
✉ severin.lemaignan@iia.csic.es  
<https://academia.skadge.org>  
41 years old



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

Keywords **Artificial cognition, AI for Social modelling, Social Robotics, Responsible Human-Robot Interaction**

## Education & Research Activities

- 2026– **Principia Investigator in Artificial Social Cognition and AI, IIIA-CSIC, Spain**  
Co-lead of the SocialMinds AI Lab  
Leading and Managing the 15+ researchers lab
- 2021–2025 **Senior Scientist in Social Robotics and AI, PAL Robotics, Spain**  
Research team leader, overseeing the company's AI roadmap and development of Social Robots and autonomous Human-Robot Interactions capabilities.
- 2019–2021 **Associate Professor in Social Robotics and AI, 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.
- 2018–2019 **Senior Research Fellow in Robotics and Artificial Intelligence, Bristol Robotics Lab, United Kingdom**
- 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**  
Embodied AI for Education – Supervision of the Robotics 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 & PI/Co-I Roles

Selected fellowships

- 2021–2023 **Horizon Europe / ACCÍO TecnioSpring Technology Transfer fellowship,**  
Principal Investigator, € 400K
- 2015–2017 **EU H2020 Marie Skłodowska-Curie Individual Fellowship,**  
Principal Investigator, € 195K
- Recent grants with PI/Co-I role
- 2024–2027 **Horizon Europe (DN), SWEET, Supervisor**
- 2024–2027 **Spanish government, Capsul-IA, Principal Investigator (technical coordinator)**
- 2024–2027 **Horizon Europe, ARISE, Principal Investigator (technical coordinator)**
- 2022–2026 **Horizon Europe (DN), TRAIL, Supervisor**

- 2022–2026 **Horizon Europe, CoreSense**, Technical coordinator
- 2020–2024 **Horizon Europe, SPRING**, Principal Investigator (Technical coordinator)
- 2021–2024 **Horizon Europe (DN), PERSEO**, Supervisor
- 2019–2023 **Horizon Europe, SHAPES**, Principal Investigator (technical coordinator)

## Scientific Impact & Dissemination Activities

**Active figure of the Social and Intelligent Robots community**, *invited to high-profile editorial roles*

**As of Jul 2024, 100+ publications, 4900+ citations,  $h$ -index = 35,  $i10$ -index = 67**

Recent International expert & advisory roles

- 2020–2024 **Invited member of the International HRI Steering Committee**
- 2021–2022 **Expert on Ethics of Child-Robot Interaction; EU JRC/UNICEF**
- 2017– **EU H2020 member on the Peer Review College**
- 2019–21 **Full member of the UK EPSRC College**
- 2019– **Invited PhD committee examiner, 6 times since 2019, in Sweden (Örebro, Uppsala, KTH), Germany (Bielefeld), France (LAAS-CNRS), UK (Bristol Robotics Lab)**
- 2019 **Invited Expert in Child-Robot Interaction, robot4SEN project, VTC, Hong Kong**
- Significant National & International Editorial roles
- 2025 **General Chair of the IEEE/ACM Human-Robot Interaction Conference 2025**
- 2018– **Associate Editor, Frontiers in Robotics and AI**
- 2018– **Program Committee of major international conferences in AI and robotics, IROS'16–'18; IJ-CAI'17'18'20'21; HRI'16–'24; HAI'18; AAMAS'19; RSS'20**
- 2017–2024 **Organisation of the IEEE/ACM HRI conference, alt.HRI chair '17, local chair '20, Student Design Competition chair '21, Publication chair '24**
- Policy making
- 2023 **Invited to co-author the upcoming Responsible Robotics roadmap; Dagstuhl seminar**
- 2020 – **Expert Collaborator for the European Joint Research Centre, contributing to the UNICEF Guidelines for Responsible Child-Robots Interactions**
- 2019 **Invited panel by the EU Research Executive Agency, MSCA AI Cluster, sharing expertise in Human-Robot Interaction**
- 2018–2020 **BRL strategic planning, involved in discussion about Intelligent Manufacturing; HRI systems; Assistive robotics with key UK policy makers, incl. BEIS Secretary of State Greg Clark; Minister of State for Universities, Science, Research and Innovation Chris Skidmore; West of England CA Tim Bowles**

