

# Thomas Lambert

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## Diplomas and Employments

- 2021 – Today **Associate Professor**, *Université de Lorraine, LORIA, Équipe COAST.*
- 2020 – 2021 **Software Engineer**, *Inria Rennes Bretagne-Atlantique, IRISA, Rennes, Team MYRIADS.*  
Supervised by Shadi Ibrahim, founded by research project ANR KerStream.
- 2018 – 2020 **Post-doctoral position**, *Inria Rennes Bretagne-Atlantique, LS2N, Nantes, Team STACK.*  
Supervised by Shadi Ibrahim founded by research project ANR KerStream.
- 2017 – 2018 **Associate Researcher**, *University of Manchester, Computer Science Department, High-Performance, Parallel and Distributed Software Systems Laboratory.*  
Supervised by Rizos Sakellariou, founded by European research project I-BiDaaS.
- 2014 – 2019 **PhD : On the Effect of Replication of Input Files on the Efficiency and the Robustness of a Set of Computations**, *Laboratoire Bordelais de Recherche en Informatique (LaBRI, Bordeaux), Team REALOPT.*  
Supervised by Olivier Beaumont and Lionel Eyraud-Dubois.
- 2011 – 2013 **Master of Computer Science**, *ENS de Lyon.*
- 2010 – 2011 **L3 (Bachelor) of Computer Science**, *ENS de Lyon.*

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## Research Visit and Internships

- February 2016 and February 2018 **Research Visit**, *University College of Dublin, Heterogeneous Computing Laboratory.*  
Visit to Alexey Lastovetski.
- April 2014 – July 2014 **Research Internship : Scheduling of mutual exclusion graph for sparse linear algebra**, *Laboratoire d'Informatique Parallèle (LIP, Lyon), Team ROMA.*  
Supervised by Loris Marchal and Bora Uçar.
- October 2013 – March 2014 **Research Internship : Study of dynamic scheduling techniques for some types of matrices operations**, *Laboratoire Bordelais de Recherche en Informatique (LaBRI, Bordeaux), Team CEPAGE.*  
Supervised by Olivier Beaumont and Abdou Guermouche.
- March – July 2013 **M2 Research Internship : Variants of hierarchical bin packing problem**, *Laboratoire d'Informatique Parallèle (LIP, Lyon), Team ROMA.*  
Supervised by Loris Marchal and Bora Uçar.
- March – July 2012 **M1 Research Internship : Allocation of memory for different classes of directed acyclic graphs**, *Laboratoire d'Informatique Parallèle (LIP, Lyon) and University Hawai'i at Manoa, Teams ROMA and CoRG.*  
Supervised by Henri Casanova, Loris Marchal and Bora Uçar.
- June – July 2011 **L3 Research Internship : Factorization of graph for Cartesian product**, *Laboratoire d'Informatique Parallèle (LIP, Lyon), IXXI.*  
Supervised by Christophe Crespelle and Eric Thierry.

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## Supervision

- February – August 2021 **Internship supervisor of Jad Alhadj (M2)**, *Inria Rennes Bretagne-Atlantique, Team MYRIADS.*  
Co-supervised with Shadi Ibrahim and Martin Quinson

- April – **Internship supervisor of Asha Begam Mohamed Mubarak (M2)**, *Inria Rennes*  
August 2019 *Bretagne-Atlantique, IMT Nantes*, Team STACK.  
Co-supervised with Shadi Ibrahim and Jad Darrous
- June – July **Internship supervisor of Bastien Thomas (L3)**, *Laboratoire Bordelais de Recherche en*  
2016 *Informatique (LaBRI, Bordeaux)*, Team REALOPT.  
Co-supervised with Olivier Beaumont.

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## Collective Duties

### Publicity Chair

- 2021 **PDSW'21** (workshop hébergé à SC'21).  
2020 **PDSW'20** (workshop hébergé à SC'20).

