

# Dr. Wafa JOHAL

## Lecturer (Assistant Professor), University of New South Wales

@ wafa.johal@unsw.edu.au WWW: wafa.johal.org  
in linkedin.com/in/wafajohal github.com/wafajohal  
orcid.org/0000-0001-9118-0454 Wafa Johal Wafa Johal



School of Computer Science and Engineering, Faculty of Engineering, UNSW, Sydney

## 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
- 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
- June 2010 **B.S. B.A. Mathematics and Informatics applied to Cognitive Sciences** Pierre-Mendès France University, Grenoble, France 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

- August 2019 **Lecturer (Assistant Professor) in Intelligent and Autonomous Systems, UNIVERSITY OF NEW SOUTH WALES, Sydney, Australia**  
... Department of Computer Sciences and Computer Engineering  
Human-Robot Interaction Robots in Education Tangible Robots Cognitive Models for HRI Multi-Modal Interaction
- August 2019 **Postdoctoral Scientist for NCCR Robotics, EPFL, Switzerland**  
October 2015 **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  
> Co-supervising 6 PhD students.  
Human-Robot Interaction Robots in Education Tangible Robots Cognitive Models for HRI Multi-Modal Interaction

## TEACHING ACTIVITIES

- University of New South Wales, Australia **October 2019**  
> Guest Lectuere : Data Analytics and Data Visualisation for HCI - School of Computer Science and Engineering
- École Polytechnique Fédérale de Lausanne, Switzerland **October 2015 - Now**  
> Visual Computing : Vision & Graphics, AR-game project using processing and various computer vision techniques.  
> Practical on Tangible Swarm Interaction, Master in Robotics
- Grenoble Institute of Technology, France **October 2012 - July 2014**  
> Instructor for ACVL : Software's Analysis, Conception and Validation.  
> Instructor for Introduction to Programming
- Pierre Mendès-France University, Grenoble, France **October 2013- January 2014**  
> Instructor for INF f-1 : Undergraduate Beginner Programming, Lectures & Practical Sessions

**IRECHECK** DEC. 2019 - DEC.2022  
*Proposal co-author, International Partner*

The IReCheck project, is funded by the Swiss NSF and the French ANR. The goal of the project is to investigate social and task adaptation in a Learning by Teaching task with Typically Developed children and children with NeuroDevelopmental Disorders.

CHILI EPFL 490k CHF 3 Years Project

**COWRITING KAZAKH** OCT. 2018 - SEPT.2020  
*Principal Coordinator, Proposal co-author*

The Cowriter Kazakh project, is a SNSF project that seeds for collaboration between Kazakhs and Swiss researchers. In this project we will deploy the Cowriter robotic system to help the transition from Cyrillic to Roman alphabet in Kazakhstan.

CHILI EPFL 10k CHF 2 Years Project  
 Nazarbayev University

**FIND YOUR VOICE!** SEPT. 2018 - DEC.2019  
*Local Coordinator, Proposal co-author*

The project aims to help children who struggle to find their voice in social situations, by training them on joke telling using platform such as Alexa or Google Home. It is a project funded by the SRCF that seeds for cross-country and cross discipline collaboration between researchers.

CHILI EPFL 15k CHF Partners : UCLIC  
 University of Sussex UC Irvine

**CELLULO** 2015 - TODAY  
*Project manager, Proposal co-author*

The Cellulo project, funded by the NCCR Robotics (Swiss NSF), aims to design and propose new use of tangible swarm robots in education.

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

**ROBOTS FOR LEARNING** 2015 - TODAY  
*Project manager, Proposal co-author*

I launched in Fall 2015 the Robots for Learning initiative that aims to create a research community on interactions aspect of using robots for learners. We organized several workshop and training events funded by the NCCR Robotics

CHILI/MOBOTS EPFL 18.5k CHF

**ANIMATAS** FEB. 2018 - TODAY  
*Proposal co-author, International Partner*

The Animatas project, is a EU MSCA ITN ETN that aims to explore the use of virtual agents in educational context.

