Gergely Ódor

Ph.D. obtained in Computer Science at EPFL
Email: gergely.odor@epfl.ch
Website: https://www.gergelyodor.com/

Education

Ph.D. in Computer Science, *École polytechnique fédérale de Lausanne*, Lausanne, Switzerland

2017 – 2022 | The Role of Adaptivity in Source Identification with Time Queries | Advisor: Prof. Patrick Thiran

M.S. in Mathematics, *Central European University*, Budapest, Hungary

2016 – 2017 | Global information loss and criticality in resistance matrices | Advisor: Prof. Bálint Virág

B.S. in Mathematics with Computer Science, *Massachusetts Institute of Technology*, Cambridge, MA

2012 – 2016 | Cumulative GPA**:** 4.9 (out of 5.0)

Preprints

G. Ódor, J. Vuckovic, M.S. Ndoye and P. Thiran
"Source Detection via Contact Tracing in the Presence of Asymptomatic Patients"
arXiv preprint arXiv: 2112.14530 (2021)

Y. Meirovitch, A. Matveev, H. Saribekyan, D. Budden, D. Rolnick, G. Odor, S. Knowles-Barley, T.R. Jones, H. Pfister, J.W. Lichtman, N. Shavit,
"A Multi-Pass Approach to Large-Scale Connectomics,"
arXiv preprint arXiv:1612.02120 (2016)

Peer-reviewed Journal Publications

V. Lecomte, G. Ódor, and P. Thiran
"The power of adaptivity in source identification with time queries on the path"
Theoretical Computer Science, Volume 911, pp. 92 – 123; (2022)

S. Mashkaria, G. Ódor, and P. Thiran
"On the robustness of the metric dimension of grid graphs to adding a single edge"
Discrete Applied Mathematics, in press (2022)

G. Ódor, D. Czifra, J. Komjáthy, L. Lovász, and M. Karsai,
"Switchover phenomenon induced by epidemic seeding on geometric networks"
Proceedings of the National Academy of Sciences, 118(41); (2021)

G. Ódor, and P. Thiran,
"Sequential metric dimension for random graphs"
Journal of Applied Probability, Volume 58, Issue 4, December pp. 909 – 951; (2021)

J. Komjáthy, and G. Ódor,
"Metric dimension of critical Galton–Watson trees and linear preferential attachment trees"
European Journal of Combinatorics, 95, p.103317; (2021)

A. Matveev, Y. Meirovitch, H. Saribekyan, W. Jakubiuk, T. Kaler, G.O., D. Budden, A. Zlateski, N.Shavit,
“A multicore path to connectomics-on-demand”
Proceedings of the 22nd ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming; (2017) (Best Paper nominee).

G. [Géza] Ódor, R. Dickman, G. [Gergely] Ódor,
“Griffiths phases and localization in hierarchical modular networks”
Sci. Rep. 5, 14451 (Nature Publishing Group); (2015).

H. Schulz, G. [Géza] Ódor, G. [Gergely] Ódor, M. F. Nagy,
“Simulation of 1+1 dimensional surface growth and lattices gases using GPUs”
Comp. Phys. Comm. 182; (2011)

Peer-reviewed Conference Publications

G. Odor, Y.-H. Li, A. Yurtsever, Y.-P. Hsieh, Q. Tran-Dinh, M. El Halabi and V. Cevher,
“Frank-Wolfe works for non-Lipschitz continuous gradient objectives: scalable Poisson phase retrieval,”
ICASSP (2016)

Presentations

2022 July: NetSci 2022 @Shanghai (online)
Title: Switchover phenomenon induced by epidemic seeding on geometric networks (contributed talk)

2022 July: Epidemology and modelling workshop (Kecskemét)
Title: Identifying patient zero and proximity-sensitive awareness (invited speaker)

2022 May: Erdös Center Workshop: Mathematics of Large Networks (Budapest)
Title: Source Identification via Contact Tracing in the Presence of Asymptomatic Patients (contributed talk)

2021 November: Budapest Semesters in Mathematics Colloquium (Budapest)
Title: Switchover phenomenon induced by epidemic seeding on geometric networks (invited speaker)

