AVETIK KARAGULYAN

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Google Scholar
github.com/avetx

WORK EXPERIENCE

Postdoctoral fellow | *Optmization in Machine Learning* — Since Nov 2021
King Abdullah University of Science and Technology — Thuwal, Saudi Arabia
- Hosted by Peter Richtarik

Research Intern — Apr 2018 – August 2018
ENSAE - CREST — Palaiseau, France
- Supervised by Arnak Dalalyan

Math trainer — June 2017 – Aug 2017
ISTC — Yerevan, Armenia

Teaching Associate — Sept 2016 – May 2017
American University of Armenia — Yerevan, Armenia

Medical Data Analysis Intern — Apr 2016 – Jul 2016
MerSoft LLC — Yerevan, Armenia

EDUCATION

Ph.D. | *Applied Mathematics* — Sept 2018 – Jun 2021
Institut Polytéchnique de Paris, CREST — Palaiseau, France
- Supervised by Arnak Dalalyan

Master of Science | *Mathematics, Vision, Learning (MVA)* — Sept 2017 – Aug 2018
ENS Paris-Saclay — Cachan, France
- GPA - 16/20 (très bien)

Bachelor of Science | *Major: Mathematics* — Sept 2013 – May 2017
Yerevan State University, Faculty of Mathematics and Mechanics — Yerevan, Armenia
- GPA - 20/20 (excellent)

PUBLICATIONS

Penalized Langevin dynamics with vanishing penalty for smooth and log-concave targets
Avetik Karagulyan, Arnak Dalalyan
- Advances in Neural Information Processing Systems, 2020

Bounding the error of discretized Langevin algorithms for non-strongly log-concave targets
Arnak Dalalyan, Avetik Karagulyan and Lionel Riou-Durand
- Preprint available on arXiv.

Non-Asymptotic Guarantees For Sampling by Stochastic Gradient Descent
Avetik Karagulyan
- Journal of Contemporary Mathematical Analysis (Armenian Academy of Sciences) 54.2 (2019): 71-78

User-friendly guarantees for the Langevin Monte Carlo with inaccurate gradient
Arnak Dalalyan,Avetik Karagulyan
- Stochastic Processes and their Applications 129.12 (2019): 5278-5311

Existence of positive solutions for an approximation of stationary mean-field games
Diogo Gomes et al.
- Involve, a Journal of Mathematics Vol. 10 (2017), No. 3, 473–493

Conferences and Presentations

Meeting in Mathematical Statistics   Dec 2020
Talk

33-rd Neural Information Processing Systems   Dec 2020
Poster

Honors and Awards

Dean's List   Fall 2017
Recognition for to 20% of students in academics at Austin College

Noyce STEM Education Leadership Scholarship   June 2017
Merit based grant for students pursuing education in STEM fields

Stephens Scholarship   May 2017
Merit based scholarship to support international study experiences within Austin College

John D . Mosely Scholarship   July 2016
Merit based scholarship requiring Austin College alumnus nomination

Presidents List   Spring 2016
Overall GPA above 3.8 at Austin College

Eagle Scout   April 2006
Highest level of achievement within the Boy Scouts of America

Teaching Experience

High School Physics (11 Weeks Teaching/Observing)   Fall 2017
Denison High School   Denison, TX

High School Calculus (11 Weeks Teaching/Observing)   Fall 2017
Denison High School   Denison, TX

High School Geometry (9 Weeks Teaching/Observing)   Spring 2016
Sherman High School   Sherman, TX

Community Involvement

Austin College Community Tutors   Fall 2017 – Fall 2018
Free tutoring for local students in science and mathematics   Sherman, TX

River Legacy Nature Center   September 2015 – August 2016
Provided assistance for various youth science education programs   Arlington, TX

Back on My Feet Run Club   April 2014 – August 2015
Helping to reestablish homeless persons in the community   Austin, TX

Skills

Languages: English (Native), Spanish (B1), Finnish (A1)
Programming: Python (NumPy, SciPy, Matplotlib, Pandas), MATLAB, Mathematica, Java
Document Creation: Microsoft Office Suite, LaTex, Markdown