

Antoine Dailly

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.

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- 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

- 2020 Dailly, A., Hansberg, A., & Ventura, D. (2020). On the balanceability of some graph classes. *Discrete Applied Mathematics*, to appear.
- 2020 Dailly, A., Duchêne, E., Larsson, U., & Paris, G. (2020). Partition Games. *Discrete Applied Mathematics*, 285, 509-525.
- 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

The balancing number and list balancing number of some graph classes, with L. Eslava, A. Hansberg, D. Ventura.

<https://hal.archives-ouvertes.fr/hal-03015201>

<https://arxiv.org/abs/2011.11119>

The Neighbour Sum Distinguishing Relaxed Edge Colouring, with É. Duchêne, A. Parreau, E. Sidorowicz.

■ 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

Novembre 2020 ***Équilibrabilité et nombre d'équilibrage des cycles***, JGA 2020, Online.

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

Octobre 2020 ***Jeux de soustraction dans les graphes : Complexité et algorithmes polynomiaux***, Groupe de travail GaMoC, Orléans, France.

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.

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- 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

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