

Patrick Wang

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Associate Professor of Computer Science at ISEP, my main research interest lies in the field of Technology Enhanced Learning and more particularly the orchestration of TEL activities in classrooms. My current research projects include the use of visual programming languages to enhance the teaching and learning of core concepts of Computer Science.

EDUCATION

Ph.D. in Computer Science Université Grenoble-Alpes	October 2013 – September 2016 Grenoble, France
○ Thesis title : “Chao: Un framework pour le développement de systèmes d’orchestration d’EIAH sur tablettes en classe”	
○ Supervisors : Pierre Tchounikine, Matthieu Quignard	
○ Jury : Mireille Bétrancourt, Serge Garlatti, Thierry Nodenot	
French Engineer’s Degree in Software Engineering Institut Supérieur d’Électronique de Paris	September 2010 – September 2013 Paris, France

PREVIOUS AND CURRENT APPOINTMENTS

Associate Professor of Computer Science Institut Supérieur d’Électronique de Paris, LISITE, RDI	Since August 2017 Paris, France
Research Associate The Open University, Knowledge Media Institute	October 2016 – June 2017 Milton Keynes, United Kingdom
Ph.D. Student Université Grenoble-Alpes, Laboratoire d’Informatique de Grenoble	October 2013 – September 2016 Grenoble, France
Research Assistant Høgskolen i Oslo og Akershus, Universal Design of ICT	September 2012 – December 2012 Oslo, Norway

RESEARCH PROJECTS

ISEP – ROBO Institut Supérieur d’Électronique de Paris, LISITE, RDI Principal Investigator : Raja Chiky Exploration of the use of programmable robots and visual programming languages to introduce core computer science concepts to K-12 students.	Since September 2017 Paris, France
○ Co-investigator of the project	
○ Project leader and coordinator with the funding body (Fondation Orange)	
○ Coordinator with the MINARC research team within LISITE	
○ Supervision of research assistants	
○ Design of an experimental protocol to evaluate the impact of learning computer science through the programming of tangible objects compared to web-based simulations	
MK:Smart – Garden Monitor The Open University, Knowledge Media Institute Principal Investigator : Enrico Motta MK:Smart is a large collaborative initiative which is developing innovative solutions to support economic growth in Milton Keynes. Garden Monitor is a project which aims towards water efficiency in households, particularly during gardening activities.	October 2016 – June 2017 Milton Keynes, United Kingdom
○ Design of an experimental protocol to evaluate the impact of using the Garden Monitor app on the users’ watering behaviors	
○ Quantitative analysis of the data produced during a six month long trial	
○ Qualitative analysis of the answers to a end-of-trial questionnaire I designed	
○ Design and development of a new version of Garden Monitor as a spin-off company	

Rexplore

The Open University, Knowledge Media Institute
Principal Investigator : Enrico Motta

October 2016 – June 2017
Milton Keynes, United Kingdom

Rexplore leverages novel solutions in large-scale data mining, semantic technologies and visual analytics, to provide an innovative environment for exploring and making sense of scholarly data.

- o Design and implementation of unsupervised machine learning techniques to generate a state of the art from the meta data of a research paper
- o Analysis of co-citation networks and bibliographic coupling networks from data available in Rexplore

Doctoral Project: Chao

Laboratoire d'Informatique de Grenoble, MeTAH
Supervisors : Pierre Tchounikine and Matthieu Quignard

October 2013 – September 2016
Grenoble, France

Chao is a software framework designed to facilitate the development of orchestration technologies for tablets.

- o Design of the orchestration model and orchestration user interfaces to support teachers in taking orchestration actions
- o Design of experimental protocols to evaluate the orchestration tools offered by the framework Chao
- o Steering of experiments occurring in live conditions in primary school classrooms with pupils using tablets
- o Qualitative and quantitative analysis of data generated from these experiments

Training Games for Children with Autism Spectrum Disorder

Høgskolen i Oslo og Akershus, Universal Design of ICT
Supervisor : Weiqin Chen

September 2012 – December 2012
Oslo, Norway

Development of games for multitouch tabletops designed for children with Autism Spectrum Disorders.

- o Design of learning scripts to promote the development of social skills for children with ASD
- o Design of a collaborative environment in which these learning scripts should be played
- o Implementation of learning scripts as collaborative games played on a multitouch table

PUBLICATIONS

International peer-reviewed journal articles:

- o Wang, P., Tchounikine, P. & Quignard, M. (2018). Chao: A framework for the development of orchestration technologies for Technology-Enhanced Learning activities using tablets in classrooms, *Int. J. Technology Enhanced Learning*, Vol. 10, Nos. 1/2, pp.1-21.

International peer-reviewed conference articles :

- o Wang, P., Tchounikine, P. & Quignard, M. (2015). Orchestration issues raised by transposing a paper-based individual activity into a tablet-based CSCL activity: An example. Proceeding of the *11th International Conference on Computer-Supported Collaborative Learning*.
- o Wang, P., Tchounikine, P. & Quignard, M. (2015). A model to support monitoring for classroom orchestration in a tablet-based activity. In *Design for Teaching and Learning in a Networked World* (pp. 491-496).

TEACHING DUTIES

Lecturer of Computer Science

Institut Supérieur d'Électronique de Paris

Since September 2017
Paris, France

- o II.3510 – Mobile Applications
- o II.3518 – Formal Approaches
- o II.2306/II.2406 – Web Technologies
- o AI.1101 – Project-Based Learning for Web Development
- o CT.1103 – Introduction to Computer Science

Teaching Assistant

École Nationale de l'Enseignement Professionnel Supérieur, EECS Department

2014 – 2016
Grenoble, France

- o Lecturer in Mathematics
- o Lab supervisor in Mathematics and Computer Science

LANGUES

English: Common European Framework of Reference for Languages: C2

French: Mother tongue