# Pr. Séverin Lemaignan

### Social Robotics and AI

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Scientific Focus F

Keywords Social Robotics, Robotic Cognition, Responsible Human-Robot Interaction, Cognitive Architectures

#### Education & Research Activities

2019 — **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*.

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.

## Scientific Impact & Dissemination Activities

Active figure of the Intelligent Robots community, invited to high-profile editorial roles.

**As of Feb 2021, 75+ publications**, 2800+ citations, h-index = 25, i10-index = 45.

Recent International expert & advisory roles

- 2021 Expert on Ethics of Child-Robot Interaction; EU JRC/UNICEF.
- 2017 EU H2020 member on the Peer Review College.
- 2019- 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.
- 2018- Senior Scientific Adviser for South-West UK SMEs, EU H2020 SABRE project.

Significant National & International Editorial roles

- 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-'20; HAI'18; AAMAS'19; RSS'20.

- 2017–2021 **Organisation of the IEEE/ACM HRI conference**, alt.HRI chair '17, local chair '20, Student Design Competition chair '21.
  - 2019 UK TAROS conference on Autonomous Robotic Systems, co-coordinator.

Policy making

- 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

- Robots for Learning invited speaker, 2019
   Robot4SEN, Vocational Training Council, Kong Kong
- o 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
- o **Child-robot Social Interactions** *invited speaker*, 2018 IIT, Genoa, Italy
- Theory of Mind and Joint-action keynote, 2018
   Robotics Science and System, Pittsburgh, USA
- Immersive Technologies for Safe Driverless Vehicles *invited speaker*, 2018 South West Creative Technology Network, Bristol, UK
- Human-Robot interaction in the context of safe driverless vehicles *invited speaker*, 2018 HRI Symposium, Stanford University, Stanford, USA
- Robots for Learning keynote, 2018
   Symposium on Robots for Language Learning, Koç University, Istanbul, Turkey

#### 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.

#### Publications

As of Feb 2021, 75+ publications, 2800+ citations, h-index = 25, i10-index = 45 (Google Scholar).  $\rightarrow$  Link to complete list of publications, workshops and seminars.

#### International peer-reviewed journals

- o Senft, E., Lemaignan, S., Baxter, P., Bartlett, M., Belpaeme, T., **Teaching robots social autonomy from in situ human guidance**,
- Science Robotics 2019. DOI: 10.1126/scirobotics.aat1186.
- o 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. DOI: 10.3389/frobt.2019.00067.
- o 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,

Frontiers in AI and Robotics 2019. DOI: 10.3389/frobt.2019.00049.

o Flook, R., Shrinah, A., Wijnen, L., Eder, K., Melhuish, C., Lemaignan, S.,

On the Impact of Different Types of Errors on Trust in Human-Robot Interaction: Are laboratory-based HRI experiments trustworthy?

Interaction Studies 2019. DOI: 10.1075/is.18067.flo.

o 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.

o 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.

o 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.

o 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.

o 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.

o Lemaignan, S.

Grounding the Interaction: Knowledge Management for Interactive Robots [dissertation abstract], Künstliche Intelligenz 2013. DOI: 10.1007/s13218-013-0246-3.

o Lallée, S., Pattacini, U., Lemaignan, S., Lenz, A., Melhuish, C., Natale, L., Skachek, S., Hamann, K., Steinwender, J., Sisbot, E.A., Metta, G., Pipe, T., Alami, W., Warnier, M., Guitton, J., Warneken, F., Dominey, P.F.,

Towards a Platform-Independent Cooperative Human-Robot Interaction System: III. An Architecture for Learning and Executing Actions and Shared Plans,

IEEE Transactions on Autonomous Mental Development 2012. DOI: 10.1109/TAMD.2012.2199754.

o 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. DOI: 10.1007/s12369-011-0123-x.

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

o Chance, G., Ghobrial, A., Lemaignan, S., Pipe, T., Eder, K.,

An Agency-Directed Approach to Test Generation for Simulation-based Autonomous Vehicle Verification, *AI Test* 2020. DOI: 10.1109/AITEST49225.2020.00012.

o 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.

o 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.

o Sallami, Y., Lemaignan, S., Clodic, A., Alami, R.,

Simulation-based physics reasoning for consistent scene estimation in an HRI context, *IROS* 2019. DOI: 10.1109/IROS40897.2019.8968106.

o 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.

o 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.

