

# Antoine Dailly

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## Curriculum Vitae

### Work Experience

- since 2019 **Postdoc**, *Instituto de Matemáticas, National Autonomous University of Mexico, Juriquilla.*  
Research in graph theory and Ramsey theory, under the supervision of Adriana Hansberg.  
Teaching in computability and complexity.
- 2018–2019 **ATER (assistant teacher and researcher)**, *Université Grenoble Alpes, G-SCOP, OC team*, Grenoble, France.  
Tutorials and practical courses in Computer Science (135h)  
Domains taught : Graphs, Complexity, Operational Research, Algorithmics, Programming in Python and Compilation.  
Research in graphs and combinatorics (reconfiguration, combinatorial games, criticality).
- 2015–2018 **PhD in Computer Science (Ministry of Higher Education and Research funding)**, *Université Claude Bernard Lyon I, LIRIS, GOAL team*, Lyon, France.  
*Criticality, identification and vertex deletion games on graphs*  
Director : Hamamache Kheddouci.  
Advisors : Aline Parreau et Éric Duchêne.  
Defended on September 27th 2018.
- 2015–2018 **Assistant teacher**, *ISFA*, Lyon, France.  
Lectures, tutorials and practical courses in Computer Science (198h)  
Domains taught : Unix, Algorithmics, Programming in Python, C++ and Java
- 2015–2018 **Scientific popularization**, *Maths à Modeler*, Lyon, France.  
Introduction to research in Mathematics and Theoretical Computer Science directed towards primary and secondary students
- 2011–2015 **Mentoring**.  
Mentoring of secondary and superior students in Mathematics, Algorithmics, Theoretical Computer Science and Programming

### Education

- 2014–2015 **Master's Degree in Computer Science – Artificial Intelligence specialization**, *Université Claude Bernard Lyon I*, Lyon, France, with honors, ranked 1/22.
- 2013–2014 **Master 1 in Computer Science**, *Université Claude Bernard Lyon I*, Lyon, France, with honors, ranked 2/98.
- 2012–2013 **Bachelor's Degree in Theoretical Computer Science**, *École Normale Supérieure de Lyon*, Lyon, France.
- 2011–2012 **Licence 2 in Mathematics and Computer Science**, *Université Montpellier II*, Montpellier, France, with honors.

*Instituto de Matemáticas unidad Juriquilla; Blv. Juriquilla 3001  
76230, Juriquilla, Qro, Mexico  
✉ antoine.dailly@im.unam.mx*

- 2010–2011 **Classe Préparatoire aux Grandes Écoles – Mathematics, Physics and Industrial Sciences specialization**, *Lycée Pierre de Fermat*, Toulouse, France.
- 2010 **High School Diploma – Mathematics specialization**, *Lycée Georges Clemenceau*, Montpellier, France, with honors.

## Research stays and internships

- 2017 **Research stay**, *Instituto de Matemáticas*, Juriquilla, Mexico.  
Two-months research stay to study the Murty-Simon Conjecture.  
Mentor : Adriana Hansberg.
- 2015 **Research internship**, *LIRIS – GOAL team*, Lyon, France.  
Five-months internship on octal games on graphs.  
Advisors : Aline Parreau and Éric Duchêne
- 2014 **Research internship**, *ERIC*, Lyon, France.  
Two-months internship on the adaptation of multi-agents paradigm to the Map&Reduce model.  
Advisor : Nadia Kabachi
- 2013 **Research internship**, *INRIA Sophia Antipolis – WIMMICS team*, Valbonne, France.  
Three-months internship on semantic similarity measures.  
Advisors : Elena Cabrio and Julien Cojan