## Recent International Keynotes and Invited Talks

- **Architectures for HRI – invited panelist**, 2024  
TA-HRI Symposium, Boulder, USA
- **End-to-end Participatory Design – keynote**, 2023  
NAVERlabs HRI Symposium, Grenoble, France
- **Cognitive Architectures for Social Robots – keynote**, 2023  
HRI Symposium, Tel-Aviv
- **ROS4HRI – keynote**, 2022  
ROSCON'22, Kyoto
- **Robots for Learning – invited speaker**, 2019  
Robot4SEN, Vocational Training Council, Kong Kong
- **From Big Data to Social Robotics – keynote**, 2019  
UK RAS conference, Loughborough, UK
- **Big Data and Social Robotics – invited speaker**, 2018  
LAAS-CNRS, Toulouse, France
- **Child-robot Social Interactions – invited speaker**, 2018  
IIT, Genoa, Italy
- **Theory of Mind and Joint-action – keynote**, 2018  
Robotics Science and System workshop, Pittsburgh, USA

## 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**

## Supervision & Teaching Experience

**Students supervision**, Supervised 13 PhD and 20+ MSc students to date, (click here for full list)

- o L. Palonetto (PhD, 2025-): *Modelling of Social Situations*
- o F. Gebelli (PhD, 2023-): *Explanability for Social Robots*
- o L. Ferrini (PhD, 2021–2026): *Social Learning for Interactive Robots*
- o L. Lach (PhD, 2021–2023): *Tactile Manipulation for Robots*
- o Y. Mohamed (PhD, 2021–2024): *Data-Driven Human State Assessment*
- o N. Webb (PhD, 2019-2024): *Data-Driven Human Robot Interaction*
- o M. Bartlett (PhD, 2017-): *Data-Driven Social Robotics*
- o K. Winkle (PhD, 2016–2020): *Persuasive human-robot interactions*
- o C. Wallbridge (PhD, 2016–2019): *Spatial reasoning for Child-Robot Interaction*
- o E. Senft (PhD, 2015–2018): *Shared autonomy for social human-robot interactions*
- o A. Jacq (PhD, 2014–2017): *Mutual modeling and repair strategies in HRI*
- o A. Özgür (PhD, 2014–2017): *Cellulo: haptic robotics for learning*
- o S. Chandra (PhD, 2013–2017): *CoWriter project: learning by teaching handwriting to a robot*
- o J. Fink (PhD, 2011–2014): *Long-term acceptance of robots in daily life & anthropomorphism*

2018–2021 **University of the West of England, associate professor**

teaching at MSc level; Human-Robot Interaction, data science, software engineering for robotics, ROS

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– **Cluster Lead for STEM outreach, University of the West of England**

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

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

2011 **'Roboscopie' 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 EUROBOT Robotic Competition**

## Technical Skills and Spoken Languages

### Programming

- o Expert C++, Python, Java, Prolog, SmallTalk
- o Machine learning: RL, Transformers
- o Deep-learning frameworks: pytorch, TensorFlow, ONNX
- o CUDA programming
- o Data analysis and statistics: scipy, pandas, numpy
- o Knowledge representation: RDF, OWL, SPARQL
- o Open-source enthusiast
- o GitHub: [github.com/severin-lemaignan](https://github.com/severin-lemaignan)

### Languages

French Native

### Robotics

- o Expert in cognitive robotics and human-robot interaction
- o ROS 1/ROS 2
- o Expert TIAGo, TIAGo Pro, ARI, PR2, Pepper, Nao developer
- o Contributor to ROS, OpenCV
- o Lead dev. MORSE simulator

English Fluent (C2)  
Spanish Advanced (B2)  
German Advanced (B1)

## Selected publications

As of Jul 2024, 100+ publications, 4900+ citations, *h*-index = 35, *i10*-index = 67 (*Google Scholar*).

