

Wafa JOHAL

PostDoctoral Scientist, EPFL

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EPFL IC IINFCOM CHILI, RLC D1 740 (Rolex Learning Center), Station 20, CH-1015 Lausanne, Suisse
French, Married with one child (<2 y.o.)

EDUCATION

- September 2012 - 30 October 2015 **Ph.D in Applied Mathematics and Computer Sciences**
University of Grenoble Alps, Laboratory of Informatics of Grenoble - MAGMA Team France
- > Thesis Topic : *Behavioral Styles for Human-Robot Interaction : Towards Plasticity in HRI*
 - > Advisers : Prof. Sylvie Pesty & Prof. Gaëlle Calvary
 - > Jury Members : Mohamed Chetouani (UPMC), Pierre DeLoor (ENIB), Pierre Dillenbourg (EPFL), Dominique Vaufreydaz (UPMF), Dominique Duhaut (ENIB), Nadine Mandran (CNRS).
- Affective Computing Human-Robot Interaction Personalization Adaptivity Cognitive Architecture
- June 2012 **M.S., Computer Sciences : Graphics, Vision & Robotics**
University Joseph Fourier, Grenoble, France
- > Thesis Topic : *Multi-modal detection of intention of interaction by a companion robot*
 - > Adviser : Dr. Dominique Vaufreydaz
- Activity Recognition Multi-modal Data Fusion Human-Robot Interaction
- June 2010 **B.S. B.A. Mathematics and Informatics applied to Cognitive Sciences** Pierre-Mendès France University, Grenoble, France
- > *Topped, Summa cum Laude*
- Exchange Student for one year in Washington College, MA (U.S.A.), August 2009 - May 2010
- Other Trainings
- October 2017 Applied Machine Learning Days, EPFL, Lausanne, Switzerland.
 - August 2013 Social Human-Robot Interaction Summer School, Cambridge, UK.

ACADEMIC EMPLOYMENT

- Today
October 2015 **Postdoctoral Scientist for NCCR Robotics, EPFL, Switzerland**
Computer Human Interaction for Learning and Instruction Lab (Pr. Pierre Dillenbourg),
Mobile Robots Group - LSRO (Pr. Francesco Mondada)
- > In charge of the robotics research projects at the CHILI Lab : Cellulo, CoWriter and Animatas
 - > Currently advising 6 PhD students.
 - > Piloting the project on Augmented Reality for the course "Introduction to Visual Computing", team of 6 TAs, 150 students.
- Human-Robot Interaction Personalization Robots in Education Tangible Robots Cognitive Models for HRI
Multi-Modal Interaction

RESEARCH PROJECTS

ANIMATAS FEB. 2018 - TODAY
Local Coordinator <https://animatas.eu>
[Animatas - CHILI](#)

The Animatas project, is a EU MSCA ITN ETN that aims to explore the use of virtual agents in educational context. At the CHILI lab - EPFL, I proposed 3 PhD topics on educational robotics. I was the main instigator for the project at EPFL.

CHILI EPFL 759k CHF 3 Years Project 3 PhD Students

CELLULO 2015 - TODAY
Project manager <http://chili.epfl.ch/cellulo>

The Cellulo project, funded by the NCCR Robotics (Swiss NF), aims to design and propose new use of tangible swarm robots in education.. I am in charge of reporting our research activities. I elaborated the Pre-Proposal for the Phase 3 in Educational Robotics with P. Dillenbourg and F. Mondada.

CHILI/MOBOTS EPFL 1Mo CHF 4 Years 2 PhD + 1 Postdoc

SUPERVISION OF JUNIOR RESEARCHERS

Florian Zimmerman	Master Thesis, IC EPFL	<i>Multi-modal Data Capture and Annotation</i>	Feb. 2018 - Jul. 2018
Arzu Guneyusu	EDRS PhD Student EPFL	<i>Upper-arm Gamified Rehabilitation with Tangible Robots.</i>	Mar. 2017 - now
Thibault Asselborn	EDRS PhD Student EPFL	<i>Adaptive Learning in Child-Robot Interaction.</i>	Jun. 2016 - now
Elmira Yadollahi	EDRS PhD Student EPFL	<i>CoReader - CRI for Reading.</i>	Nov. 2016 - now
Dr. Ayberk Ozgur	EDIC PhD Student EPFL	<i>Cellulo - Haptic Swarm Robots for Education.</i>	October 2015 - December 2017.
Alexis Jacq	EDRS PhD Student EPFL	<i>Mutual-Modeling for Child-Robot Interaction.</i>	October 2015 - now
Ilef Benfarhat	Graduate Student, ENS Tunis,	<i>Child-Robot Interaction,</i>	Feb 2013 - July 2013

TEACHING ACTIVITIES

École Polytechnique Fédérale de Lausanne, Switzerland October 2015 - Now

- › Visual Computing : Vision & Graphics, AR-game project using processing and various computer vision techniques.

Grenoble Institute of Technology, France October 2012 - July 2014

- › Instructor for ACVL : Software's Analysis, Conception and Validation.
Methods for Requirement Analysis, Software Design Patterns UML Diagrams and Object Constraint Language
- › Instructor for Introduction to Programming
OCaml and Python, Complexity analysis

Pierre Mendès-France University, Grenoble, France October 2013- January 2014

- › Instructor for INF f-1 : Undergraduate Beginner Programming, Lectures & Practical Sessions

Joseph Fourier University, Grenoble, France October 2011- January 2012

- › Instructor for Biology Undergraduates : C2i, Burautic, Basic HTML, Lectures & Practical Sessions

ACADEMIC DUTIES

Conferences & Events

- ◇ Guest Editor Special Issue for the International Journal of Social Robotics - Springer, on "Robots for Learning", June 2018.
- ◇ Session Chair on Implicit Human-Robot Communication, RO-MAN 2016. New York, USA - August, 2016.
- ◇ **Program and Steering Committee**
 - › IEEE International Conference on Robot and Human Interactive Communication, Ro-Man 2018.
 - › ACM Interaction Design and Children (IDC) Conference, IDC 2018.
 - › International Conference on Human Robot Interaction, HRI 2018, HRI 2019.
 - › International Conference on Social Robotics, ICSR 2016.
 - › Workshop on Behavior, Emotion and Representation :Building Blocks of Interaction at International Conference on Human-Agent Interaction, October 2017.