o Lemaignan, S., Sallami, Y., Wallbridge, C., Clodic, A., Alami, R.,

underworlds: Cascading Situation Assessment for Robots,

IROS 2018. DOI: 10.1109/IROS.2018.8594094.

o Senft, E., Lemaignan, S., Bartlett, M., Baxter, P., Belpaeme, T.,

Robots in the classroom: Learning to be a Good Tutor,

HRI – Workshop R4L 'Robots for Learning' 2018.

o 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.

o Wallbridge, C., Lemaignan, S., Belpaeme, T.,

Qualitative Review of Object Recognition Techniques for Tabletop Manipulation,

HAI 2017. DOI: 10.1145/3125739.3132593.

o Senft, E., Lemaignan, S., Baxter, P., Belpaeme, T.,

Toward Supervised Reinforcement Learning with Partial States for Social HRI, AAAI Fall Symposium – AI-HRI 2017.

o Özgür, A., Lemaignan, S., Johal, W., Beltran, M., Briod, M., Pereyre, L., Mondada, F., Dillenbourg, P.,

Cellulo: Versatile Handheld Robots for Education,

HRI 2017. DOI: 10.1145/2909824.3020247.

o Kennedy, J., Lemaignan, S., Montassier, C., Lavalade, P., Irfan, B., Papadopoulos, F., Senft, E., Belpaeme, T., Child Speech Recognition in Human-Robot Interaction: Evaluations and Recommendations, HRI 2017. DOI: 10.1145/2909824.3020229.

o 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.

o Hostettler, L., Özgür, A., Lemaignan, S., Dillenbourg, P., Mondada, F.,

Real-Time High-Accuracy 2D Localization with Structured Patterns,

ICRA 2016. DOI: 10.1109/ICRA.2016.7487653.

o 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.

o Lemaignan, S., Garcia, F., Jacq, A., Dillenbourg, P.,

From Real-time Attention Assessment to "With-me-ness" in Human-Robot Interaction,

HRI 2016. DOI: 10.1109/HRI.2016.7451747.

o Jacq, A., Lemaignan, S., Garcia, F., Dillenbourg, P., Paiva, A.,

Building Successful Long Child-Robot Interactions in a Learning Context,

HRI 2016. DOI: 10.1109/HRI.2016.7451758.

o Baxter, P., Ashurst, E., Kennedy, J., Senft, E., Lemaignan, S., Belpaeme, T.,

The Wider Supportive Role of Social Robots in the Classroom for Teachers, WONDER Workshop - ICSR 2015.

o Lemaignan, S., Fink, J., Mondada, F., Dillenbourg, P.,

You're Doing It Wrong! Studying Unexpected Behaviors in Child-Robot Interaction,

ICSR 2015. DOI: 10.1007/978-3-319-25554-5\_39.

o Lemaignan, S., Hosseini, A., Dillenbourg, P.,

pyRobots: a Toolset for Robot Executive Control,

IROS 2015. DOI: 10.1109/IROS.2015.7353769.

o Karim, M. E., Lemaignan, S., Mondada, F.,

A Review: Can Robots Reshape K-12 STEM Education?,

ARSO 2015.

o Chandra, S., Alves-Oliveira, P., Lemaignan, S., Sequeira, P., Paiva, A., Dillenbourg, P.,

Can a Child Feel Responsible for Another in the Presence of a Robot in a Collaborative Learning Activity?, RoMAN 2015. DOI: 10.1109/ROMAN.2015.7333678.

o Lemaignan, S., Dillenbourg, P.,

Mutual Modelling in Robotics: Inspirations for the Next Steps,

*HRI* 2015. DOI: 10.1145/2696454.2696493.

o 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.

o Fink, J., Rétornaz, P., Vaussard, F., Wille, F., Franinovi , K., Berthoud, A., Lemaignan, S., Dillenbourg, P., Mondada, F.,

Which Robot Behavior Can Motivate Children to Tidy up Their Toys? Design and Evaluation of "Ranger", HRI 2014. DOI: 10.1145/2559636.2559659.

o Lemaignan, S., Hanheide, M., Karq, 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.

o Lemaignan, S., Fink, J., Dillenbourg, P., Braboszcz, C.,

#### The Cognitive Correlates of Anthropomorphism,

Workshop A bridge between Robotics and Neuroscience - HRI 2014.

o Lemaignan, S., Alami, R.,

#### Explicit Knowledge and the Deliberative Layer: Lessons Learned,

IROS 2013. DOI: 10.1109/IROS.2013.6697182.

o Echeverria, G., Lemaignan, S., Degroote, A., Lacroix, S., Karg, M., Koch, P., Lesire, C., Stinckwich, S.,

