

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

- 2015–2018 **PhD in Computer Science**, *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.
- 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.
- 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

- 8 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>
- 7 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>

- 6 Dailly, A., Duchêne, E., Larsson, U., & Paris, G. (2020). **Partition Games**, *Discrete Applied Mathematics*, 285, 509-525..
<https://hal.archives-ouvertes.fr/hal-01723190>
- 5 Dailly, A., Moncel, J., & Parreau, A. (2019). **Connected Subtraction Games on Subdivided Stars**, *INTEGERS*, 19..
<https://hal.archives-ouvertes.fr/hal-01849181>
- 4 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>
- 3 Dailly, A., Gledel, V., & Heinrich, M. (2019). **A generalization of Arc-Kayles**, *International Journal of Game Theory*, 48(2), 491-511..
<https://hal.archives-ouvertes.fr/hal-01587921>
- 2 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>
- 1 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>

Submitted publications

Complexity and algorithms for Isometric Path Cover on chordal graphs and beyond, with D. Chakraborty, S. Das, F. Foucaud, H. Gahlawat, S. K. Ghosh.

<https://hal.archives-ouvertes.fr/hal-03710812>

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.

■ 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 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	<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	