Leonidas Tsepenekas

Curriculum Vitae

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Research Interests

Main Topics: Algorithmic Fairness, Explainability, Approximation and Randomized Algorithms, Combinatorial and Stochastic Optimization, Machine Learning, Clustering and Facility Location Problems.

Education

08/2017–10/2022 **University of Maryland, College Park**, *PhD in Theoretical Computer Science*, Academic Advisers: Aravind Srinivasan and John P. Dickerson, Dissertation title: On Algorithmic Fairness and Stochastic Models for Combinatorial Optimization and Unsupervised Machine Learning

10/2010–09/2016 **National Technical University of Athens (NTUA)**, *Athens*, Greece

- BSc & MSc in Electrical and Computer Engineering (5-year joint degree, 300 ECTS)
  - Grade: 8.84/10 (top 5% of my class)
  - Grade in major: 9.456/10
- Thesis: "Approximation Algorithms for Scheduling Malleable Jobs".

2010 **High School Graduation**, 14^{th} *High School of Peristeri*
Nationwide University Entrance Examination Score: 19.375/20.000, the highest among all students of the school, top 1% nationwide.

Teaching Experience

2015-2017 *Computer Programming* and *Algorithms and Complexity* courses at NTUA
Fall 2017 Teaching assistant at UMD for CMSC 351: Introduction to Algorithms
Spring 2018 Teaching assistant at UMD for CMSC 351: Introduction to Algorithms
Summer 2018 Teaching assistant at UMD for CMSC 250: Discrete Mathematics
Fall 2018 Teaching assistant at UMD for CMSC 351: Introduction to Algorithms
Spring 2019 Teaching assistant for CMSC 451: Design and Analysis of Computer Algorithms

Reviewing Experience

2018 **TALG-2018**, *ACM Transactions on Algorithms*
2021 **ICML-2021**, *International Conference on Machine Learning*
2021 **NeurIPS-2021**, *Conference on Neural Information Processing Systems*
2022 **AISTATS-2022**, *International Conference on Artificial Intelligence and Statistics*
2023 **NeurIPS-2023**, *Conference on Neural Information Processing Systems*

Work Experience

05/2019–08/2019 **Research Intern**, *University of Virginia Biocomplexity Institute and Initiative. Supervised by Anil Vullikanti*

06/2022–08/2022 **AI Summer Research Associate**, *JPMorgan Chase & Co. Supervised by Ivan Brugere*

02/2023–Today **Research Scientist**, *JPMorgan Chase & Co.*

Publications

2016 **Improving Scheduling Of Data Transmission In Tdma Systems**, *T. Aslanidis, L. Tsepenekas*, (Alphabetic Order), (ICAIT)

2016 **Message Routing in Wireless and Mobile Networks Using TDMA Technology**, *T. Aslanidis, L. Tsepenekas*, (Alphabetic Order), International Journal of Wireless & Mobile Networks

2019 **A Unified Approach to Online Matching with Conflict-Aware Constraints**, *P. Xu, Y. Shi, H. Cheng, J.P. Dickerson, K.A. Sankararaman, A. Srinivasan, Y. Tong, L. Tsepenekas*, AAAI

2020 **A Pairwise Fair and Community-preserving Approach to k-Center Clustering**, *B. Brubach, J.P. Dickerson, S. Khuller, A. Srinivasan, L. Tsepenekas*, (Alphabetic Order), ICML

2020 **Probabilistic Fair Clustering**, *S.A. Esmaeili, B. Brubach, L. Tsepenekas, J.P. Dickerson*, NeurIPS

2021 **Fairness, Semi-Supervised Learning, and More: A General Framework for Clustering with Stochastic Pairwise Constraints**, *B. Brubach, J.P. Dickerson, A. Srinivasan, L. Tsepenekas*, (Alphabetic Order), AAAI

2021 **Approximating Two-Stage Stochastic Supplier Problems**, *B. Brubach, N. Grammel, D. Harris, A. Srinivasan, L. Tsepenekas, A. Vullikanti*, (Alphabetic Order), APPROX

2022 **Deploying Vaccine Distribution Sites for Improved Accessibility and Equity to Support Pandemic Response**, *G. Li, A. Li, M. Marathe, A. Srinivasan, L. Tsepenekas, A. Vullikanti*, (Alphabetic Order), AAMAS
Best Student Paper Award

2022 **A New Notion of Individually Fair Clustering: α-Equitable k-Center**, *D. Chakrabarti, J.P. Dickerson, S.A. Esmaeili, A. Srinivasan, L. Tsepenekas*, (Alphabetic Order), AISTATS

2022 **Fair Disaster Containment via Graph-Cut Problems**, *M. Dinitz, A. Srinivasan, L. Tsepenekas, A. Vullikanti*, (Alphabetic Order), AISTATS

2022 **Controlling Epidemic Spread using Probabilistic Diffusion Models on Networks**, *A. Babay, M. Dinitz, A. Srinivasan, L. Tsepenekas, A. Vullikanti*, (Alphabetic Order), AISTATS

2023 **Deploying Vaccine Distribution Sites for Improved Accessibility and Equity to Support Pandemic Response**, *G. Li, A. Li, M. Marathe, A. Srinivasan, L. Tsepenekas, A. Vullikanti*, (Alphabetic Order), AAMAS

2023 **Comparing Apples to Oranges: Learning Similarity Functions for Data Produced by Different Distributions**, *L. Tsepenekas, I. Brugere, F. Lecue, D. Magazzeni*, NeurIPS

2023 **SHAP@k:Efficient and Probably Approximately Correct (PAC) Identification of Top-k Features**, *S. Kariyappa, L. Tsepenekas, F. Lécué, D. Magazzeni*, Under Review

Tutorials

2021 **Co-organized tutorial on Fair Clustering, which was presented at AAAI 2021**
Check fairclustering.com

Honors and Awards

Eurobank **"A great moment for education"**
For graduating with the highest score in my high school

University of Maryland **Dean's Fellowship**

Gerontelis Foundation **Graduate Studies Scholarship**

University of Maryland **Ann G. Wylie Dissertation Fellowship**

Programming & Computer skills

Programming C/C++, Python, Java, Haskell, ML

Skills Linux/Unix, Windows, LaTeX

Languages

Greek Native

English Fluent