2021 July: Franco-Dutch meeting “Bézout-Eurandom” (IHP Paris)
Title: Switchover phenomenon induced by epidemic seeding on geometric networks

2021 July: Rátz László Conference of Mathematics Teachers (online)
Title: Random trees and epidemic spreading (invited speaker)

2020 February: Budapest University of Technology and Economics Stochastic Seminar (TU Budapest)
Title: Sequential metric dimension for random graphs (invited speaker)

2019 July: 19th International Conference on Random Structures and Algorithms (ETH Zurich)
Title: Sequential metric dimension for random graphs (contributed talk)

2019 March: YEP XV "Information Diffusion on Random Networks" (TU Eindhoven)
Title: Source localization with adaptive sensor selection in random graphs (contributed talk)

2018 April: Wiki Workshop at The Web Conference (WWW2018 Lyon)
Title: How did Wikipedia become navigable (poster)

2014, 2015, 2018 December: Statistical Physics Holiday Seminar, Eötvös Lóránd University (ELTE)

Reseach internships

Alfréd Rényi Institute of Mathematics (Hungarian Academy of Science) – Budapest, Hungary
Temporary research position in the group of Prof. Bálint Virág 06.2017 – 08.2017

Computational Connectomics Group, MIT CSAIL – Cambridge, MA
Undergrad Researcher under the direction of Prof. Nir Shavit 09.2014 – 05.2016

Laboratory for Information and Inference Systems, EPFL – Lausanne, Switzerland
Research Intern under the direction of Prof. Volkan Cevher 06.2015 – 08.2015

Bear Lab, MIT – Cambridge, MA
Undergrad Researcher under the direction of Profs Mark Bear and Arnold Heynen 02.2013 – 05.2014

Teaching activities

Teaching Assistantship:

- Dynamical system theory for engineers (EPFL, 09.2018 – 01.2019, 09.2019 –01.2020)
- Probabilities and statistics (EPFL, 02.2019 – 06.2019)
- Theory of Computation (EPFL, 02.2018 – 06.2018)
- Matrix Computations with Applications (CEU, 02.2017 – 06.2017)

Tutoring:

- Mathematics and English for disadvantaged children (Menetszél Association 02.2020 – 06.2021)
- Introductory mathematics classes for MIT students (MIT Math Learning Center, 09.2014 – 05.2015)
- Advanced computer science classes for MIT students (HKN Tutoring, 02.2015. – 05.2015)

Supervision of students/junior researchers

- Jana Vuckovic (summer@EPFL intern 2021)
- Miguel-Angel Sanchez Ndoye (EPFL Student Assistant Spring 2021, Summer 2021)
- Stanislas Jouven (EPFL BA semester project, Spring 2019, Fall 2019)
- Victor Lecomte (summer@EPFL intern, 2019)
- Satvik Mashkaria (summer@EPFL intern, 2019)
- Nicolas D'Argenlieu (EPFL BA semester project, Spring 2019)
- Constantin Isabela (EPFL MS semester project, Fall 2018)
- Farzad Pourkamali (summer@EPFL intern, 2018)
- Shivani Angappan and Kejia Wang (MIT PRIMES Circle, Spring 2016)

Outreach activities

- Tutored online Hungarian disadvantaged students in 5th and 7th grade in Mathematics and English (Menetszél Association from 2020-2021)
- Tutored at an after-school program for Boston-area public high school students that offers a mathematical enrichment curriculum and an introductory research experience to talented students with disadvantaged backgrounds. (MIT PRIMES Circle tutor in Spring 2016)

Awards

- The paper “A multicore path to connectomics-on-demand” was nominated for Best Paper Award at PPoPP17
- International Mathematical Olympiad, Mar del Plata, 2012 – Honorable Mention
- International Olympiad in Informatics, Hungarian Qualifiers 2012 – 5th place
- W. L. Putnam Math. Comp. 2012, 2013, 2014, and 2015 – Top 12% each year (top 7% in 2013)

Languages

Fluent in English and Hungarian, intermediate in French