

Théo Pierron

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I am currently a postdoc at Masaryk University (Brno, Czech republic), under the supervision of Dan Kral'.

Publications

- M. Bonamy, T. Pierron, É. Sopena, *Every planar graph is totally $\max(\Delta + 2, 10)$ -choosable*, to be submitted.
- M. Bonamy, N. Bousquet, K. K. Dabrowski, M. Johnson, D. Paulusma, T. Pierron, *Graph Isomorphism for (H_1, H_2) -free Graphs: An Almost Complete Dichotomy*, submitted.
- F. Dross, F. Foucaud, V. Mitsou, P. Ochem, T. Pierron, *Homomorphisms of planar signed graphs to cycles*, submitted.
- F. Foucaud, H. Hocquard, D. Lajou, V. Mitsou, T. Pierron, *Parameterized complexity of edge-coloured and signed graph homomorphism problems*, accepted at IPEC'19.
- H. Hocquard, S. Kim, T. Pierron, *Coloring squares of graphs with mad constraints*, accepted in *Discrete Applied Mathematics*, 2019.
- I. Choi, D. Cranston, T. Pierron, *Degeneracy and Colorings of Squares of Planar Graphs without 4-Cycles*, accepted in *Combinatorica*, 2019.
- T. Pierron, T. Place, M. Zeitoun, *Quantifier Alternation for Infinite Words*, accepted at FoSSaCS'16.
- T. Pierron, R.J. Shank, *Rings of invariants for the three dimensional modular representations of elementary abelian p -groups of rank four*, published in *Involve*, 2016.

Talks

International conferences

- European Conference on Combinatorics, Graph Theory and Applications Bratislava, Slovakia, August 2019, *A Brooks-like result for graph powers*.
- Workshop Cycles and Colourings, High Tatras, Slovakia, September 3, 2018, *Coloring the squares of planar graphs with no 4-cycle*.
- International Colloquium on Graph Theory and combinatorics, Lyon, France, July 9, 2018, *Every planar graph of maximum degree 8 is totally 10-choosable*.
- SIAM Conference on Discrete Maths, Denver, USA, June 6, 2018, *Total List Coloring of Planar Graphs*.
- International Conference on Foundations of Software Science and Computation Structures (FoSSaCS), Eindhoven, The Netherlands, April 5, 2016, *Quantifier Alternation for Infinite Words*.

National conferences

- Journées Graphes et Algorithmes, Grenoble, France, November 15, 2018, *Coloration du carré des graphes planaires sans C_4* .
- Journées Graphes et Algorithmes, Bordeaux, France, November 15, 2017, *Coloration totale par listes de graphes planaires*.

Seminars

- July 4, 2019, CombAlgo team meeting, *Polynomial methods in combinatorics*.
- February 27, 2019, CS Junior Seminar, Durham (UK), *Coloring the squares of planar graphs with no 4-cycle*.
- January 30, 2019, IFCAM Project Meeting, RKMVERI, Kolkata (India), *Complexity of some signed graph homomorphism problems*.

- September 28, 2018, Graphs and Optimization seminar, Bordeaux (France), *Coloring the squares of planar graphs with no 4-cycle*.
- May 4, 2018, Graphs and Optimization seminar, Bordeaux (France), *Total list coloring of planar graphs*.
- October 18, 2017, ANR Delta Meeting at Porquerolles (France), *Complexity of some separation problems*.
- November 26, 2015, FMI, Stuttgart (Germany), *Quantifier Alternation for Infinite Words*.

Research experiences

- 1-week research stay at Masaryk University (Czech republic), with A. Kabela, D. Kral' and T. Kelly, March 2019.
- 1-week research stay at University of Durham (UK), with N. Bousquet, K. Dabrowski, M. Johnson and D. Paulusma, February 2019.
- 2-week research stay at ISI/RKMVERI (Kolkata, India), with J. Bensmail, F. Foucaud, S. Das, S. Sen and E. Sopena, January 2019.
- 1-week research stay at University of Ljubljana (Slovenia), with M. Petruševski and R. Škrekovski, December 2017.
- 1-week research stay at FMI, Stuttgart (Germany), with M. Kufleitner, December 2016.
- 1-week research stay at FMI, Stuttgart (Germany), with M. Kufleitner and M. Zeitoun, November 2015.
- 5-month internship at University of Bordeaux, under the direction of M. Zeitoun and T. Place, Spring 2015.
- 9-week internship at University of Kent (United Kingdom) under the direction of R. J. Shank, Summer 2013
- 4-week internship at Institut Élie Cartan (France) under the direction of G. Tenenbaum, Summer 2012

Education

- 2019- Postdoc at Masaryk university.
- 2018-2019 Teaching assistant (ATER) at Bordeaux University.
- 2015-2019 Ph.D. from Bordeaux University, defended in 2019.
 - Title: "Induction schemes: from languages separation to graph colorings"
 - Advisors: Marthe Bonamy, Thomas Place, Éric Sopena and Marc Zeitoun.
- 2011-2015 Student at ENS Rennes, Department of Mathematics (graduation in 2015).
- 2015 M.Sc in Mathematics, University of Bordeaux, 2015.
- 2014 First place at national competitive exam for recruiting math teachers, 2014.
- 2013 B.Sc in Computer Science, ENS Rennes / University of Rennes 1, 2013.
- 2012 B.Sc in Mathematics, ENS Rennes / University of Rennes 1, 2012.

Attended events

- Eurocomb'19, Bratislava, Slovakia, August 26-30, 2019.
- Meeting of ANR Hosigra, Sète, France, April 1-5, 2019.
- JGA 2018, Grenoble, France, November 14-16, 2018.
- C&C 2018, High Tatras, Slovakia, September 3-7, 2018.
- ICGT 2018, Lyon, France, July 9-13, 2018.
- SGT 2018, Sète, France, June 11-15, 2018.
- SIAM DM'18, Denver, USA, June 4-8, 2018.
- Meeting of ANR Hosigra, Bordeaux, March 28-30, 2018.
- JGA 2017, Bordeaux, France, November 15-17, 2017.
- Meeting of ANR Delta, Porquerolles, France, October 17-20, 2017
- EJCIM 2017, Lyon, France, January 23-27, 2017.
- Meeting of ANR Delta, Bordeaux, France, February 9-10, 2017.
- FoSSaCS 2016, Eindhoven, The Netherlands, April 2-8, 2016.

Teaching

- Spring 2019: “Compilation”, exercise sessions for third-year Bachelor students.
- Spring 2019: “Probabilities, Statistics and Combinatorics”, exercise sessions for second-year Bachelor students.
- Spring 2019: “Algorithmics for tree-based data structures”, lectures and exercise sessions for second-year Bachelor students.
- Fall 2018: “Logic and proof”, lectures and exercise sessions for third-year Bachelor students.
- Fall 2016-2018: “Functional programming”, lectures and exercise sessions for second-year Bachelor students.
- Fall 2015-2017: “Algorithms on graphs”, exercise sessions for third-year Bachelor students.
- Spring 2016: “Algorithms and programming”, exercise sessions for first-year Bachelor students.

Other

- Reviewer for Journal of Combinatorial Theory, Series B, Journal of Graph Theory, Discrete Mathematics, Discrete Applied Mathematics and Information Processing Letters
- Organizing committee of JGA 2017 (national meeting of french graph theorists)
- Member of the association Maths à Modeler (association promoting mathematics and computer science in secondary schools).