## Publications in international journals

- 2019 Dailly, A., Moncel, J. & Parreau, A. (2019). Connected Subtraction Games on Subdivided Stars. *INTEGERS*, 19
- 2019 Dailly, A., Foucaud, F. & Hansberg, A. (2019). Strengthening the Murty-Simon conjecture on diameter 2 critical graphs. *Discrete Mathematics*, 342(11), 3142-3159
- 2018 Dailly, A., Gledel, V., & Heinrich, M. (2018). A generalization of Arc-Kayles. *International Journal of Game Theory*, 48(2), 491-511
- 2018 Beaudou, L., Coupechoux, P., Dailly, A., Gravier, S., Moncel, J., Parreau, A., & Sopena, E. (2018). Octal Games on Graphs : The game 0.33 on subdivided stars and bistars. *Theoretical Computer Science*, 746, 19-35
- 2017 Bousquet, N., Dailly, A., Duchene, E., Kheddouci, H., & Parreau, A. (2017). A Vizing-like theorem for union vertex-distinguishing edge coloring. *Discrete Applied Mathematics*, 232, 88-98

## Papers submitted in international journals

**On the balanceability of some graph classes**, with A. Hansberg, D. Ventura.

<https://hal.archives-ouvertes.fr/hal-02497933>

<https://arxiv.org/abs/2003.04804>

**Partition games**, with E. Duchêne, U. Larsson and G. Paris.

<https://hal.archives-ouvertes.fr/hal-01723190>

<https://arxiv.org/abs/1803.02621>

## ■ Talks in international conferences and colloquiums

- January 2019 **Connected Subtraction Games on Graphs** , CGTC3, Lisbonne.  
July 2018 **A strengthening of the Murty-Simon Conjecture**, ICGT 2018, Lyon, France.  
January 2017 **Octal Games on Graphs** , CGTC2, Lisbon, Portugal.  
November 2016 **A Vizing-like theorem for union vertex-distinguishing edge coloring**, BGW 2016, Bordeaux, France.

## ■ Talks in national conferences and colloquiums

- March 2020 **Balancing graphs using bicolored edges**, XXXV Coloquio Víctor Neumann-Lara de Teoría de Gráficas, Combinatoria y su Aplicaciones, Santiago de Querétaro, Mexico.  
November 2018 **Renforcer la conjecture de Murty-Simon sur les graphes critiques de diamètre 2** , JGA 2018, Grenoble, France.  
November 2016 **Coloration d'arêtes union-distinguante**, JGA 2016, Paris, France.  
November 2015 **Jeux octaux sur les graphes : 0.03**, JGA 2015, Orléans, France.

## ■ Talks in seminars

- September 2019 **A strengthening of the Murty-Simon Conjecture for diameter 2 critical graphs**, Seminario Preguntón, UNAM Juriquilla, Mexico.  
April 2019 **Jeux octaux dans les graphes**, Séminaire LIS, Marseille.  
March 2019 **Jeux octaux dans les graphes**, Séminaire LIB, Dijon.  
January 2019 **Jeux octaux dans les graphes**, Séminaire Optimisation Combinatoire, Bordeaux.  
December 2018 **Jeux octaux dans les graphes**, Séminaire AICoLoCo, Clermont-Ferrand.  
December 2017 **Rooks and Arc-Kayles**, Seminario Preguntón, UNAM Juriquilla, Mexico.  
April 2016 **Coloration d'arêtes union-distinguante**, SIF PhD students' seminar, Paris, France.  
October 2015 **Octal games on graphs : 0.03 and 0.33** , Graphes@Lyon, Lyon, France.

## ■ Posters

- January 2020 **Gráficas balanceables**, UNAM Juriquilla, Mexico.

## Responsibilities

- 2013–2015 **Voluntary activities**, *AML (Association des Miagistes et Informaticiens de Lyon)*, a student organization, Lyon, France.  
Active volunteer (2013–2014), then secretary of the organization (2014–2015)
- 2013–2015 **Student representative**, *Computer Science Department Council*, Lyon, France.  
2013–2015

## Special Skills

- French Native speaker
- English Fluent, C1 level *B2 level validated by the CLES in 2013*
- Spanish Basic
- Theoretical Computer Science Algorithmics, Combinatorial Game Theory, Graph Theory, Complexity Theory
- Programming Languages C/C++, Java, LaTeX, Python, OCaml, Scheme
- Systems Linux, Windows