#### Simulating complex robotic scenarios with MORSE,

SIMPAR 2012. DOI: 10.1007/978-3-642-34327-8\_20.

o Warnier, M., Guitton, J., Lemaignan, S., Alami, R.,

When the Robot Puts Itself in Your Shoes. Managing and Exploiting Human and Robot Beliefs,

RoMAN 2012. DOI: 10.1109/ROMAN.2012.6343872.

o Alami, R., Warnier, M., Guitton, J., Lemaignan, S., Sisbot, E. A.,

#### When the robot considers the human...,

ISRR 2011.

o Lallée, S., Pattacini, U., Boucher, J.D., Lemaignan, S., Lenz, A., Melhuish, C., Natale, L., Skachek, S., Hamann, K., Steinwender, J., Sisbot, E.A., Metta, G., Alami, R., Warnier, M., Guitton, J., Warneken, F., Dominey, P.F.,

## Towards a Platform-Independent Cooperative Human-Robot Interaction System: II. Perception, Execution and Imitation of Goal Directed Actions,

IROS 2011, DOI: 10.1109/IROS.2011.6094744.

o 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.

o Echeverria, G., Lassabe, N., Degroote, A., Lemaignan, S.,

#### Modular Open Robots Simulation Engine: MORSE,

ICRA 2011. DOI: 10.1109/ICRA.2011.5980252.

o 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.

o 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.

o Lallée, S., Lemaignan, S., Lenz, A., Melhuish, C., Natale, L., Skachek, S., van Der Zant, T., Warneken, F., Dominey, P.F.

#### Towards a Platform-Independent Cooperative Human-Robot Interaction System: I. Perception,

IROS 2010. DOI: 10.1109/IROS.2010.5652697.

o Mallet, A., Pasteur, C., Herrb, M., Lemaignan, S., Ingrand, F.,

#### GenoM3: Building middleware-independent robotic components,

ICRA 2010. DOI: 10.1109/ROBOT.2010.5509539.

o Mehani, O., Benenson, R., Lemaignan, S., Ernst, T.,

#### Networking Needs and Solutions for Road Vehicles at Imara,

ITST 2007. DOI: 10.1109/ITST.2007.4295894.

o Stinckwich, S., Lemaignan, S., Saidani, S.,

#### SqueakBot: a Pedagogical Robotic Platform,

C5 Conference 2007. DOI: 10.1109/C5.2007.28.

o Lemaignan, S., Siadat, A., Dantan, J.Y., Semenenko, A.,

#### MASON: A proposal for an ontology of manufacturing domain,

IEEE Workshop on Distributed Intelligent Systems (DIS) 2006. DOI: 10.1109/DIS.2006.48.

#### Short peer-reviewed publications

o Mohamed, Y., Lemaignan, S.,

#### Predicting Human Interactivity State from Surrounding Social Signals,

*HRI* 2021. DOI: 10.1145/3434074.3447230.

o Webb, N., Mohamed, Y., Lemaignan, S.,

#### Framing the Challenge of Social Interaction Modelling: One Case Study,

HRI 2021. DOI: 10.1145/3434074.3447233.

o Park, C.H., Ros, R., Kwak, S., Huang, C., Lemaignan, S.,

## Towards Real World Impacts: Design, Development, and Deployment of Social Robots in the Wild, Frontiers in AI and Robotics 2020. DOI: 10.3389/frobt.2020.600830.

o Sallami, Y., Winkle, K., Webb, N., Lemaignan, S., Alami, R.,

The Unexpected Daily Situations (UDS) Dataset: A New Benchmark for Socially-Aware Assistive Robots, HRI 2020. DOI: 10.1145/3371382.3378270.

o Wijnen, L., Lemaignan, S., Bremner, P.,

Towards using Virtual Reality for Replicating HRI Studies,

HRI 2020. DOI: 10.1145/3371382.3378374.

o Winkle, K., Lemaignan, S., Caleb-Solly, P., Leonards, U., Turton, A., Bremner, P.,

Couch to 5km Robot Coach: An Autonomous, Human-Trained Socially Assistive Robot,

HRI 2020. DOI: 10.1145/3371382.3378337.

o Wallbridge, C., Lemaignan, S., Senft, E., Belpaeme, T.,

Towards Generating Spatial Referring Expressions in a Social Robot: Dynamic vs Non-Ambiguous, *HRI* 2019. DOI: 10.1109/HRI.2019.8673285.

o Bartlett, M., Belpaeme, T., Thill, S., Edmunds, C. E. R., Lemaignan, S.,

What Can You See? Identifying Cues on Internal States from the Kinematics of Natural Social Interactions.

