# Antoine Dailly

*Curriculum Vitae*

## ▬▬▬ Work Experience

2021–2022 **ATER (assistant teacher and researcher)**, *IUT2 de Grenoble, G-SCOP, OC team*, Grenoble, France.
Tutorials and practical courses in Computer Science
Domains taught : Algorithms and Programming, Graphs, Probability and Statistics, Web Development.
Research in graphs and combinatorics.

2019–2021 **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.

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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.

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

2022 Dailly, A., Duchêne, E., Parreau, A., & Sidorowicz, E. (2022). The neighbour sum distinguishing relaxed edge colouring. *Applied Mathematics and Computation*, 419, 126864.

2021 Dailly, A., Hansberg, A., & Ventura, D. (2020). On the balanceability of some graph classes. *Discrete Applied Mathematics*, 291, 51-63.

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.

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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

## 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

February 2021 **Équilibrabilité**, *Séminaire ACRO*, Marseille, France (online).

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 AlCoLoCo*, Clermont-Ferrand.

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| 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

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

## ▬▬▬ Responsibilities

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

## ▬▬▬ Special Skills

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| 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++, Python, Java, LaTeX, Scheme | |
| Systems | Linux, Windows | |

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