

Academic positions and degrees

- Since 2022 | **Postdoc** at University of Warsaw, Poland, in collaboration with the group of [Michał Pilipczuk](#).
- 2019-2022 | **Postdoc** at University of Bergen, Norway, in collaboration with the *Algorithm Group* and supervised by [Jan Arne Telle](#)
- 2018-2019 | **Assistant Professor** at Université Paris Cité and IRIF, in collaboration with the team [Theory and algorithmics of graphs](#)
- 2015-2018 | **PhD** in Computer Science from the Université Clermont Auvergne (France)
Laboratory: [LIMOS](#)
Thesis: *Matrix Decompositions and Algorithmic Applications to (Hyper)Graphs*
Supervisor: [Mamadou Moustapha Kanté](#)
Defended on 13 February 2019
- 2013-2015 | **Master degree** in Computer Science from the Université de Montpellier (France)
Specialization: Algorithmic, Complexity, Optimization.
Master Thesis: *Parameterized Complexity and Kernelization for Constraint Satisfaction Problem*. Supervised by Cristophe Paul and Philippe Janssen.
- 2010-2013 | **Bachelor degree** in Mathematics from the Université de Montpellier (France)
Specialization: *Algebra and Computer Science*.

Publications in conferences

[C1] New Width Parameters for Independent Set: One-sided-mim-width and Neighbor-depth

WITH T. KORHONEN, I. RAZGAN * WG 2023 * [Open access link](#)

[C2] Tight Lower Bounds for Problems Parameterized by Rank-width

WITH T. KORHONEN, N. NEDERLOF * STACS 2023 * doi.org/10.4230/LIPIcs.STACS.2023.11 * [Open access link](#)

[C3] A Logic-Based Algorithmic Meta-Theorem for Mim-Width

WITH J. DREIER, L. JAFFKE * SODA 2023 * doi.org/10.1137/1.9781611977554.ch125 * [Open access link](#)

[C4] Recognition of Linear and Star Variants of Leaf Powers is in P

WITH S. HØGEMO, M. VACHELLE, J. A. TELLE * WG 2022 * doi.org/10.1007/978-3-031-15914-5_6 * [Open access link](#)

[C5] On Dasgupta's hierarchical clustering objective and its relation to other graph parameters

WITH S. HØGEMO, U. BRANDES, C. PAUL, J. A. TELLE * FCT 2021 * doi.org/10.1007/978-3-030-86593-1_20 * [Open access link](#)

[C6] Close relatives of Feedback Vertex Set without single-exponential algorithms parameterized by treewidth

WITH É. BONNET, N. BRETTELL, O. KWON * IPEC 2020 * doi.org/10.4230/LIPIcs.IPEC.2020.3 * [Open access link](#)

[C7] Node Multiway Cut and Subset Feedback Vertex Set on graphs of bounded mim-width

WITH C. PAPADOPOULOS, J. A. TELLE * WG 2020 * doi.org/10.1007/978-3-030-60440-0_31 * [Open access link](#)

[C8] More applications of the d -neighbor equivalence: acyclicity and connectivity constraints

WITH M. M. KANTÉ * ESA 2019 * doi.org/10.4230/LIPIcs.ESA.2019.17 * [Open access link](#)

[C9] On minimum connecting transition sets in graphs

WITH T. BELLITTO, B. BERGOUNOUX * WG 2018 * doi.org/10.1007/978-3-030-00256-5_4 * [Open access link](#)

[C10] Towards a polynomial kernel for directed feedback vertex set

WITH E. EIBEN, R. GANIAN, S. ORDYNIK, M. S. RAMANUJAN * MFCS 2017 * doi.org/10.4230/LIPIcs.MFCS.2017.36 * [Open access link](#)

[C11] An optimal XP algorithm for Hamiltonian cycle on graphs of bounded clique-width

WITH M. M. KANTÉ, O. KWON * WADS 2017 * doi.org/10.1007/978-3-319-62127-2_11 * [Open access link](#)

Publications in journals

[J1] Node Multiway Cut and Subset Feedback Vertex Set on graphs of bounded mim-width

WITH C. PAPADOPOULOS, J. A. TELLE * *Algorithmica*, 2022 * doi.org/10.1007/s00453-022-00936-w * [Open access link](#)

[J2] Towards a polynomial kernel for directed feedback vertex set

WITH E. EIBEN, R. GANIAN, S. ORDYNIK, M. S. RAMANUJAN * *Algorithmica*, 2021 * doi.org/10.1007/s00453-020-00777-5 * [Open access link](#)

[J3] More applications of the d -neighbor equivalence: acyclicity and connectivity constraints

WITH M. M. KANTÉ * *SIAM J. Discret. Math.*, 2021 * doi.org/10.1137/20M1350571 * [Open access link](#)

[J4] An optimal XP algorithm for Hamiltonian cycle on graphs of bounded clique-width

WITH M. M. KANTÉ, O. KWON * *Algorithmica*, 2020 * doi.org/10.1007/s00453-019-00663-9 * [Open access link](#)

