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..
https://hal.archives-ouvertes.fr/hal-03064954

2021 Dailly, A., Hansberg, A., & Ventura, D. (2021). **On the balanceability of some graph classes**, *Discrete Applied Mathematics*, 291, 51-63..
https://hal.archives-ouvertes.fr/hal-02497933

2020 Dailly, A., Duchêne, E., Larsson, U., & Paris, G. (2020). **Partition Games**, *Discrete Applied Mathematics*, 285, 509-525..
https://hal.archives-ouvertes.fr/hal-01723190

2019 Dailly, A., Moncel, J., & Parreau, A. (2019). **Connected Subtraction Games on Subdivided Stars**, *INTEGERS*, 19..
https://hal.archives-ouvertes.fr/hal-01849181

2019 Dailly, A., Foucaud, F., & Hansberg, A. (2019). **Strengthening the Murty-Simon conjecture on diameter 2 critical graphs**, *Discrete Mathematics*, 342(11), 3142-3159..
https://hal.archives-ouvertes.fr/hal-01959683

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2018 Dailly, A., Gledel, V., & Heinrich, M. (2018). **A generalization of Arc-Kayles**, *International Journal of Game Theory*, 48(2), 491-511..
https://hal.archives-ouvertes.fr/hal-01587921

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..
https://hal.archives-ouvertes.fr/hal-01418153

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..
https://hal.archives-ouvertes.fr/hal-01313088

Papers submitted in international journals

The neighbour sum distinguishing edge-weighting with local constraints, with E. Sidorowicz.
https://hal.archives-ouvertes.fr/hal-03615738
https://arxiv.org/abs/2203.11521

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

November 2021 **La coloration d-relaxée somme-distinguante** , *JGA 2021*, Online.

November 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.

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Talks in seminars

March 2022	**Subtraction Games on Graphs : Complexity, regularity and polynomial algorithms**, *Séminaire LIGM*, Paris (Champs-sur-Marne), France.
October 2021	**Équilibrabilité**, *Séminaire de mathématiques discrètes*, Grenoble, France.
October 2021	**Strengthening the Murty-Simon Conjecture on diameter-2-critical graphs** , *VCU Discrete Mathematics Seminar*, Virginia Commonwealth University (online).
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.
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	

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Programming Languages	C/C++, Python, Java, LaTeX, Scheme
Systems	Linux, Windows