CHILI EPFL 759k CHF 3 Years Project 3 PhD Students

## SUPERVISION OF JUNIOR RESEARCHERS

<b>Pawel Golinski</b>	Master Thesis, IC EPFL, Jan. 2019 - June 2019	<i>CoPainter - detect and remediate for dysgraphia through drawings</i>
<b>Hala Khodr</b>	EDRS PhD Student EPFL, Sep. 2018 - now	<i>Learner Swarm Interaction.</i>
<b>Laila El Hammasy</b>	Master Thesis, STI EPFL, Oct. 2018 - February 2019)	<i>Social and Task Engagement in a Multi-party Collaborative Learning Task</i>
<b>Sina Shahmoradi</b>	EDRS PhD Student EPFL, - now	<i>ANIMATAS - Orchestration of Robot Populated Classrooms.</i>
<b>Utku Norman</b>	EDIC PhD Student EPFL, now	<i>ANIMATAS - Mutual Modelling for Mutual Understanding.</i>
<b>Jauwairia Nasir</b>	EDRS PhD Student EPFL, Sep. 2018 - now	<i>ANIMATAS - Assessment of Multiparty engagement in Learning task.</i>
<b>Florian Zimmerman</b>	Master Thesis, IC EPFL, Feb. 2018 - Jul. 2018	<i>Multi-modal Data Capture and Annotation</i>
<b>Arzu Guneyasu</b>	EDRS PhD Student EPFL, Mar. 2017 - now	<i>Cellulo - Upper-arm Gamified Rehabilitation with Tangible Robots.</i>
<b>Sonia Anderson Barbeau</b>	Bachelor Thesis in Swiss Pedagogical University (HEP) Vaud, Nov. 2016 - June 2017	<i>Le robot Cellulo comme instrument de régulation des conceptions erronées en lien avec l'apprentissage de la symétrie axiale au primaire.</i>
<b>Thibault Asselborn</b>	EDRS PhD Student EPFL, now	<i>CoWriter - Adaptive Learning in Child-Robot Interaction.</i>
<b>Elmira Yadollahi</b>	EDRS PhD Student EPFL, Nov. 2016 - now	<i>CoReader - CRI for Reading.</i>
<b>Dr. Ayberk Ozgur</b>	EDIC PhD Student EPFL, December 2017.	<i>Cellulo - Haptic Swarm Robots for Education.</i>
<b>Alexis Jacq</b>	EDRS PhD Student EPFL, 2015 -now	<i>CoWRiter Mutual-Modeling for Child-Robot Interaction.</i>

## Edition

- ◇ **Guest Editor Special Issue** for the International Journal of Social Robotics - Springer, on “Robots for Learning”, June 2018.
- ◇ **Program and Steering Committee**
  - › IEEE International Conference on Robot and Human Interactive Communication, Ro-Man 2018, Ro-Man 2019.
  - › ACM Interaction Design and Children (IDC) Conference, IDC 2018.
  - › International Conference on Human Robot Interaction, HRI 2018, HRI 2019, HRI 2020.
  - › 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 :

### Funding Agencies or Other Institutions

- TA-Swiss, Social and Empathetic Robots Expert Panelist at Bern, September 2018
- ERA.Net RUS PLUS - FP7, Robotics Expert Panelist at the S&T Council, October 2017



### Journals

- ◇ *Frontiers in Robotics and AI*, 2019
- ◇ *International Journal of Human-Robot Interaction*, 2016, 2017, 2018
- ◇ *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

### Conferences

- › *RAS IEEE International Conference on Robotics and Automation (ICRA)*, 2020
- › *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, 2018
- › *ACM-SIG International Conference on Human Robot Interaction (HRI)*, 2015, 2016, 2017, 2018, 2019
- › *IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, 2014, 2015, 2016, 2018, 2019

## Professional Associations

- › LEARN – EPFL Center for Learning Sciences 
- › NCCR Robotics, SNSF, Switzerland 

## INVITED TALKS

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- › Assistive Human-Robot Interaction : From Education to Re-Education. ETH Zurich, Switzerland Dec. 2018.
- › Teacher symposium on Computational Thinking, Entre-Deux-Lacs, HEPL, Yverdon-les-bains. Switzerland, Nov. 2018.
- › HRI 2019 Mini symposium, Stanford University, Palo Alto, CA, USA. Nov. 2018.
- › Tangible Human-Robot Interaction : From Learning to Re-Learning, BioX Lab - Stanford, Palo Alto, CA, USA. Nov. 2018.
- › Enabling smooth and personalized user-robot interaction to enhance learning, University of New South Wales, Sydney, Australia. Nov. 2018.
- › Swarm Robotics - Pushing the state of the art, Rome, Italy, Oct. 2018.
- › 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.

## ORGANIZATIONAL DUTIES

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- › “Workshop on Robots for Learning - Building Robots for Classroom Context” @RoMan 2019, R4L@HRI2019. New Delhi, India - October 14, 2019.
- › “Workshop on Robots for Learning - Adaptive Learning” @HRI 2019, R4L@HRI2019. Daegu, South Korea - March 11, 2019.
- › “Developing Technologies in Educational Settings” @EPFL,  EPFL, Switzerland - Feb 4-8, 2019.
- › “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

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- 2019 Best Reviewer Award for the 27th International Conference on Computers in Education.
- 2018 Best Paper Award : Honorable Mention. *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.

## LANGUAGES

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

## OTHERS

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

## CAREER BREAKS

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