

Experience

Robotics

- 2016–Present **Engineer/PhD AI Behavior**, BLUE FROG ROBOTICS, Paris, France.
In charge of companion robot's behavior and cognitive system, emotional AI. Also in charge of studio department which develops C# applications using *UNITY* to give a behavior and implement functionalities for Buddy the emotional robot. This includes **Human Robot Interaction design**, machine state conception and implementation, **dialogue management**, and various **applications specification and implementation using Buddy SDK**, such as chatbot, edutainment, fitness, security patrol, ticket booking, elder care...
→ Main achievements:
- Define and implement Buddy Behavior and cognitive layer, with task manager, pro-activity management, internal state (emotion, desire and needs) and reactive behaviors to diverse stimuli.
 - Working with animator (successfully proposing BML formalism).
 - Working with P.O for specification and product definition
 - Working as P.O for SDK developers
 - CIFRE subject redaction on **episodic memory**
 - Hiring for CIFRE and studio department
 - Technology watch (reviewer at HRI 16/18 and Ro-Man 2018, attend conferences, reading papers...)
 - Development with Scrum method (using **Jira**)
 - Interns tutoring
 - External developers training
- 2013–2016 **PhD student**, LAAS-CNRS, Toulouse, France.
ANR project MaRDi (Man Robot Dialogue) to enhance a domestic robot with situated dialogue abilities.
→ Main achievements:
- **TOASTER** (Tracking Of Agent and Spatio-TEmporal Reasoning), a C++ ROS open-source framework to collect data from sensors and compute geometric properties, agent affordances and mental states. Generated world states are managed in a database. TOASTER had **several user** inside different research groups.
 - Contribute to MORSE and implemented simulation scenario for user study (MaRDi project)
 - One month at iCeIRA (Taipei robotics laboratory) for collaboration
 - Interns co-tutoring.
 - Reviewing papers (HRI2016).
 - Courses:
 - Artificial Intelligence Planning (coursera)
 - Entrepreneurship courses (Université de Toulouse)
 - HRI summer school 2013 (Cambridge). Summer school on social robotics.
- May–Nov. **Master Internship**, HRI-JP, Wako, Japan.
2012 Honda Research Institute of Wako. HALOGEN Project: enhance multimodal multiparty dialogue on a humanoid robot.
→ Main achievements:
- Modules of image and audio analysis to identify the users interacting with the robot.
 - Developed a communication system interacting with users, according to data from Kinect and multichannel microphone, along with inferences results from Markov logic network (using Alchemy).
- 2010–2011 **1 Year Internship**, CNRS-AIST JRL, Tsukuba, Japan.
→ Main achievements:
- Developed Amelif framework functionalities using OpenGL and Glut
 - Developed a vision server to use robot cameras with different settings and made plugin to analyze the images. Programmed in C++, using the libraries boost and OpenGL.
 - Plugin for object recognition using Gabor Jets and colour features to localize and recognize objects.

Projects

- 2013–2015 **Start-up Project Manager**, *JOBBOX*, Toulouse, France.
Initiated a start-up project with 5 friends. Main idea is to crowd-source client tasks (e.g. picture moderation) by using a smartphone application. Homepage at <http://myjobbox.net>
- 2012 **Scholar Project Manager**, *ENSEEIH / Unitag*, Toulouse, France.
Managed last year project of engineering courses. 6 students worked to provide a facebook application for the start-up Unitag.
- 2009–2010 **Project Manager**, *N7Consulting*, Toulouse, France.
Project Manager for the "Junior-Enterprise" N7Consulting.

Education

- 2013–2016 **PhD**, *LAAS-CNRS*, Toulouse, *defended: 10/2016*.
PhD in Human Robot Interaction. Situation assessment, Theory of Mind, Human Aware Plan Management.
Supervisor Professor Rachid Alami
- 2008–2013 **Engineer**, *ENSEEIH-INPT*, Toulouse, .
Computer Science and Applied Mathematics, French engineering diploma, equivalent to a Master's degree in Engineering (February 2013).
- 2011–2012 **Master Research**, *INPT*, Toulouse, .
Master Multimedia (October 2012).
- 2006–2008 **Preparatory School**, *La Martinière Monplaisir*, Lyon, .
Two years undergraduate course in preparatory classes for competitive entrance exams for the national engineering schools. Subjects: Mathematics, Physics.
- 2005–2006 **Baccalaureate S**, *Le Bon Sauveur*, Le Vesinet.
Scientific Baccalaureate with distinction (French equivalent of 'A' levels in Mathematics, Physics and Biology).

Computer skills

- Basic BLENDER, Android SDK
- Intermediate PYTHON, SQL, Kinect SDK/OpenNI, OpenCV, Windows
- Advanced Object oriented (C#, C++, JAVA), C, UNITY, ROS, L^AT_EX, Linux, git, MORSE simulator

Most relevant Publications (peer-reviewed)

- March 2018 Best demo award at HRI 2018 (Chicago)
- 2016 Raisonement sur le contexte et les croyances pour l'interaction homme-robot (Thesis)
- HRI -16 Using Human Knowledge Awareness to Adapt Collaborative Plan Generation, Explanation and Monitoring
- HRI -16 Some essential skills and their combination in an architecture for a cognitive and interactive robot (*Workshop*)
- ICSR -15 An Adaptive and Proactive Human-Aware Robot Guide
- IWSDS -15 Users' Belief Awareness in Reinforcement Learning-based Situated Human-Robot Dialog Management
- SIMPAR -14 Simulating human-robot interactions for dialogue strategy learning
- SIMPAR -14 Simulation and HRI recent perspectives with the MORSE simulator
- ROMAN -14 A framework for endowing an interactive robot with reasoning capabilities about perspective-taking and belief management

Languages

- French **Mother tongue**
- English **Fluent** *TOEIC score in 2010: 865. Fluent speaking and writing*
- Japanese **Notions**