

KONSTANTINOS SOTIROPOULOS

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SUMMARY

Final year PhD student doing research on mining and learning from graphs. Publications in top-tier ML and data mining conferences (NeurIPS, ICML, KDD). Industry experience in big tech companies (Microsoft, Meta, Red Hat).

EDUCATION

PhD in Computer Science, Boston University Sep 2017- Expected May 2023

Advisor: Babis Tsourakakis

Thesis: New Methods, Algorithms and Impossibility Results for ML on Graphs

Diploma in Electrical & Computer Engineering, National Technical University of Athens Feb 2016

Supervisor: Symeon Papavassiliou

Thesis: Algorithms for computing centrality measures in complex networks

SELECTED PUBLICATIONS & RESEARCH EXPERIENCE

Research Fellow Sep 2017 - Now

Boston University - Massive Data, Algorithms and Systems (MiDAS) Group

- On the Power of Edge Independent Graph Models - NeurIPS 2021
*Sudhanshu Chanpuriya, Cameron Musco, **Konstantinos Sotiropoulos**, and Charalampos E. Tsourakakis*
- Triangle-aware Spectral Sparsifiers and Community Detection - KDD 2021
***Konstantinos Sotiropoulos**, Charalampos E. Tsourakakis*
- DeepWalking Backwards: From Embeddings Back to Graphs - ICML 2021
*Sudhanshu Chanpuriya, Cameron Musco, **Konstantinos Sotiropoulos**, and Charalampos E. Tsourakakis*
- Node Embeddings and Exact Low-Rank Representations of Complex Networks - NeurIPS 2020
*Sudhanshu Chanpuriya, Cameron Musco, **Konstantinos Sotiropoulos**, and Charalampos E. Tsourakakis*
- TwitterMancer: Predicting User Interactions on Twitter - Allerton 2019
***Sotiropoulos, Konstantinos**, John W. Byers, Polyvios Pratikakis, and Charalampos E. Tsourakakis*

Research Assistant Sep 2015 - July 2017

National Technical Univ. of Athens - Network Management & Optimal Design (NETMODE) lab

- Hyperbolic Embedding for Efficient Computation of Path Centralities and Adaptive Routing in Large-Scale Complex Commodity Networks - IEEE Transactions on Network Science and Engineering
*Eleni Stai, **Konstantinos Sotiropoulos**, Vasileios Karyotis, Symeon Papavassiliou*
- Hyperbolic Traffic Load Centrality for large-scale complex communications networks - IEEE ICT 2016
*Eleni Stai, **Konstantinos Sotiropoulos**, Vasileios Karyotis, Symeon Papavassiliou*

INDUSTRY EXPERIENCE

Meta (formerly Facebook) Summer 2022

Software Engineering Intern

- Design and implementation of community detection algorithms for large-scale graphs using distributed engines.
- Graph Analytics Team - Manager: Dionysios Logothetis, Mentor: Siddhant Benhaddikar

Microsoft Summer 2021

Applied Data Science Intern

- Worked on devising efficient exploration schemes for Neural Thompson Sampling.
- WebXT, Auction & Bidders Team - Manager: Sreedal Menon, Mentor: Woosang Lim

- Worked on creating ETL processes for enabling large-scale analysis of Openshift/Kubernetes monitoring data, and providing insights on the adoption of the Operators framework by customers.
- Openshift, Operators Team - Manager: Daniel Geoffroy, Mentor: Alexander Greene

AWARDS & HONORS

- Research Excellence award from the Boston University CS Department (2021)
- Thomaidion Award from the NTUA for publishing as an undergraduate student (2017 & 2018).
- Best Paper Award at the 23rd IEEE International Conference on Telecommunications (ICT) 2016.
- Selected among the top reviewers in ICML 2022 and ICLR 2022

TEACHING EXPERIENCE

- CS 506 - Computational Tools for Data Science, Fall 2019, Boston University
- CS 330 - Introduction to Algorithms, Summer 2019, Spring 2019, Spring 2018, Boston University
- CS 131 - Combinatoric Structures, Fall 2017, Boston University

SERVICE

- Reviewer for ICDM 2019, KDD 2020, ICML 2021 & 2022, NeurIPS 2021 & 2022, ICLR 2022.
- Program committee for SocInfo 2020 and ICCCN 2021.
- Coordinator for the MiDAS (Data Group) seminars during Fall 2019. Invited speakers and organized weekly meetings.
- Mentor for Jay Vishwarupe during BU's Rise program for exceptional high school students.
- Mentor for Konstantinos Tsitsekis during his undergraduate thesis at NTUA.

SKILLS

Programming Languages

Proficient in Python, intermediate experience in C++ and Java.

Other Skills

Working experience in PyTorch, Apache Giraph and MySQL.

Familiarity with MongoDB, Hadoop/MapReduce, Docker.