### Member of Program Committee

- 2021 **CCGrid'21, BDPS'21** (workshop à ICDCS'21), **HPCC'21, IEEE BigData'21**.  
2020 **CCGrid'20, HPCS'20**.  
2019 **CCGrid'19, IEEE BigDataSE'19, HPC Asia'19**.

### Reviewer for Journals

- 2020 **TPDS (x2), Journal of Grid Computing**.  
2019 **FGCS (x3), JPDC, TPDS, Transactions on Cloud Computing**.  
2018 **FGCS, Transaction on Parallel Computing**.  
2016 **Cluster Computing (x2)**.

### Reviewer for Conferences

- 2021 **Euro-Par'21, IEEE CLUSTER'21, ICPADS'21**.  
2020 **Euro-Par'20, HPBDC'20, ICPP, ICPADS, IPDPS (x3)**.  
2019 **Euro-Par'19, HPBDC'19, ICA3PP'19, CLUSTER'19**.  
2018 **Euro-Par'18, ICPADS'18, ISPA'18**.  
2017 **IPDPS'17, ICPP'17**.  
2016 **IPDPS'16, HiPC'16**.  
2015 **SC'15**.

### Administrative Duties

- 2014 - 2015 **President of AFoDIB**, *University of Bordeaux*.  
President of the association of computer science PhD students of Bordeaux

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## Teaching

- 2020 - 2021 **Operating Systems**, *University of Rennes 1*.  
L3, 24h
- 2020 - 2021 **Databases and Structured Data**, *University of Rennes 1*.  
L2, 40h
- 2019 - 2020 **Introduction to Scheduling**, *IMT Nantes*.  
M2, 2h.
- 2019 - 2020 **Method and Object Programming**, *IMT Nantes*.  
L3, 30h.
- 2018 - 2019 **Introduction to Databases and Human-Machine Interactions**, *IMT Nantes*.  
L3, 30h
- 2017 - 2018 **Co-supervision of end of study internships**, *University of Manchester*.  
2<sup>nd</sup> year Master Degree
- 2017 - 2018 **Tutoring**, *University of Manchester*.  
1<sup>st</sup> year Bachelor degree, 22h
- 2016-2017 **Low-Level Programming**, *IUT of Bordeaux*.  
1<sup>st</sup> year, 24h

- 2014 - 2015 **Introduction to Programming and C++**, *IUT of Bordeaux*.  
2016 - 2017 1<sup>st</sup> year, 36h  
2015-2016 **Introduction to Databases**, *IUT of Bordeaux*.  
1<sup>st</sup> year, 54h  
2014 - 2015 **Support**, *IUT of Bordeaux*.  
1<sup>st</sup> year, 22h

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## Popular Science

- 2019 **Science festival at Nantes**.  
Workshop on the history of Computer Science.
- 2017 **Participation to "Girls Can Code"**.  
Supervision of a one-week internship, created by the Prologin association, for young women to discover the bases of programming and computer science.
- 2016 - 2017 **Member of the association "Maths à modeler" of Bordeaux**.  
Organization of workshops for 12-16 years students for recreational practice of mathematics and research.
- 2011 - 2014 **Member of RUBENS project**, *ENS de Lyon*.  
Building and presentation of a Lego Turing Machine for popular science purpose.

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## Publications

### International Journals

- [1] (Rang A) Oliver Beaumont, Thomas Lambert, Loris Marchal and Bastien Thomas. Performance Analysis and Optimality Results for Data-Locality Aware Tasks Scheduling with Replicated Inputs. In *Future Generation Computing Systems*, 111 : p.582-598, 2020. <https://hal.inria.fr/hal-02275473v1>
- [2] (Rang A\*) Olivier Beaumont, Brett A. Becker, Ashley DeFlumere, Lionel Eyraud-Dubois, Thomas Lambert, and Alexey Lastovetsky. Recent Advances in Matrix Partitioning for Parallel Computing on Heterogeneous Platforms. In *Transactions on Parallel and Distributed Systems*, 30.1 : p. 218-229, 2018. <https://hal.inria.fr/hal-01670672v2/document>
- [3] (Rang A) Enver Kayaaslan, Thomas Lambert, Loris Marchal, and Bora Uçar. Scheduling series-parallel task graphs to minimize peak memory. In *Theoretical Computer Science*, 707 : p. 1-23, 2018. <https://hal.inria.fr/hal-01397299/document>
- [4] (Rang B) Thomas Lambert, Loris Marchal, and Bora Uçar. Comments on the hierarchically structured bin packing problem. In *Information Processing Letters*, 115(2) : p. 306-309, 2015. <https://hal.inria.fr/hal-01071414v2/document>

