

## Academic positions and degrees

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- 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 journals

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

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

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

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

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

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

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

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

### [J5] Counting minimal transversals of $\beta$ -acyclic hypergraphs

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

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

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

## Publications in conferences

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### [C1] Tight Lower Bounds for Problems Parameterized by Rank-width

AVEC T. KORHONEN, N. NEDERLOF \* Accepted to STACS 2023 \* [Open access link](#)

### [C2] A Logic-Based Algorithmic Meta-Theorem for Mim-Width

AVEC J. DREIER, L. JAFFKE \* Accepted to SODA 2023 \* [Open access link](#)

### [C3] Recognition of Linear and Star Variants of Leaf Powers is in P

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

### [C4] On Dasgupta's hierarchical clustering objective and its relation to other graph parameters

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

### [C5] Close relatives of Feedback Vertex Set without single-exponential algorithms parameterized by treewidth

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

### [C6] Node Multiway Cut and Subset Feedback Vertex Set on graphs of bounded mim-width

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

### [C7] More applications of the $d$ -neighbor equivalence: acyclicity and connectivity constraints

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

### [C8] On minimum connecting transition sets in graphs

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

### [C9] Towards a polynomial kernel for directed feedback vertex set

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

### [C10] An optimal XP algorithm for Hamiltonian cycle on graphs of bounded clique-width

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

## Publications in workshops

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### [W1] Disjunctive minimal separators enumeration

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

## Publications in preparation

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### [P1] Efficient FPT algorithms using polynomial space parameterized by shrub-depth

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

### [P2] A Logic-Based Algorithmic Meta-Theorem for problems based on blocks properties

AVEC L. JAFFKE

### [P3] A new notion of Representative Sets for Graph Coloring

## Collective responsibilities

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Mai 2022	<b>APGA 2022: Advances in Parameterized Graph Algorithms</b> , Calp (Espagne) Member of the organization committee, in charge of the website
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2019-2022	<b>University of Bergen</b> Member of four committees for evaluating PhD students intermediary lectures
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Depuis 2019	<a href="#">The Parameterized Complexity Newsletter</a> Co-editor of the newsletter
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2017-2018	<b>LIMOS, Clermont-Ferrand (France)</b> Member of the laboratory council
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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

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

## Presentations as an external guest

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- Seminar of the team ALGCO, 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

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