IDC - Workshop 'The Near Future of Children's Robotics' 2018.

o Senft, E., Lemaignan, S., Baxter, P., Belpaeme, T.,

Leveraging Human Inputs in Interactive Machine Learning for Human Robot Interaction,

HRI 2017. DOI: 10.1145/3029798.3038385.

o Senft, E., Lemaignan, S., Baxter, P., Belpaeme, T.,

SPARC: an efficient way to combine reinforcement learning and supervised autonomy,

NIPS - Proc. of the Future of Interactive Learning Machines (FILM) Workshop 2016.

o Lemaignan, S., Kennedy, J., Baxter, P., Belpaeme, T.,

Towards Machine-Learnable Child-Robot Interactions: the PInSoRo Dataset,

RoMAN - Workshop on Long-term Child-robot Interaction 2016.

o Kennedy, J., Lemaignan, S., Belpaeme, T.,

The Cautious Attitude of Teachers Towards Social Robots in Schools,

RoMAN - Workshop on Robots for Learning 2016.

o Senft, E., Baxter, P., Kennedy, J., Lemaignan, S., Belpaeme, T.,

Providing a Robot with Learning Abilities Improves its Perception by Users,

HRI 2016. DOI: 10.1109/HRI.2016.7451832.

o Baxter, P., Lemaignan, S., Trafton, G.,

Workshop on Cognitive Architectures for Social Human-Robot Interaction,

HRI 2016. DOI: 10.1109/HRI.2016.7451865.

o Lemaignan, S., Alami, R.,

## A Few AI Challenges Raised while Developing an Architecture for Human-Robot Cooperative Task Achievement.

AAAI 2014 Fall Symposium Series - Artificial Intelligence and Human-Robot Interaction 2014.

o Lemaignan, S., Fink, J., Dillenbourg, P.,

#### The Dynamics of Anthropomorphism in Robotics,

HRI 2014. DOI: 10.1145/2559636.2559814.

o Lemaignan, S., Echeverria, G., Karg, M., Mainprice, M., Kirsch, A., Alami, R.,

#### Human-Robot Interaction in the MORSE Simulator,

*HRI* 2012. DOI: 10.1145/2157689.2157745.

o Lemaignan, S., Ros, R., Alami, R.,

## Dialogue in situated environments: A symbolic approach to perspective-aware grounding, clarification and reasoning for robots,

Workshop Grounding Human-Robot Dialog for Spatial Tasks - RSS 2011.

o Lemaignan, S., Sisbot, E. A., Alami, R.,

#### Anchoring interaction through symbolic knowledge,

HRI Pioneers - HRI 2011. ISBN: 978-0-557-79488-1.

o Ros, R., Sisbot, E. A., Lemaignan, S., Pandey, A. K., Alami, R.,

Robot, tell me what you know about...?: Expressing robot's knowledge through interaction,  $ICAIR\ 2010$ .

#### Book chapters

o Mondada, F., Fink, J., Lemaignan, S., Mansolino, D., Wille, F., Franinovi , K.

Ranger, an Example of Integration of Robotics into the Home Ecosystem 2015.

### Selected Fellowships & Grants

2020–2021 University of the West of England, Robots4SEN: Social Robots to Support Children with Autism, Principal Investigator, £25K.

2019–2022 InnovateUK, CAV Forth – Verification for Connected Autonomous Vehicles, Co-Investigator, £600K.

2015–2017 EU H2020 Marie Skłodowska-Curie Individual Fellowship,

Principal Investigator, € 195K.

## Supervision & Teaching Experience

Students supervision, Supervised 9 PhD and 20+ MSc students to date, (click here for full list).

- o N. Webb (PhD, 2019-): 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
- 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 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 EU-ROBOT Robotic Competition.

## Technical Skills and Spoken Languages

Robotics • Expert in cognitive robotics and human-robot inter- Programming • Python, modern C++, Prolog, SmallTalk

- action
- o ROS, Symbolic knowledge manipulation expert
- o Expert PR2, Pepper, Nao developer
- o Contributor to ROS, OpenCV
- Lead dev. MORSE simulator

#### Languages

French Native

English Fluent

German Advanced

- o Deep-learning frameworks: pytorch, TensorFlow
- o Open-source enthusiast

GitHub: github.com/severin-lemaignan