



# Dr. Jennifer Renoux

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## Research Interests

Human-Machine teams, Human-Machine communication, Epistemic Planning, Planning under Uncertainty, Multi-agent Systems

## Professional Experience

- 2016–2020 **Post-doctoral researcher**, ÖREBRO UNIVERSITY, Örebro, Sweden.  
Workpackage Leader in the project MoveCare and involved in the project E-care@Home
- MoveCare Project: Multiple-Actors Virtual Empathic Caregiver for the Elder. Horizon 2020 project. Main roles: Workpackage Leader and main developer.
  - E-care@Home: Swedish Interdisciplinary Distributed research environment. Main role: research on context-awareness and part of the data collection team.
- 2012–2015 **Industrial Ph.D. Student**, AIRBUS DEFENCE AND SPACE, Val de Reuil, France.  
Doctoral work: Contribution to multiagent planning for active information gathering  
As part of the thesis contract (CIFRE) and in addition to research work, involved in the following projects:
- Dem@Care Project : Dementia Ambient care: Multi-sensing Monitoring for Intelligent Remote Management and Decision Support. Involved in the architecture definition and system integration
  - Airbus Defence and Space robotic activities. Involved in the creation of a new robotic pole inside Airbus Defence and Space. Worked on Pioneers AT-3 and use of Robot Operating System. Prepared the robotic platform and implement reasoning algorithms for experimentation.

## Doctoral Thesis

- Title *Contribution to multiagent planning for active information gathering*
- Supervisor Prof. Dr. Abdel-Allah Mouaddib, University of Caen Normandy
- Co-Supervisor Dr. Simon Le Gloannec, Airbus Defence and Space
- Defense September 18th, 2015
- Description In surveillance and search and rescue applications, agents need to coordinate their actions and to improve their beliefs about the world. Efficient coordination requires the agents to have the same beliefs. Therefore they need to communicate to converge towards common belief states. Information gathering is so not only a mean but becomes a goal of the decision process. This specific type of decision process is starting to be addressed in the literature for a single agent but to our knowledge, the multi-agent aspect and the convergence of beliefs are new issues. This thesis addresses these issues using an extended belief state that maintains not only beliefs about the world but also beliefs about other agents' beliefs. We use this extended belief state to enable agent to coordinate themselves without computing a global policy.

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## Education

- Sep. 2015 **Doctoral degree**, *University of Caen Normandy*, Caen, France.
- Oct. 2011 **M.Sc. in Computer Science**, *University Pierre and Marie Curie*, Paris - France, Specialized in Artificial Intelligence and Decision Making.  
Master Thesis : Autonomous agents reasoning on physical world
- Jul. 2010 **Master's Degree of Engineering**, *National Institute of Applied Sciences*, Lyon - France, Specialized in Computer Science.

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## Master and Bachelor Theses Supervision

- 2018 – 2019 **Joshua Hudson**, *Master Thesis*, Linköping University, Sweden.  
Title: A Partially Observable Markov Decision Process for Breast Cancer Screening.  
Co-supervision with Pedro U. Lima (University of Lisbon, Portugal) and Lia da Silva Lopez (Combine, Göteborg, Sweden)
- 2019 **Ronny Malky**, *Bachelor Thesis*, Örebro University, Sweden.  
Title: Design and development of an application for manual data insertion in a smart home environment
- 2018 **Saman Nistany**, *Bachelor Thesis*, Örebro University, Sweden.  
Title: Integration of the Flex Application Real-time updated dashboard with Outlook Calendar (industrial thesis)

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## Teaching Qualifications

- 2020 **A Practical Introduction to Teaching**, *Örebro University*, Örebro, Sweden.  
Qualifying course for teachers in Higher Education.

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## Teaching Activities

- 2020 **Course Responsible**, *Örebro University*, Örebro, Sweden.  
Course: Software Engineering for the Computer Engineering program
- 2019-2020 **Lecturer**, *Örebro University*, Örebro, Sweden.  
Course: Planning under Uncertainty for the International Master on Robotics and Intelligent Systems program
- 2018-2020 **Teaching Assistant**, *Örebro University*, Örebro, Sweden.  
Software Engineering for Civil Engineers, Multi-Agent Systems for the International Master on Robotics and Intelligent Systems program
- 2013 **Teaching Assistant**, *National Institute of Applied Sciences*, Rouen, France.  
Course: Introduction to Algorithms

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## Participation in Conferences and Journals

- 2018 Member of the organization team of the AAMAS'18 demo session
- 2015 – 2020 Reviewer for various journals and conferences, including Paladyn, Sensors, Künstliche Intelligenz, AAI, AAMAS, IJCAI, IROS

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## Science Popularization and Other Activities

- 2020 – current Writer and Reviewer for the French peer-reviewed science popularization website Papier-Mâché (<https://papiermachesciences.org/qui-sommes-nous/>)
- 2019 – current Co-President of the French group “NoFakeScience”, writer of the op-ed “Health, Environment, Research: the scientific method overlooked by the media”. Published in 4 different newspapers in 4 different French-speaking countries. Translated in English. <https://nofake.science>
- 2018 – current Participation to various science popularization events in France and Sweden.

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## Languages

- French **Native**
- English **Fluent**
- German **Intermediate**
- Swedish **Basic**