



Florian Hoersch

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Education

2018- : PhD in computer science,
GSCOP, Grenoble,

2015-2018 : Master of science in mathematics,
Ulm University,

2016-2017 : Master of mathematics in combinatorics and
optimization,
University of Waterloo,

2012-2015 : Bachelor of science in mathematics applied to economy,
Ulm University,

2014-2015 : Erasmus stay in Bordeaux.

Research interests

- Discrete mathematics,
- Graph theory,
- Matroid theory,
- Combinatorial optimization.

Professional experience

May-July 2015 : Towers Watson, Munich,

Internship in Actuarial Consulting,

June-July 2018 : Profect, Ulm,

Student job in Software Engineering.

Teaching

Analysis 1,

University of Ulm, fall 2013-14, marking duty,

University of Ulm, summer 2014, marking and tutorial duty,

University of Ulm, fall 2015-16, marking and tutorial duty,

Kombinatorische Optimierung 1,

University of Ulm, summer 2016, marking duty,

Proofs,

University of Waterloo, fall 1016, marking duty,

Introduction to Optimization(CO 250),

University of Waterloo, spring 2017, marking duty,

University of Waterloo, summer 2017, marking and tutorial duty,

Introduction to Optimization(Non-specialist level)(CO 227),

University of Waterloo, fall 2017, marking and tutorial duty,

Deterministic OR Models(CO 370),

University of Waterloo, fall 2017, marking duty,

Modélisation des structures informatiques,

University Grenoble Alpes, spring 2019, marking and tutorial duty,

Graphes et complexité,

Polytech Grenoble, fall 2019, marking and tutorial duty,

Recherche opérationnelle,

Polytech Grenoble, fall 2019, marking and tutorial duty,

Operations Research,

IM2AG Grenoble, spring 2020, teaching duty,

Graphes,

University Grenoble Alpes, spring 2020, teaching duty,

Graphes et Applications,

Phelma Grenoble, spring 2020, teaching duty.

Conferences attended

Journées Graphes et Algorithmes,

online, november 2020,

Journées Graphes et Algorithmes,

Brussels, november 2019,

A tribute to Frédéric Maffray,

Grenoble, september 2019,

Slovenian International Conference on graph theory,

Bled, june 2019,

Journées Graphes et Algorithmes,

Grenoble, november 2018,

SiGMa,

Waterloo, july 2017,

CanaDam,

Toronto, june 2017.

Presentations given

Reachability in arborescence packings,

Journées Graphes et algorithmes, online, november 2020,

Séminaire algorithmes, graphes et combinatoire,
Montpellier(online), november 2020,

Combinatorial Optimization Seminar, Waterloo (online), july
2020,

<https://www.youtube.com/watch?v=rD8qR-pV1gY>

An introduction to matroids and a generalization of the graph minor
theorem of Robertson and Seymour,

GSCOP Research seminar, Grenoble, december 2019,

Orientations des graphes 3-arête-connexes,

Journées Graphes et algorithmes, Brussels, november 2019 ,

Highly vertex-connected orientations of regular eulerian graphs ,

Slovenian International Conference on graph theory, Bled, june
2019.

Publications

Packing of mixed hyperarborescences with flexible roots via matroid
intersection,

with Z.Szigeti, submitted,

Reachability in arborescence packings,

with Z.Szigeti, submitted,

The $(2,k)$ -connectivity augmentation problem: Algorithmic aspects,
with Z.Szigeti, submitted,

Connectivity of orientations of 3-edge-connected graphs,
with Z.Szigeti, to appear in European Journal of Combinatorics,

Eulerian orientations and vertex-connectivity,
with Z. Szigeti, DAM, 2021,

Matroid fragility and relaxations of circuit hyperplanes,
with J.Geelen, JCTB, 2020.

Theses

Extending Pappus' theorem,
Master's thesis, Waterloo, 2017,
supervisor : Jim Geelen,

Analysis on the improper colorability of graphs depending on their
maximum average degree,
Bachelor's thesis, Bordeaux\Ulm, 2015,
Supervisors : H.Bruhn-Fujimoto, P.Dorbec, A.Raspaud.

Languages

- German (mother tongue),
- English (C2),
- French (C1),
- Spanish (A2).