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

### Selected International peer-reviewed journals

- Lemaignan, S., Newbutt, N., Rice, L., Daly, J.,  
**"It's Important to Think of Pepper as a Teaching Aid or Resource External to the Classroom": A Social Robot in a School for Autistic Children,**  
*International Journal of Social Robotics* 2022. DOI: 10.1007/s12369-022-00928-4.
- Winkle, K., Senft E., Lemaignan, S.,  
**LEADOR: A Method for End-To-End Participatory Design of Autonomous Social Robots,**  
*FrontiersIn AI and Robotics* 2021. DOI: 10.3389/frobt.2021.704119.
- Wallbridge, C., Smith, A., Giuliani, M., Melhuish, C., Belpaeme, T., Lemaignan, S.,  
**The Effectiveness of Dynamically Processed Incremental Descriptions in Human Robot Interaction,**  
*ACM Transactions on Human-Robot Interaction* 2021. DOI: 10.1145/3481628.
- Wallbridge, C., Lemaignan, S., Senft, E., Belpaeme, T.,  
**Generating Spatial Referring Expressions in a Social Robot: Dynamic vs Non-Ambiguous,**  
*FrontiersIn AI and Robotics* 2019. DOI: 10.3389/frobt.2019.00067.
- 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 Natural Social Interactions,**  
*FrontiersIn AI and Robotics* 2019. DOI: 10.3389/frobt.2019.00049.
- 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. DOI: 10.1371/journal.pone.0205999.
- Senft, E., Baxter, P., Kennedy, J., Lemaignan, S., Belpaeme, T.,  
**Supervised Autonomy for Online Learning in Human-Robot Interaction,**  
*Pattern Recognition Letters* 2017. DOI: 10.1016/j.patrec.2017.03.015.
- Lemaignan, S., Warnier, M., Sisbot, E.A., Clodic, A., Alami, R.,  
**Artificial Cognition for Social Human-Robot Interaction: An Implementation,**  
*Artificial Intelligence* 2017. DOI: 10.1016/j.artint.2016.07.002.
- Lemaignan, S., Jacq, A., Hood, D., Garcia, F., Paiva, A., Dillenbourg, P.,  
**Learning by Teaching a Robot: The Case of Handwriting,**  
*IEEE Robotics and Automation Magazine* 2016. DOI: 10.1109/MRA.2016.2546700.
- Dillenbourg, P., Lemaignan, S., Sangin, M., Nova, N., Molinari, G.,  
**The Symmetry of Partner Modelling,**  
*Intl. J. of Computer-Supported Collaborative Learning* 2016. DOI: 10.1007/s11412-016-9235-5.

### Selected International peer-reviewed conference articles

- Cooper, S., Ros, R., Lemaignan, S.,  
**Challenges of deploying assistive robots in real-life scenarios: an industrial perspective,**  
*RoMAN* 2023. DOI: 10.1109/RO-MAN57019.2023.10309467.
- Webb, N., Giuliani, M., Lemaignan, S.,  
**SoGrIn: a non-verbal dataset of social group-level interactions,**  
*RoMAN* 2023. DOI: 10.1109/RO-MAN57019.2023.10309351.
- Alhafnawi, M., Hunt, E. R., Lemaignan, S., O'Dowd, P., Hauert, S.,  
**Deliberative Democracy with Robot Swarms,**  
*IROS* 2022. DOI: 10.1109/IROS47612.2022.9981649.
- Webb, N., Giuliani, M., Lemaignan, S.,  
**Measuring Visual Social Engagement from Proxemics and Gaze,**  
*RoMAN* 2022. DOI: 10.1109/RO-MAN53752.2022.9900801.
- Mohamed, Y., Ballardini, G., Parreira, M. T., Lemaignan, S., Leite, I.,  
**Automatic Frustration Detection Using Thermal Imaging,**  
*HRI* 2022. DOI: 10.5555/3523760.3523821.