Reviewer for :

- ERA.Net RUS PLUS - FP7, Robotics Expert Panelist at the S&T Council, October 2017
- ◇ *International Journal of Human-Robot Interaction*, 2016, 2017
- ◇ *International Journal of Social Robotics*, 2016, 2017, 2018
- ◇ *IEEE Robotics and Automation Magazine (IEEE-RAM)*, 2016
- ◇ *Journal of Cognitive Systems Research*, 2016
- ◇ *Journal on Interaction Studies*, 2016
- ◇ *Transaction on Learning Technologies*, 2017
- ◇ *International Journal of Child-Computer Interaction*, 2017
- › *ACM SIG Interaction Design and Children Conference (IDC)*, 2018
- › *ACM CHI Conference on Human Factors in Computing Systems (CHI)*, 2017
- › *ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, 2017, 2018
- › *Springer International Conference on Social Robotics (ICSR)*, 2015, 2016
- › *ACM-SIGInternational Conference on Human Robot Interaction (HRI)*, 2015, 2016, 2017, 2018
- › *IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, 2014, 2015, 2016, 2018

Professional Associations

- > NCCR Robotics, SNF, Switzerland
- > IEEE Member
- > RAS Member
- > Reseau Romand Mentorat
- > Co-founder of the Robodoc-LIG research group for PhD students at the Laboratory of Informatics of Grenoble.

Invited Speaker

- > HRI 2018 Mini symposium, Cornell University, Ithaca, NY, USA. Nov. 2017.
- > The Classroom of Tomorrow – Swarm Robots in Education, Swissnex Boston, USA, April 2016.
- > Non-verbal Communication in Human Robot Interaction, MIT Media Lab, Personal Robotics Group, April 2016.
- > Engagement & adaptation : How human-robot interaction can help in everyday life, Naver Labs Europe, December 2016 (Xerox Research Center).

ORGANIZATIONAL DUTIES

- > “Workshop on the Near Future of Child Robot Interaction” @IDC 2018, CRI@IDC. Trondheim, Norway - June 20, 2018.
- > “Workshop on Robots for Learning - Inclusive Learning” @HRI 2018, R4L@HRI2018. Chicago, IL USA - March 5, 2018.
- > “Workshop on Robots for Learning” @HRI 2017, R4L@HRI. Vienna, Austria - March 6, 2017.
- > “Workshop on Robots for Learning” @RoMan 2016, R4L. New York, USA - August 27, 2016.
- > “Workshop on Social Robots in Education” , @NewFriends 2016. Barcelona, Spain - November 2, 2016.
- > “Workshop Affect, Compagnon Artificiel, Interaction” , WACAI 2012. Grenoble, France - 15 & 16 November 2012.
- > PersyCup Robotic Challenge. Grenoble, France - 21 Mai 2015.

AWARDS

- 2018 Best Paper Award : *When Deictic Gestures in a Robot Can Harm Child-Robot Collaboration*. ACM Interaction Design and Children Conference (IDC 2018), Trondheim, Norway.
- 2018 Best Student CCI Award : *When Deictic Gestures in a Robot Can Harm Child-Robot Collaboration*. ACM Interaction Design and Children Conference (IDC 2018), Trondheim, Norway.
- 2017 Best Paper Award : ACM Human-robot Interaction Conference (HRI), Vienna, Austria.
- 2016 Qualification for a position as an assistant professor in Computer Sciences, by the French Ministry of Research and Education (Ref : 16227283862), From 29/01/2016.
- 2015 Winner of the Social Touch Challenge at International Conference on Multimodal Interaction (ICMI). Nov. 2015.
- 2015 Best Paper Award : Honorable Mention, ACM Human-robot Interaction Conference 2015 (HRI), Portland, USA.
- 2015 HRI Pioneers : International Conference on Human Robot Interaction 2015 (HRI), Portland, USA.

SKILLS

Robotics Platforms :

- > Cellulo : Tangible robot designed for human-swarm interactions.
- > Reeti : PC-Bot with mounted motorized and expressive head By Robopec
- > Kompai : a robot to assist seniors and dependent persons at home By Robosoft
- > Nao : a small humanoid robot for child-robot interaction By Aldebaran

Computer Programming :

- > Python, C++, Java, Javascript, Bash scripting , Cmake, OCaml, Urbi, Prolog
- > QtQuick, ROS, OpenCV, OpenGL, Kinect SDK, Naoqi
- > Numerical Analysis : Jupyter, Scipy, Sklearn R, Gnu-plot, Numpy
- > Version Control : Svn, Git

Operating Systems :

- > Linux (Ubuntu, Archlinux), Apple OS X, Microsoft Windows family,

LANGUAGES

French ● ● ● ● ●
English ● ● ● ● ○
Italian ● ● ○ ○ ○

OTHERS

- 1996-2010 Scout at Eclaireurs Eclaireuses de France (EEDF)
- 2004 Youth Worker Diploma (BAFA - Brevet d’Aptitude aux Fonctions d’Animateur)

CAREER BREAKS

Feb. 2017 - May 2017. Maternity leave after the birth of my son, Liam Johal on 05.02.2017, Lausanne, Switzerland.