

PERSONAL INFORMATION



Fabrice Popineau

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Gender Male | Date of birth 11/01/1964 | Nationality French

JOB APPLIED FOR Artificial Intelligence Expert

WORK EXPERIENCE

2010 — Professor in Computer Science, full position

CentraleSupélec — Gif-sur-Yvette, France

CentraleSupélec is an internationally-reputed Higher Education and Research Institution. Its excellence lies in its combination of fundamental and applied sciences for innovation with societal impact. For almost two centuries, CentraleSupélec's top engineers have been practicing their skills and knowledge for the development of corporate institutions and public organizations. CentraleSupélec is the result of the merging between *École Centrale Paris* and *École Supérieure d'Électricité* in 2015.

Research Experience

My research aims at using artificial intelligence techniques to optimize human learning. In this current era where digital access to knowledge is cheap and user attention is expensive, a number of online applications have been developed for learning. These platforms collect a massive amount of data over various profiles, that can be used to improve learning experience: intelligent tutoring systems can infer what activities worked for different types of students in the past, and apply this knowledge to instruct new students. In order to learn effectively and efficiently, the experience should be adaptive: the sequence of activities should be tailored to the abilities and needs of each learner, in order to keep them stimulated and avoid boredom, confusion and dropout.

- fully-accredited member at *Laboratoire de Recherche en Informatique* — CNRS Research Unit 8253, member of the laboratory board
- member of the AAAI 2019 program committee
- member of the IJCAI-ECAI 2018 program committee
- appointed by AFNOR as expert member in the French National Body for the ISO/IEC JTC1/SC 42 "Artificial intelligence" committee
- supervisor for the French translation of the leading textbook *Artificial Intelligence: A Modern Approach* by Peter Norvig and Stuart Russell (2nd and 3rd editions, 1216 pages, used by more than 1200 universities in the world)
- Co-organizer of WeASeL2018 *Workshop eliciting Adaptive Sequences for Learning*, attached to the ITS-2018 conference, UQAM, Montréal (Canada). <https://humanlearn.io/>
- reviewer for the Information Processing & Management journal
- PhD co-supervisor for 8 PhD students

2017 — 2020 research partner in the e-FRAN project "Parcours Connectés": support project for new teachers. The objective is to create continuity between initial and in-service training for primary school teachers. Consortium of seven partners for a budget of about 2M€.

2014 — 2017 research partner in the "NexpertSanté" project labelled by the three competitiveness clusters System@tic, Cap Digital and Medicen. The goal of the project was to design, build and test a new therapeutic platform for the treatment of psycho-physiological insomnia. The platform implements a program of behavioural and cognitive online therapy. My mission was to work on data analytics to prevent patient dropout. Five partners for a total budget of 2316k€.

2007 — 2010 research partner in the ITEA2 project "LINDO" : *Large scale distributed INDEXation of multi-media Objects*. This project aimed to define the distributed architecture of a large-scale video surveillance system allowing high-level interrogation of captured content. The project brought together 14 partners in 3 countries: Belgium, France and Spain for a budget of 9261k€. My mission was to work on metadata formats and their interrogation.

Teaching Experience I teach classes in:

- *Algorithmics*, 1st year common core course for 500 students. I taught the same course in English for a pool of 100 students (2010 — 2014).
- *Artificial Intelligence*, 3rd year specialization course, 70 students
- *Big Data*, 2nd year common core source, coordinator of the teaching staff
- *Theoretical Computer Science* 3rd year specialization course, 35 students

2005 — 2010 Full position of Professor in Computer Science

Supélec — Metz campus

Head of the 3rd year Artificial Intelligence specialization, Supélec, Metz

Job description Supélec is an institution which carefully recruits highly skilled students after 2 years of intensive mathematics and science training (French "Classes Préparatoires").

Each year, 25 students take this specialization to complete their degree in electrical engineering. The academic year runs from September to March and the internship takes place from April to August. This specialization is composed of 450 hours of oral courses and 300 hours of practical teaching. This responsibility included:

- defining the syllabus, its implementation and the coordination of the teaching team,
- monitoring of students, throughout the academic year but also during their 5 month internship,
- monitoring of relations with industry for projects and internships,
- managing exchanges between GeorgiaTech Lorraine and Supélec within the framework of the dual degree.

1991 — 2005 Assistant Professor in Computer Science

Supélec — Metz campus, France

Job description — I taught courses in Artificial intelligence: *human reasoning modeling, algorithmics, Lisp and Prolog programming*.

— I completed many contracts with companies: RATP (Paris subway), Microsoft, Acterna, SAGEM, Thales, Hutchinson, LUSIS among others.

2005 I was head of the organizing committee of the 2005 EuroT_EX conference: 130 participants from 25 countries, with Donald Knuth and Hermann Zapf as invited speakers.

1997 — 2007 I was one of the coordinators and main contributors in the T_EXLive team. The T_EXLive project is a free software project building and developing a reference distribution of the T_EX software for all the platforms (Windows, Mac, Unix). I have been also a member of the GUTenberg board, the French chapter of the T_EX Users Group. I am still at the editorial board of the GUTenberg journal name "Cahiers GUTenberg".