- Mohamed, Y., Lemaignan, S.,  
**ROS for Human-Robot Interaction,**  
*IROS* 2021. DOI: 10.1109/IROS51168.2021.9636816.
- Wijnen, L., Bremner, P., Lemaignan, S., Giuliani, M.,  
**Performing Human-Robot Interaction User Studies in Virtual Reality,**  
*RoMAN* 2020. DOI: 10.1109/RO-MAN47096.2020.9223521.
- Winkle, K., Lemaignan, S., Caleb-Solly, P., Leonards, U., Turton, A., Bremner, P.,  
**In-Situ Learning from a Domain Expert for Real World Socially Assistive Robot Deployment,**  
*RSS* 2020. DOI: 10.15607/RSS.2020.XVI.059.
- Winkle, K., Lemaignan, S., Caleb-Solly, P., Leonards, U., Turton, A., Bremner, P.,  
**Effective Persuasion Strategies for Socially Assistive Robots,**  
*HRI* 2019. DOI: 10.1109/HRI.2019.8673313.
- Wallbridge, C., van den Berghe, R., Hernández García, D., Kanero, J., Lemaignan, S., Edmunds, C., Belpaeme, T.,  
**Using a Robot Peer to Encourage the Production of Spatial Concepts in a Second Language,**  
*HAI* 2018. DOI: 10.1145/3284432.3284433.
- Irfan, B., Kennedy, J., Lemaignan, S., Papadopoulos, F., Senft, E., Belpaeme, T.,  
**Social psychology and Human-Robot Interaction: an Uneasy Marriage,**  
*alt.HRI* 2018. DOI: 10.1145/3173386.3173389.
- Senft, E., Lemaignan, S., Baxter, P., Belpaeme, T.,  
**Toward Supervised Reinforcement Learning with Partial States for Social HRI,**  
*AAAI Fall Symposium – AI-HRI* 2017.
- Chandra, S., Alves-Oliveira, P., Lemaignan, S., Sequeira, P., Paiva, A., Dillenbourg, P.,  
**Children's Peer Assessment and Self-disclosure in the Presence of an Educational Robot,**  
*RoMAN* 2016. DOI: 10.1109/ROMAN.2016.7745170.
- Baxter, P., Kennedy, J., Senft E., Lemaignan, S., Belpaeme, T.,  
**From Characterising Three Years of HRI to Methodology and Reporting Recommendations,**  
*alt.HRI* 2016. DOI: 10.1109/HRI.2016.7451777.
- Karim, M. E., Lemaignan, S., Mondada, F.,  
**A Review: Can Robots Reshape K-12 STEM Education?,**  
*ARSO* 2015. DOI: 10.1109/ARSO.2015.7428217.
- Lemaignan, S., Dillenbourg, P.,  
**Mutual Modelling in Robotics: Inspirations for the Next Steps,**  
*HRI* 2015. DOI: 10.1145/2696454.2696493.
- Hood, D., Lemaignan, S., Dillenbourg, P.,  
**When Children Teach a Robot to Write: An Autonomous Teachable Humanoid Which Uses Simulated Handwriting,**  
*HRI* 2015. DOI: 10.1145/2696454.2696479.
- Lemaignan, S., Hanheide, M., Karg, M., Khambhaita, H., Kunze, L., Lier, F., Lütkebohle, I., Milliez, G.,  
**Simulation and HRI - Recent Perspectives with the MORSE Simulator,**  
*SIMPAR* 2014. DOI: 10.1007/978-3-319-11900-7\_2.
- Lemaignan, S., Fink, J., Dillenbourg, P., Braboszcz, C.,  
**The Cognitive Correlates of Anthropomorphism,**  
*Workshop A bridge between Robotics and Neuroscience - HRI* 2014.
- Lemaignan, S., Ros, R., Alami, R., Beetz, M.,  
**What are you talking about? Grounding dialogue in a perspective-aware robotic architecture,**  
*RoMAN* 2011. DOI: 10.1109/ROMAN.2011.6005249.
- Lemaignan, S., Ros, R., Mösenlechner, L., Alami, R., Beetz, M.,  
**ORO, a Knowledge Management Module for Cognitive Architectures in Robotics,**  
*IROS* 2010. DOI: 10.1109/IROS.2010.5649547.
- Ros, R., Lemaignan, S., Sisbot, E. A., Alami, R., Steinwender, J., Hamann, K., Warneken, F.,  
**Which One? Grounding the Referent Based on Efficient Human-Robot Interaction,**  
*RoMAN* 2010. DOI: 10.1109/ROMAN.2010.5598719.