

Academic positions

Post-doc

Bergen, Norway

UNIVERSITY OF BERGEN

Since September 2019

- 3 years position in the **Algorithm** group.
- **Research project:** Algorithmic applications of the parameterized complexity on cryptographic problems.
- **Supervisor:** Jan Arne Telle.

Assistant Professor

Paris, France

UNIVERSITÉ PARIS DIDEROT

2018 - 2019

- Position of 10 months with reasearch duty and 158 hours of teaching duty.
- **Laboratory:** IRIF.
- **Team:** Theory and algorithmics of graphs.

Degree

PhD in Computer Science

Clermont-Ferrand, France

UNIVERSITÉ CLERMONT AUVERGNE

Defended on the 13th February

2019

- **Laboratory:** LIMOS.
- **Supervisors:** Mamadou M. Kanté.
- **Description:** The objectives of my thesis is to characterize the structural restrictions on (hyper)graphs that make NP-hard problems tractable. For doing so, I studied structural parameters that are more general than tree-width such as clique-width and rank-width.

Master in Computer Science

Montpellier, France

UNIVERSITÉ DE MONTPELLIER

2013 - 2015

- **Specialization:** Theoretical Computer Science, Algorithmic, Complexity, Optimization.
- **Master Thesis:** Supervised by Christophe Paul and Philippe Janssen.
Parameterized Complexity and Kenerlization for Constraint Satisfaction Problem.

Bachelor in Mathematics

Montpellier, France

UNIVERSITÉ DE MONTPELLIER

2010 - 2013

- **Specialization:** *Algebra and Computer Science.*

Publications

I have co-authored 6 peer-reviewed publications : 2 Journal articles and 4 conference papers.

[7] Node Multiway Cut and Subset Feedback Vertex Set on Graphs of Bounded Mim-width

Open access link

B. Bergounoux, C. Papadopoulos, J. A. Telle

2019

Submitted to WG.

[6] More applications of the d -neighbor equivalence: acyclicity and connectivity constraints

Open access link

B. Bergounoux, M. M. Kanté

2019

Conference: ESA.

[5] Counting minimal transversals of β -acyclic hypergraphs

Open access link

B. Bergounoux, F. Capelli, M. M. Kanté.

2019

Journal: Journal of Computer and System Sciences (JCSS).

[4] Fast exact algorithms for some connectivity problems parameterized by clique-width

Open access link

B. Bergounoux, M. M. Kanté.

2019

Journal: Theoretical Computer Science (TCS).

[3] On minimum connecting transition sets in graphs

T. Bellitto, B. Bergougnoux.

Conference: WG.

[Open access link](#)

2018

[2] An optimal XP algorithm for Hamiltonian cycle on graphs of bounded clique-width

B. Bergougnoux, M. M. Kanté, O. Kwon.

Conference: WADS (Journal version submitted to Algorithmica).

[Open access link](#)

2017

[1] Towards a polynomial kernel for directed feedback vertex set

B. Bergougnoux, E. Eiben, R. Ganian, S. Ordyniak, M. S. Ramanujan.

Conference: MFCS.

[Open access link](#)

2017

Invited Talks

More applications of the d -neighbor equivalence: acyclicity and connectivity constraints

- IBS Summer Research Program on Algorithms and Complexity in Discrete Structures (South Korea), July 2019.
- University of Bergen (Norway), March 2019.
- International symposium of Basic Sciences at INU (South Korea), October 2018.
- JGA, French Workshop on Graphs and Algorithms, November 2018.

Counting minimal transversals in β -acyclic hypergraphs

- INRIA Lille (France), LINKS Group, March 2017.
- JGA, French Workshop on Graphs and Algorithms, November 2017.

An optimal XP algorithm for Hamiltonian cycle on graphs of bounded clique-width

- Université de Bordeaux (France), LABRI, September 2017.

Fast Exact Algorithms for some connectivity problems parameterized by clique-width

- JGA, French Workshop on Graphs and Algorithms, November 2016.
- TU Wien (Austria), Algorithms and Complexity Group, September 2016.

Teaching

I gave 158 hours of teaching during my ATER position and 192 hours during my PhD. In the following, CM means lecture, TD means tutorial and TP means practical work.

UNIVERSITÉ PARIS DIDEROT

Paris, France

C language: Pointers, data structures, function pointers.	3 rd year	60h TP	<i>2018 - 2019</i>
Programming Project: Elaboration and follow-up of projets.	2 nd year	24h TD	
Object-oriented programming advanced: Inheritance, multithreading, JavaFx.	3 rd year	20h TP	
System programming: Fork, I/O, file system, lock, pipe, mmap, semaphors.	4 th year	24h TP	
Web programming: Html, PHP, MySQL, jQuery, Node.js, Ajax, Bootstrap, Symphony.	3 rd year	30h TP	

UNIVERSITÉ CLERMONT AUVERGNE

Clermont-Ferrand, France

Algorithmic Introduction: Variable, array, list.	1 st year	30h TD	<i>2017 - 2018</i>
Graph Theory: Fundamental Algorithm, Kruskal, Dijkstra.	3 rd year	18h TP	
Operating System: Garbage collector, process management, shell.	3 rd year	16h TP	<i>2016 - 2017</i>
Projet Supervisor: AI for a cooperative game called Hanabi	4 th year		
IT tools: Spreadsheet, word processor and presentation program.	1 st year	12h TP	
Network: TCP / UDP, security, cryptography	3 rd year	8h TD	<i>2015 - 2016</i>
Operating System: System call, memory / process management.	1 st year	10h CM, 16h TD, 16h TP	
OCaml programming: Basis of programming and algorithmic.	1 st year	64h TP	

Collective responsibilities

The Parameterized Complexity Newsletter.

Since 2019

CO-EDITOR OF THE NEWSLETTER.

Reviewer

Since 2015

ALGORITHMICA, DAM, DisOpt, ESA, IWOCA, JCTB, MFCS, LATIN, TALG, TCS, SIDMA, WG.

WEPA 2016: First Workshop on Enumeration Problems and Applications

November 2016

MEMBER OF THE ORGANIZATION COMMITTEE.

ANR projet: GraphEn (Graph Enumeration)

2016 - 2018

MEMBER OF THE ANR PROJET AND WEBMASTER.

LIMOS

2017 - 2018

MEMBER OF THE LABORATORY COUNCIL.