CONTACT INFORMATION PostDoctoral Scientist

CHILI Lab - Ecole Polytechnique Federal de Lausanne

EPFL IC ISIM CHILI

RLC D1 740 (Rolex Learning Center)

Station 20

CH-1015 Lausanne, SUISSE

RESEARCH INTERESTS I am interested in personalization using non-verbal cues of communication during Human-Robot Interaction. I believe that personalization of robots' behaviours will improve acceptability. I work with robots having various embodiment and try to base my models on social sciences and cognitive sciences. I also have interest in affective computing, learning, symbolic reasoning and integration of companion robots in smart homes. I have conducted child-robot interactions experiments from protocole design to data analysis.

*Mobile*: +33-6 69 69 48 16 *E-mail*: wafa.johal@gmail.com

WWW: wafa.johal.fr

Academia

## University of Grenoble Alps, Laboratory of Informatics of Grenoble - MAGMA Team France

Ph.D. Student in Computer Sciences, October 2012 - October 2015

- Thesis Topic: Behavioural Styles for Human-Robot Interaction: Towards Plasticity in HRI
- Advisers : Prof. Sylvie Pesty & Prof. Gaëlle Calvary
- Area of Study : Affective Computing, Human-Robot Interaction, Personalisation, Plasticity

#### University Joseph Fourier, Grenoble, France

M.S., Computer Sciences: Graphics, Vision & Robotics, June 2012

- Thesis Topic: Multi-modal detection of intention of interaction by a companion robot
- Adviser : Dr. Dominique Vaufreydaz
- Area of Study: Activity Recognition, Multi-modal Data Fusion

#### Pierre-Mendès France University, Grenoble, France

B.S. B.A. Mathematics and Informatics applied to Cognitive Sciences, June 2010

- Topped, Summa cum Laude
- Mathematics : Linear Algebra, Logic, Probabilities, Statistics
- Computer Sciences : Algorithms & Programming
- Cognitive Sciences : Memory, Learning & Perception

Exchange Student for one year in Washington College, MA (U.S.A.), 2009-2010

JOURNAL PUBLICATIONS

[1] Vaufreydaz D., **Johal W**., and Combe C., Starting engagement detection towards a companion robot using multimodal features, *Robotics and Autonomous* Systems, January 2015, ISSN 0921-8890.

International Conference Publications

- [2] Ta V.C, **Johal W.**, Portaz M., Castelli E., Vaufreydaz D., The Grenoble system for the Social Touch Challenge at ICMI 2015. International Conference on Multimodal Interaction. (ICMI2015). [In accepted]
- [3] **Johal W.**, Calvary G., Pesty S., Non-verbal Signals in HRI : Interfer- ence in Human Perception. International Conference on Social Robotics. (ICSR2015). [In accepted]
- [4] **Johal W.**, Pellier D., Adam C., Fiorino H., Pesty S., A Cognitive and Affective Architecture for Social Human-Robot Interaction. HRI'15 Extended Abstracts. DOI=10.1145/2701973.2702006 [Award Nominee]
- [5] Johal W., Robots Interacting with Style. HRI'15 Extended Abstracts.DOI=10.1145/2701973.2702706
- [6] **Johal W.**, Calvary G., Pesty S., Toward Companion Robots Behaving with Style. *In Proceedings of the 2014 IEEE International Symposium on Robot and Human Interactive Communication* (ROMAN). Edinburgh. 2014. doi: 10.1109/ROMAN.2014.6926393
- [7] **Johal W.**, Adam C., Fiorino H., Pesty, S., Duhaut D.. Acceptability of a companion robot for children in daily life situations *5th IEEE Conference on Cognitive InfoCommunications*. (CogInfoCom) Nov 2014. Vietri, Italy. doi: 10.1109/CogInfoCom.2014.7020474
- [8] **Johal W.**, Calvary G. and Pesty S.. A Robot with Style because you are Worth it!. *In CHI '14 Extended Abstracts on Human Factors in Computing Systems* (CHI EA '14). Toronto, Canada. DOI=10.1145/2559206.258122
- [9] **Johal W.**, Dugdale J., Pesty S.. Modelling interactions in a mixed agent world. In Proceeding of 25th *European Modeling and Simulation Symposium* (EMSS). Athens, Greece, 23-25 Sept 2013
- [10] **Benkaouar (Johal) W.**, Vaufreydaz D.. Multi-sensors engagement detection with a robot companion in a home environment. *Workshop on Assistance and Service Robotics in a Human Environment at IEEE International Conference on Intelligent Robots and Systems* (IROS2012), Vilamoura, Algarve Portugal, oct 2012.

