Mónika Csikós

PhD candidate in Computer Science

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Experience

- **ESIEE Paris** — Paris, France
  PhD candidate — *2018 –*
  - **Research topic**: Approximation Algorithms for Large-Scale Geometric Data
  - **3 peer-reviewed publications (CORE A conference and Q1 journals)**: Google scholar

  Teaching
  - **Algorithm Design - responsible**: Lectures, problem solving and coding (`C++`) sessions for 4th year Computer Science students.
  - **Optimisation Algorithms - lecturer**: Lectures on Linear and Integer Programming. (`C++, OR-tools`).

  Mentoring (internships co-supervised with Nabil Mustafa)
  - **Baptiste Adam** (M1 student) — *(March - August 2021)*
    Topic: Visualization and benchmarking of a spatial partitioning algorithm
  - **Clément Chomicki** (M1 student) — *(May - August 2020)*
    Topic: `C++` implementation of an algorithm for half-space range sampling in 2 dimensions

- **Karlsruhe Institute of Technology** — Karlsruhe, Germany
  Research and teaching assistant (pre-doc) — *2016 – 2018*
  - **Graph Theory**: Problem solving sessions for advanced Mathematics and Computer Science students.
  - **Advanced Mathematics**: Problem solving sessions for 1st year Engineering students.

Education

- **Université Paris-Est** — Paris, France
  Master (M2) in Computer Science; mention très bien — *2015 – 2016*
  - **Specialization**: Theoretical Computer Science – Algorithms and Bioinformatics
  - **Funding**: Labex Bézout Excellence Track

- **Eötvös Loránd University** — Budapest, Hungary
  Bachelor and M1 in Applied Mathematics; with distinction — *2011 – 2015*
  - **Specialization**: Combinatorial Optimisation and Graph Theory

Publications

M. Csikós and N. Mustafa (2021). *Escaping the Curse of Spatial Partitioning: Matchings With Low Crossing Numbers and Their Applications.* Accepted to SoCG 2021 (peer-reviewed conference), invited to special issue

M. Csikós, A. Kupavskii, and N. Mustafa (2019). *Tight Lower Bounds on the VC-dimension of Geometric Set Systems.* Published in Journal of Machine Learning Research

M. Axenovich and **M. Csikós** (2019). *Induced Saturation of Graphs.* Published in Discrete Mathematics

M. Csikós and N. Mustafa (2021+). *Optimal Approximations Made Easy.* Under revision in Infomation Processing Letters

Á. Ambrus, **M. Csikós**, G. Kiss, J. Pach, G. Somlai (2021+). *On minimum and maximum perimeter isosceles containers.* Under preparation.

Miscalleneous

Language proficiency: Hungarian - native / English - fluent / French & German - intermediate