[J5] Counting minimal transversals of β -acyclic hypergraphs

WITH F. CAPELLI, M. M. KANTÉ * *J. Comput. Syst. Sci.*, 2019 * doi.org/10.1016/j.jcss.2018.10.002 * [Open access link](#)

[J6] Fast exact algorithms for some connectivity problems parameterized by clique-width

WITH M. M. KANTÉ * *Theor. Comput. Sci.*, 2019 * doi.org/10.1016/j.tcs.2019.02.030 * [Open access link](#)

Publications in workshops

[W1] Disjunctive minimal separators enumeration

WITH M. M. KANTÉ, KUNIHIRO WASA * WEPA 2019 * [Open access link](#)

Publications in preparation

[P1] Kernelization for Finding Lineal Topologies (Depth-First Spanning Trees) with Many or Few Leaves

WITH E. SAM, P. GOLOVACH, N. BLASER

[P2] Space-Efficient Parameterized Algorithms on Graphs of Low Shrubdepth

WITH V. CHEKAN, M. KANTÉ, R. GANIAN, M. MNICH, M. PILIPCZUK, S. OUM, E.J. VAN LEEUWEN,

[P3] A Logic-Based Algorithmic Meta-Theorem for problems based on blocks properties

WITH L. JAFFKE

[P4] A new notion of Representative Sets for Graph Coloring

[P5] Simple proofs on the structural properties on graphs of twin-width one

WITH J. GAJARSKÝ, F. POKRÝVKA, M. SOKOŁOWSKI

Collective responsibilities

Mai 2022	APGA 2022: Advances in Parameterized Graph Algorithms, Calp (Espagne) Member of the organization committee, in charge of the website
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2019-2022 | **University of Bergen**
Member of four committees for evaluating PhD students intermediary lectures

Depuis 2019 | **The Parameterized Complexity Newsletter**
Co-editor of the newsletter

2017-2018 | **LIMOS, Clermont-Ferrand (France)**
Member of the laboratory council

2016-2018 | **ANR project: GraphEn (Graphe Enumeration)**
Member of the ANR projet and webmaster.

Nov. 2016 | **WEPA: Workshop on Enumeration Problems and Applications**, Clermont-Ferrand
Member of the organization committee and webmaster.

Teaching

I gave 158 hours of teaching during my ATER position and 192 hours during my PhD. In the following, L is for lecture, T for tutorial and P for practical work.

Assistant professor, Université Paris Cité, 158 hours			
2018-2019	C language	3 rd year	60h P
	Programming Project	2 nd year	24h T
	Object-oriented programming advanced	3 rd year	20h P
	System programming	4 th year	24h P
	Web programming	3 rd year	30h P
During my PhD, Université Clermont Auvergne, 3×64 hours			
2017-2018	Algorithmic Introduction	1 st year	30h L/T
	Graph Theory	3 rd year	18h P
	Project Supervisor	4 th year	
	Operating Systems	3 rd year	16h T
2016-2017			12h L, 16h T, 16h P
	IT tools	1 st year	12h P
	Networks	3 rd year	8h T
2015-2016	OCaml programming	1 st year	64h P

Presentations as an external guest

- Seminar of the team ACRO, LIS, Marseille, March 2023.
- STACS, conference, Hamburg (Germany), March 2023.
- Virtual seminar, *Discrete Math Colloquium*, IBS South Korea, February 2023.
- Seminar of the team AIGCO, LIRMM, Montpellier, December 2022.
- Seminar of the team Optimisation Combinatoire, G-SCOP, Grenoble, November 2022.
- GWP, Satellite Workshop of ICALP, Paris, July 2022.
- WG, conference, Tübingen (Germany), June 2022.
- GRAA, french virtual seminar of graph theory and combinatorics, January 2022

- IPEC, online conference, December 2020
- WG, online conference, June 2020
- ESA, Munich (Germany), September 2019
- IBS Summer Research Program on Algorithms and Complexity in Discrete Structures (South Korea), July 2019
- Seminar of the algorithm group, University of Bergen (Norway), March 2019
- International symposium of Basic Sciences at INU (South Korea), October 2018
- JGA, french workshop on graphs and algorithms, Grenoble, November 2018
- Seminar of the team LINKS, INRIA Lille (France), March 2017
- JGA, french workshop on graphs and algorithms, Bordeaux, November 2017
- Université de Bordeaux (France), LABRI, September 2017
- JGA, french workshop on graphs and algorithms, November 2016
- Seminar of the Algorithms and Complexity Group, TU Wien, Vienna (Austria), September 2016

Research Visits

2019	Algorithm group, University of Bergen (Norway), 7 days, Collaborators: J. A. Telle, C. Papadopoulos
2018	University of Incheon (South Korea), 7 days, Collaborators: O. Kwon, E. Eiben
2017	LABRI, Université de Bordeaux (France), 7 days, Collaborators: M. Bonamy, T. Bellitto Équipe LINKS, INRIA Lille (France), 7 jours, Collaborators: F. Capelli
2018	Algorithms and Complexity Group, TU Wien (Austria), 7 days, Collaborators: E. Eiben, R. Ganian, S. Ordyniak, M. S. Ramanujan