# FRENCH CONFERENCE PUBLICATIONS

- [11] **Johal W.**, Pesty, S., Calvary G., Des Styles pour une Personnalisation de l'Interaction Homme-Robot. *Journées Nationales de la Robotique Interactive* (JNRI). Nov. 2014. Toulouse, France
- [12] **Johal W.**, Pesty S. Calvary G., Les Styles pour la Plasticité des Robots Compagnons. *Workshop Affect, Compagnon Artificiel, Interaction* (WACAI) 2014. Rouen, France
- [13] Adam C., **Johal W.**, Ben-Farhat I., Jost C., Fiorono H., Pesty S., Duhaut D.. Acceptabilité d'un robot compagnon dans des situations de la vie quotidienne. *Deuxième conférence III Intercompréhension de l'intraspécifique à l'interspécifique*. Lorient, 30 Sept 1Oct 2013

# OTHER PUBLICATIONS

[14] **Johal W.**, Pesty S., Calvary G.. Expressing Parenting Styles with Companion Robots. *Workshop on Applications for Emotional Robots at Human-Robot Interaction conference* (HRI'14) . Bielefeld. 2014

#### INTERN TUTORING

**Jérémy Lascaux**, Under-Graduate Student in Computer Sciences, IUT2- UPMF. Developing an Affective Math Game with Nao Robot. Spring 2014.

**Anshul Singh Parihar**, Electrical Engineering, Indian Institute of Technology, Jodhpur India Agent-Based Simulation of Human-Robot Interaction for Experiment Design. Spring 2014.

#### TEACHING

#### **Grenoble Institute of Technology**, France

Teaching Assistant

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
  - Begining of complexity analysis

#### Pierre Mendès-France University, Grenoble, France

October 2013- January 2014

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

#### Joseph Fourrier University, Grenoble, France

October 2011- January 2012

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

# ACADEMIC SERVICES

#### **Conferences & Events**

- Member of Organisation Committee, "Workshop Affect, Compagnon Artificiel, Interaction", WACAI 2012 Grenoble, France 15 et 16 November 2012.
- Member of Organisation Committee, PersyCup Robotic Challenge Grenoble, France 21 Mai 2015.

### Reviews

- Journal on Interaction Studies, 2016
- International Conference on Social Robotics (ICSR), 2015
- International Conference on Human Robot Interaction (HRI), 2015, 2016
- IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2014, 2015

#### Language

- French: Mother tongue
- English: Fluent TOEFL, 1 year in USA, Masters taught in English

### REFERENCES AVAILABLE TO CONTACT

Prof. Sylvie Pesty (e-mail: Sylvie.Pesty@imag.fr)

- Professor at University Institute of Technology (IUT2-UPMF),
- ♦ Member of MAGMA Team, LIG-Lab
- \* Prof. Pesty is my supervisor for my PhD.

#### Prof. Gaëlle Calvary (e-mail: Gaelle.Calvary@imag.fr)

- Professor at Ensimag software engineering school of the Grenoble Institute of Technology,
- Member of Engineering of Computer Human Interaction Team, LIG-Lab
- \* Prof. Calvary is my co-supervisor for my PhD.

# Dr. Dominique Vaufreydaz (e-mail : Dominique.Vaufreydaz@inria.fr)

- Associate Professor at University Pierre Mendès-France,
- ♦ Member of PRIMA Team, INRIA & LIG-Lab
- \* Prof. Vaufreydaz was my supervisor during my Masters.

#### More Information

More information and auxiliary documents can be found at http://wafa.johal.fr/.