

# Fabien LABERNIA | Researcher in Artificial Intelligence

Hauts-de-Seine – France

fabien@labernia.fr - www.fabien.labernia.fr - 31 years old (26/08/1989)

## Formation

### PSL Research University - Université Paris-Dauphine - LAMSADE

*Ph.D. in Computer Science*

Efficient algorithms for learning conditional preference networks from noisy data

Paris, France

2014 - 2018

### Université Blaise Pascal

*Research Master in Computer Science*

Models and algorithms in decision aiding specialty

Clermont-Ferrand, France

2014

### Université Blaise Pascal

*Bachelor in Computer Science*

Combinatorial algorithms specialty

Clermont-Ferrand, France

2012

### Lycée Saint-Pierre

*Scientist A-level*

Mathematics specialty

Cusset, France

2008

## Skills

### Practical

**Office:** L<sup>A</sup>T<sub>E</sub>X

**Languages:** C, C++, Java, Python

### Technical

**Machine learning:** supervised, non-supervised, query, online and offline learning algorithms

**Conditional preferences networks:** learning algorithms, complexity, and extensions

**Lattice theory:** closure systems, formal concept analyses, pattern mining

**General knowledge:** complexity, graph theory, optimization

### Linguistic

**French:** Native

**English:** Professional

**Mandarin:** Notions

## Publications

### Journal

Fabien Labernia, Florian Yger, Brice Mayag, and Jamal Atif. Query-based learning of acyclic conditional preference networks from contradictory preferences. *EURO Journal on Decision Processes*, 6(1) :39–59, June 2018

### Articles

- Fabien Labernia, Bruno Zanuttini, Brice Mayag, Florian Yger, and Jamal Atif. Online learning of acyclic conditional preference networks from noisy data. In *2017 IEEE International Conference on Data Mining, ICDM 2017, New Orleans, LA, USA, November 18-21, 2017*, pages 247–256, 2017
- Fabien Labernia, Florian Yger, Brice Mayag, and Jamal Atif. Query-based learning of acyclic conditional preference networks from noisy data. In *EURO Mini Conference :" From Multiple Criteria Decision Aid to Preference Learning "(DA2PL'2016), Paderbon, Germany*, 2016
- Quentin Brabant, Miguel Couceiro, Fabien Labernia, and Amedeo Napoli. Une approche de réduction de dimensionnalité pour l’agrégation de préférences qualitatives. In *16ème Journées Francophones Extraction et Gestion des Connaissances, EGC 2016, 18-22 Janvier 2016, Reims, France*, pages 345–350, 2016
- Olivier Coupelon, Diyé Dia, Fabien Labernia, Yannick Loiseau, and Olivier Raynaud. Using closed itemsets for implicit user authentication in web browsing. In *Proceedings of the Eleventh International Conference on Concept Lattices and Their Applications, Košice, Slovakia, October 7-10, 2014*, pages 131–144, 2014

## Abstract

Fabien Labernia and Brice Mayag. Élicitation des paramètres d'electre tri : Apprentissage par réduction. In ROADEF, Compiègne, France, 2016

## Technical report

Fabien Labernia and Olivier Raynaud. Recursive definition of the lattice of moore families. Technical report, LIMOS, Université Blaise-Pascal, 2013

# Experiences

## WiserSKILLS

Neuilly-Sur-Seine, France

2018 - now

*Research Engineer in Artificial Intelligence*

Introduction and improvement of the WiserSKILLS solution with recommender Systems and machine learning methods

## LAMSADE (CNRS UMR 7243)

Paris, France

*Research assistant (advisor : Jamal ATIF)*

2018 (2 months)

Final corrections on Ph.D. thesis manuscript, and research about an efficient learning algorithm for conditional preferences networks

## LAMSADE (CNRS UMR 7243)

Paris, France

*Doctoral contract (advisors : Jamal ATIF and Brice MAYAG)*

2014 - 2017 (3 years)

Ph.D. student with teaching duty in learning conditional preferences networks

## LIMOS (CNRS UMR 6158)

Aubière, France

*Research internship (advisor : Olivier RAYNAUD)*

2014 (5 months)

