

# Edin Husić

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**INTERESTS**      Algorithmic game theory, combinatorial optimization, graph theory.

**EDUCATION**

- > **PhD in Mathematics** at London School of Economics. (4<sup>th</sup> and final year)  
Supervisor: prof. László Végh.
- > **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 László Végh, Georg Loho (LSE) and Ben Smith (University of Manchester).

**PREPRINTS**

3. *Approximating Nash Social Welfare under Rado Valuations.* Jugal Garg, Edin Husić and László Végh.
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.

**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*.
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*.

**CONFERENCE PAPERS**

3. *The independent set problem is FPT for even-hole-free graphs.* Edin Husić, Stéphan Thomassé, and Nicolas Trotignon. *IPEC 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. *WG 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. *WG 2017*.

**RESEARCH VISITS**

- Visiting researcher, Department of Computer Science, University of Helsinki, (Duration: December 01 – December 20, 2019). Collaborator: dr. Alexandru I. Tomescu.

<b>TEACHING</b>	<p>Class teacher/teaching assistant:</p> <ul style="list-style-type: none"> <li>• <a href="#">Real Analysis</a> 2019/2020. LSE.</li> <li>• <a href="#">Algorithms and Computation</a> 2019/2020. LSE.</li> <li>• <a href="#">Operational Research Methods</a> 2017/2018 and 2018/2019. LSE.</li> <li>• “<i>Graphs are everywhere</i>” at summer school “Mathematics is cool”, Slovenia, August 2017.</li> </ul>
<b>SKILLS</b>	<p>Programming: Java, Python, Cplex, Octave, Scilab, basics of OCaml.</p> <p>Besides my mother tongue Bosnian, I speak English and Slovenian fluently and have basic knowledge of German.</p>
<b>REFeree</b>	<p>Mathematical Programming (Series B), Theoretical Computer Science, Theory of Computing Systems, ESA, MFCS, ISAAC, WADS, IWOC.</p>
<b>MATH CONTESTS</b>	<ul style="list-style-type: none"> <li>• <i>Honourable mention</i>, Open Mathematical Olympiad of the Belarusian-Russian University (2014).</li> <li>• <i>Honourable mention</i>, IMC-International Mathematics Competition for University Students (2013).</li> <li>• <i>Bronze medal</i>, Open International Internet-Olympiad discipline Mathematics (2013).</li> </ul>
<b>EXTRA-CURRICULAR ACTIVITIES</b>	<p>Mathematics instructor, “ACADEMUS d.o.o”, Koper, Slovenia, October 2015 - July 2016.</p> <p>Together with my colleagues Marko Prač and Vladan Jovičić won start up “<i>Podjetna Primorska</i>”, Koper, Slovenia, 26.05.2016.</p> <p>2<sup>nd</sup> place at <i>NASA Space App Challenge</i>, Koper, Slovenia, 22.04-24.04.2016. (30sec video presentation: <a href="https://www.youtube.com/watch?v=i6SbFHednmk">https://www.youtube.com/watch?v=i6SbFHednmk</a>)</p> <p><i>ERASMUS exchange program for students</i> at Charles University, Prague, Czech Republic, 30.9.2013 - 14.02.2014.</p>
<b>SUMMER SCHOOLS</b>	<ul style="list-style-type: none"> <li>&gt; <i>21st Max Planck Advanced Course on the Foundations of Computer Science: Market Design and Computational Fair Division</i> August 24-28, 2020 Virtual event (hosted from Saarbrücken, Germany)</li> <li>&gt; <i>Hausdorff School on Combinatorial Optimization</i>, Bonn, Germany, 20.08-24.08.2018.</li> <li>&gt; <i>São Paulo School of Advanced Science on Algorithms, Combinatorics and Optimization</i>, São Paulo, Brazil, 18.07 - 29.07.2016.</li> <li>&gt; <i>PhD Summer School in Discrete Mathematics 2015</i> Rogla, Slovenia, 27.06 - 3.07.2015.</li> <li>&gt; <i>PhD Summer School in Discrete Mathematics and Symmetries of Graphs and Networks IV</i>, Rogla, Slovenia, 29.06 - 5.07.2014.</li> </ul>