1989 — 1991 Research Engineer

Cap Gemini Innovation — Paris research center

- Skills developed**
- Project management
 - Team management
 - Continuing education: I gave many Artificial Intelligence courses inside the company/group.

1989 — 1990 ESPRIT project P2427 "TROPICS": *TR*ansparent Object-oriented Parallel Information Computing System. This European project aimed to develop a workstation for office automation using a high degree of parallelism. I was more specifically in charge the EUROTRA automatic translator to this machine.

1987 — 1989 Assistant Professor in Computer Science

Supélec — Metz campus

EDUCATION AND TRAINING

1986 **Engineer Degree from Supélec (*École Supérieure d'Électricité*), Gif-sur-Yvette**

1981--1983 ***Classes Préparatoires*, Lycée Descartes, Tours**

PERSONAL SKILLS

Mother tongue French

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C1

Communication skills

- Good communication skills in French and English acquired through teaching and doing scientific presentations either in conferences or project meetings with foreign partners.
- Excellent contact with students.

Organisational / managerial skills

- I am currently coordinating a course in Big Data with a staff of 6 professors and 12 assistants for 500 students overall.
- I have coordinated an Algorithmics course with a staff of 6 professors and 10 assistants for 500 students also for 8 years.
- I was head of the computer science department on the Metz campus of Supélec from 2005 to 2010. I was managing 6 teaching fellows and 10 lecturers on contract. My mission was to guarantee that all the students complete their degree with the expected level of abilities and at the same time to keep the teachings at the cutting edge of science and technology.

Job-related skills

- Problem solving, critical thinking
- Supervising PhD students
- Managing research projects in partnership with companies

Digital competences

SELF-ASSESSMENT				
Information Processing	Content creation	Communication	Problem solving	Safety
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

[Digital competences - Self-assessment grid](#)

Driving licence B

PUBLICATIONS

Excerpt representative of my scientific publications:

Book chapters

Jill-Jënn Vie, Fabrice Popineau, Éric Bruillard, and Yolaine Bourda. A review of recent advances in adaptive assessment. In Alejandro Peña-Ayala, editor, *Learning Analytics: Fundamentals, Applications, and Trends*, volume 94 of *Studies in Systems, Decision and Control*, chapter A review of recent advances in adaptive assessment, pages 113-142. Springer, 2017.

International journals

Youssef Meguebli, Mouna Kacimi, Bich-Liên Doan, and Fabrice Popineau. Towards better news article recommendation. *World Wide Web Journal*, 20(1):1-20, 2017.

Jill-Jënn Vie, Fabrice Popineau, Éric Bruillard, and Yolaine Bourda. Automated test assembly for handling learner cold-start in large-scale assessments. *International Journal of Artificial Intelligence in Education*, pages 1-17, 2017.

International conferences with program committee

Jill-Jënn Vie, Fabrice Popineau, Yolaine Bourda, and Éric Bruillard. Adaptive testing using a general diagnostic model. In Katrien Verbert, Mike Sharples, and Tomaz Klobucar, editors, *Adaptive and Adaptable Learning - 11th European Conference on Technology Enhanced Learning, EC-TEL 2016*, volume 9891 of *Lecture Notes in Computer Science*, pages 331-339, Lyon, France, 9/2016. Springer International Publishing.

Hiba Hajri, Yolaine Bourda, and Fabrice Popineau. Querying repositories of OER descriptions: The challenge of educational metadata schemas diversity. In Gráinne Conole, Tomaz Klobucar, Christoph Rensing, Johannes Konert, and Élise Lavoué, editors, *Design for Teaching and Learning in a Networked World - 10th European Conference on Technology Enhanced Learning, EC-TEL 2015*, volume 9307 of *LNCS*, pages 582-586, Toledo, Spain, 9 2015. Springer.

Youssef Meguebli, Mouna Kacimi, Bich-Liên Doan, and Fabrice Popineau. Building rich user profiles for personalized news recommendation. In *Posters, Demos, Late-breaking Results and Workshop Proceedings of the 22nd Conference on User Modeling, Adaptation, and Personalization co-located with the 22nd Conference on User Modeling, Adaptation, and Personalization (UMAP2014)*, pages 33-40, Aalborg, Denmark, 7/2014.

Georges Dubus, Fabrice Popineau, Yolaine Bourda, and Jean-Paul Sansonnet. Parametric reasoning agents extend the control over standard behaviors. In *2013 IEEE/WIC/ACM International Joint Conferences on Web Intelligence (WI) and Intelligent Agent Technology, IAT 2013*, volume 2, pages 163-170, Atlanta, Georgia, USA, 11 2013. IEEE, IEEE Computer Society.

Cédric Jacquot, Yolaine Bourda, Fabrice Popineau, Alexandre Delteil, and Chantal Reynaud. GLAM: A generic layered adaptation model for adaptive hypermedia systems. In H. Ashman V. Wade and B. Smyth, editors, *Adaptive Hypermedia and Adaptive Web-Based Systems, 4th International Conference, AH 2006, Dublin, Ireland, June 21-23, 2006, Proceedings*, volume 4018 of *LNCS*, pages 131-140. Springer-Verlag, 6 2006.