Development of statistical models for implicit authentication

## LIMOS (CNRS UMR 6158)

Aubière, France

*Research internship (advisor : Olivier RAYNAUD)*

2013 (4 months)

Structural and algorithm studies of Moore (co-)families

## CNRS

Aubière, France

*PetaSky Project [MASTODONS] (advisor : Engelbert MEPHU NGUIFO)*

2012 - 2013 (4 months)

Improvement of algorithms for large databases

## LIMOS (CNRS UMR 6158)

Aubière, France

*Voluntary research internship (advisor : Olivier RAYNAUD)*

Summer 2012 (2 months)

Closure algorithm of a set family.

# Research activities

## Presentations

### Ph.D. defense

Algorithmes efficaces pour l'apprentissage de réseaux de préférences conditionnelles à partir de données bruitées September 2016

IEEE International Conference on Data Mining (ICDM)

New Orleans, United States

*Online learning of acyclic conditional preference networks from noisy data*

November 2017

Seminar in computer science Ph.D. school of Paris-Dauphine

LAMSADE (Paris, France)

*Online learning of acyclic conditional preference networks from noisy data*

November 2017

Seminar in Harbin Institut of Technologies

Shenzhen, China

*Online learning of acyclic conditional preference networks from noisy data*

January 2017

From Multiple Criteria Decision Aid to Preference Learning (DA2PL 2016)

Paderborn, Germany

*Query-based learning of acyclic conditional preference networks from noisy data*

November 2016

Société Française de Recherche Opérationnelle et d'Aide à la Décision (ROADEF 2016) Compiègne, France

*Elicitation of ELECTRE TRI parameters : learning by reduction* February 2016

### MALOTEC

LORIA (Nancy, France)

*Conditional preferences network : an overview*

December 2015

Seminar in computer science Ph.D. school of Paris-Dauphine

LAMSADE (Paris, France)

*Learning the Parameters by Reduction : Case of MR-Sort*

November 2015

## Visits

### GREYC

Caen, France

Host : Bruno ZANUTTINI

May 2016

Working session about the improvement of a learning algorithm for conditional preferences networks

### LORIA

Nancy, France

Hosts : Miguel COUCEIRO and Amedeo NAPOLI

December 2015

## Teaching activities

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### 2016 - 2017

**Bachelor 3 in Computer Science**

**Université Paris-Dauphine (Paris, France)**

**Data analysis**

**17h**

Directed works about linear regression, and principal components analysis

**Bachelor 1**

**Université Paris-Dauphine (Paris, France)**

**Algorithms and programming 1**

**6h**

Introduction to algorithms with Python

**Bachelor 1**

**Université Paris-Dauphine (Paris, France)**

**Algorithms and programming 2**

**22h**

Introduction to algorithms with Python

### 2015 - 2016

**Bachelor 2**

**Université Paris-Dauphine (Paris, France)**

**Algorithms and applications**

**32h**

Algorithms and their complexities, in Python

**Bachelor 1**

**Université Paris-Dauphine (Paris, France)**

**Excel for operational research**

**12h**

Introduction to operational research with Excel

**Bachelor 1**

**Université Paris-Dauphine (Paris, France)**

**Algorithms and programming 2**

**22h**

Introduction to algorithms with Python

### 2014 - 2015

**Bachelor 2**

**Université Paris-Dauphine (Paris, France)**

**Algorithms and applications with Java**

**40h**

Algorithms and their complexities, in Java

**Bachelor 2**

**Université Paris-Dauphine (Paris, France)**

**Object programming**

**16h**

Introduction to object programming with Java

**Bachelor 1**

**Université Paris-Dauphine (Paris, France)**

**Algorithms and programming 2**

**10h**

Introduction to algorithms with Python

## Hobbies

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**China:** Visit Beijing (in 2013), and Guangdong province, in particular Shenzhen (in 2014, 2015, and 2017)

**Sport:** Tennis table during 10 years (1997 - 2007) - Provincial (single), and national (team) level

**Video making:** Post-production and clean video making (Sony Vegas Pro)

**System administrator:** Personal and web Debian server administration