### Reviewed international conferences

- [5] (Rang A) Jad Darrous, Thomas Lambert and Shadi Ibrahim. On the Importance of container images placement for service provisioning in the Edge. In *28th International Conference on Computer Communications and Networks (ICCCN 2019)*, p. 1-9, 2019. <https://hal.inria.fr/hal-02134507v1>
- [6] (Rang A) Lionel Eyraud-Dubois and Thomas Lambert. Using Static Allocation Algorithms for Matrix Matrix Multiplication on Multicores and GPUs. In *International Conference on Parallel Processing (ICPP)*, p. 1-10, 2018. <https://hal.inria.fr/hal-01670678>
- [7] (Rang A) Olivier Beaumont, Lionel Eyraud-Dubois, and Thomas Lambert. Cuboid Partitioning for Parallel Matrix Multiplication on Heterogeneous Platforms. In *International European Conference on Parallel and Distributed Computing (Euro-Par)*, p. 171-182, 2016. <https://hal.inria.fr/hal-01269881/document>
- [8] (Rang A) Olivier Beaumont, Lionel Eyraud-Dubois, and Thomas Lambert. A New Approximation Algorithm for Matrix Partitioning in Presence of Strongly Heterogeneous Processors. In *International Parallel and Distributed Processing Symposium (IPDPS)*, p. 474-483, 2016. <https://hal.inria.fr/hal-01216245/document>
- [9] (Rang B) Olivier Beaumont, Lionel Eyraud-Dubois, Abdou Guermouche, and Thomas Lambert. Comparison of Static and Dynamic Resource Allocation Strategies for Matrix Multiplication. In *International Symposium on Computer Architecture and High Performance Computing (SBAC-PAD)*, p. 170-177, 2015. <https://hal.inria.fr/hal-01163936/document>

- [10] (Rang A) Christophe Crespelle, Eric Thierry, and Thomas Lambert. A Linear-Time Algorithm for Computing the Prime Decomposition of a Directed Graph with Regard to the Cartesian Product. In *19th Annual International Computing and Combinatorics Conference - COCOON 2013*, p. 469-480, 2013. [http://people.rennes.inria.fr/Thomas.Lambert/decomposition\\_cartesian.pdf](http://people.rennes.inria.fr/Thomas.Lambert/decomposition_cartesian.pdf)

#### Others Reviewed International Publications (short paper and workshop)

- [11] (Rang A) Thomas Lambert, David Guyon and Shadi Ibrahim. Rethinking Operators Placement of Stream Data Application in the Edge. In *29th ACM International Conference on Information & Knowledge Management*, p. 2101-2104, 2020. <https://hal.inria.fr/hal-02942759v1>
- [12] Thomas Lambert and Rizos Sakellariou. Allocation of Publisher/Subscriber Data Links on a Set of Virtual Machines. In *IEEE Cloud workshops*, p. 516-523, 2018. <http://www.cs.man.ac.uk/~rizos/papers/cloud2018.pdf>
- [13] Olivier Beaumont, Thomas Lambert, Loris Marchal, and Bastien Thomas. Data-Locality Aware Dynamic Schedulers for Independent Tasks with Replicated Inputs. In *International workshop on the Convergence of Extreme Scale Computing and Big Data Analysis (CEBDA)*, p. 1206-1213, 2018. <https://hal.inria.fr/hal-01878977/document>