

Edin Husić

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EDUCATION

- > **PhD in Mathematics** (4th and final year)
Supervisor: prof. László Végh.
London School of Economics and Political Science, London, UK.
- > **Master 2 of Fundamental Computer Science** (average 16.03/20)
Supervisors: prof. Stéphan Thomassé and dr. Nicolas Trotignon.
June 2017, École Normale Supérieure de Lyon, France.
- > **Master of Mathematical Sciences** (average 9.56/10)
Thesis topic: “The maximum independent set problem and equistable graphs”
Supervisors: dr. Ademir Hujdurović and prof. Martin Milanič.
August 2017, University of Primorska, Koper, Slovenia. Available at [link](#).
- > **Bachelor of Mathematics** (average 9.59/10)
Thesis topic: “Submodular functions”.
Supervisor: prof. Martin Milanič.
September 2015, University of Primorska, Koper, Slovenia. Available at [link](#).

ONGOING RESEARCH

- *Constructing gross substitutes via independent matchings*. Joint work with Georg Loho (LSE), Ben Smith (University of Manchester), and László Végh (LSE).
- *Approximating and sketching valuations functions*. Joint work with Johannes Brustle, Yixin Tao, and László Végh (LSE).

PREPRINTS

4. *Safety in transcript assembly via paths appearing in all path covers of a DAG*. Manuel Cáceres, Brendan Mumey, Edin Husić, Romeo Rizzi, Massimo Cairo, Kristoffer Sahlin, and Alexandru I. Tomescu. Submitted.
3. *Approximating Nash Social Welfare under Rado Valuations*. Jugal Garg, Edin Husić, and László Végh. Submitted.
2. *FPT Algorithms for Finding Dense Subgraphs in c -Closed Graphs*. Edin Husić and Tim Roughgarden.
1. *Auction Algorithms for Market Equilibrium with Weak Gross Substitute Demands and their Applications*. Jugal Garg, Edin Husić, and László Végh. Submitted.

JOURNAL PAPERS

2. *MIPUP: minimum perfect unmixed phylogenies for multi-sampled tumors via branchings and ILP*. E. Husić, X. Li, A. Hujdurović, M. Mehine, R. Rizzi, V. Mäkinen, M. Milanič and A.I. Tomescu. *Bioinformatics* 35.5 (2019): 769-777.
1. *Perfect phylogenies via branchings in acyclic digraphs and a generalization of Dilworth’s theorem*. A. Hujdurović, E. Husić, M. Milanič, R. Rizzi, A. I. Tomescu. *ACM Transactions on Algorithms (TALG)* 14.2 (2018): 1-26.

REFEREED CONFERENCE PAPERS

3. *The independent set problem is FPT for even-hole-free graphs*. Edin Husić, Stéphan Thomassé, and Nicolas Trotignon. 14th International Symposium on Parameterized and Exact Computation (IPEC 2019). Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik, 2019.
2. *A polynomial-time algorithm for the independent set problem in $\{P_{10}, C_4, C_6\}$ -free graphs*. Edin Husić and Martin Milanič. International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2019). Springer, Cham, 2019. **Best Student Paper Award**.
1. *The minimum conflict-free row split problem revisited*. A. Hujdurović, E. Husić, M. Milanič, R. Rizzi, A. I. Tomescu. International Workshop on Graph-Theoretic Concepts in Computer Science (WG 2017). Springer, Cham, 2017.

RESEARCH VISITS

- Visiting researcher, Department of Computer Science, University of Helsinki, (Duration: 01.12. – 20.12.2019). Collaborator: dr. Alexandru I. Tomescu.

TEACHING

Class teacher/teaching assistant:

- [Optimisation Theory](#) 2019/2020. LSE.
- [Real Analysis](#) 2019/2020. LSE.
- [Algorithms and Computation](#) 2019/2020. LSE.
- Project marker for [Fundamentals of Operations Research](#) and [Modelling in Operations Research](#) 2018/2019 and 2019/2020. LSE
- [Operational Research Methods](#) 2017/2018 and 2018/2019. LSE.
- “*Graphs are everywhere*” at summer school “Mathematics is cool”, Koper, Slovenia, August 2017.
- Mathematics instructor at “ACADEMUS”, Slovenia, October 2015 - July 2016.

SKILLS

Coding: Java, Python, Cplex, basics of OCaml. A few older projects at [github](#).

Languages: Bosnian (native), English (fluently), Slovenian (fluently), German (basics).

REFEREE

Journals: Mathematical Programming (Series B), Theoretical Computer Science, Theory of Computing Systems.

Conferences: ESA, MFCS, ISAAC, WADS, IWOC.

EXTRA- CURRICULAR ACTIVITIES

My entry for “3 Minute Thesis BiH”: [youtube link](#) (ongoing).

With Marko Prcać and Vladan Jovičić won start-up challenge “*Podjetna Primorska*”, Koper, Slovenia, 26.05.2016.

2nd place at *NASA Space App Challenge*, Koper, Slovenia, 22.04-24.04.2016.
(30sec video presentation: [youtube link](#))

MATH CONTESTS

- *Honourable mention*, Open Mathematical Olympiad of the Belarusian-Russian Universities (2014).
- *Honourable mention*, IMC-International Mathematics Competition (2013).
- *Bronze medal*, Open International Internet-Olympiad (2013).

SUMMER SCHOOLS

- > *21st Max Planck Advanced Course on the Foundations of Computer Science: Market Design and Computational Fair Division*
August 24-28, 2020 Virtual event (hosted from Saarbrücken, Germany)
- > *Hausdorff School on Combinatorial Optimization*,
Bonn, Germany, 20.08-24.08.2018.
- > *São Paulo School of Advanced Science on Algorithms, Combinatorics and Optimization*, São Paulo, Brazil, 18.07 - 29.07.2016.
- > *PhD Summer School in Discrete Mathematics 2015*
Rogla, Slovenia, 27.06 - 3.07.2015.
- > *PhD Summer School in Discrete Mathematics and Symmetries of Graphs and Networks IV*, Rogla, Slovenia, 29.06 - 5.07.2014.