

Artavazd Maranjyan

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Education

- Ph.D. in Computer Science** Thuwal, Saudi Arabia
2023 – 2025
 - King Abdullah University of Science and Technology (KAUST)
Advisor: Peter Richtárik
 - **Thesis:** First Provably Optimal Asynchronous SGD for Homogeneous and Heterogeneous Data
- M.Sc. in Applied Statistics and Data Science** Yerevan, Armenia
2021 – 2023
 - Yerevan State University
 - **Thesis:** On local training methods; **co-supervisors:** Peter Richtárik, Mher Safaryan
- B.Sc. in Informatics and Applied Mathematics** Yerevan, Armenia
2017 – 2021
 - Yerevan State University
 - **Thesis:** On the Convergence of Series in Classical Systems; **supervisor:** Martin Grigoryan

Academic Experiences

- Research visit to Yi-Shuai Niu** Beijing, China
9-22 March 2025
 - Beijing Institute of Mathematical Sciences and Applications (BIMSA)
 - Gave talks at three universities (PKU, BUAA, BIMSA)
 - Worked with Professor Yi-Shuai Niu on a project on Server-Assisted Federated Learning
- Researcher in the group of Martin Grigoryan** Yerevan, Armenia
April 2023 – August 2023
 - Yerevan State University
 - Studied the existence and properties of universal functions with respect to the Vilenkin and Haar systems across various functional spaces
- Machine Learning Researcher** Yerevan, Armenia
March 2023 – August 2023
 - YerevaNN
 - Worked on the intersection of Federated Learning and Optimization
- Internship in the group of Peter Richtárik** Thuwal, Saudi Arabia
June 2022 – January 2023
 - King Abdullah University of Science and Technology (KAUST)
 - Worked on the "GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity" paper
- Machine Learning Researcher** Yerevan, Armenia
January 2022 – June 2022
 - YerevaNN
 - Worked on the intersection of Federated Learning and Optimization

Industry Experiences

- Co-Founder** Yerevan, Armenia
July 2021 – June 2022
 - *OnePick*
 - Built an MVP platform to help content creators and marketers generate or select photos that best matched their text descriptions
 - Participated in the *InVent 2.0* venture building program, advancing through team formation, idea generation, product development, and pitching
 - Secured initial funding and continued development beyond the program
- Backend Developer** Yerevan, Armenia
July 2021 – September 2021
 - EXALT Technologies Ltd
 - Worked for Nutanix.
- Machine Learning Research Engineer** Yerevan, Armenia
June 2021 – July 2021
 - Foundation for Armenian Science and Technology (FAST)
 - Worked on Fraud detection
 - Made data-driven forecasts using machine learning algorithms and statistical models
- Software Engineer in Test** Yerevan, Armenia
September 2019 – January 2021
 - *Picsart*

- Worked with automation team to design and develop automated solutions across several mobile/web applications
- Worked directly with software developers, test engineers, product owners, business analysts to find and resolve issues
- Worked closely with DevOps to suggest improvements in processes and in Jenkins Continuous Integration cycle

Reviewing

- 2024–Now Transactions on Machine Learning Research (TMLR)
 2026 International Conference on Learning Representations (ICLR)
 2024 SIAM Journal on Mathematics of Data Science (SIMODS)
 2024 The Journal of Machine Learning Research (JMLR)

Selected Talks

Mathematics and Applications Colloquium	KAUST, Saudi Arabia
9. KAUST Delivered a talk on Ringleader ASGD: The First Asynchronous SGD with Optimal Time Complexity under Data Heterogeneity [slides]	<i>October 28, 2025</i>
35º Colóquio Brasileiro de Matemática	Rio de Janeiro, Brazil
8. Instituto Nacional de Matemática Pura e Aplicada (IMPA) Delivered a talk and a poster on Ringmaster ASGD: The First Asynchronous SGD with Optimal Time Complexity [slides] [poster]	<i>July 27-31, 2025</i>
Federated Learning One World Seminar (FLOW)	Online
7. FLOW Talk #126 Delivered a talk on Ringmaster ASGD: The First Asynchronous SGD with Optimal Time Complexity [video] [slides]	<i>April 16, 2025</i>
Flower AI Summit 2025	London, England
6. King's House Delivered a talk on Ringmaster ASGD: The First Asynchronous SGD with Optimal Time Complexity [slides]	<i>March 26, 2025</i>
MLR Weekly Seminar	Online
5. Machine Learning Research at Apple Invited by Samy Bengio to give a talk on MindFlayer: Efficient Asynchronous Parallel SGD in the Presence of Heterogeneous and Random Worker Compute Times [slides]	<i>November 21, 2024</i>
Analysis, PDEs and Applications	Yerevan, Armenia
4. Yerevan State University Delivered a talk on MindFlayer: Efficient Asynchronous Parallel SGD in the Presence of Heterogeneous and Random Worker Compute Times [abstract]	<i>July 6, 2024</i>
The Machine Learning Summer School in Okinawa 2024	Okinawa, Japan
3. Okinawa Institute of Science and Technology (OIST) Presented a poster on GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity [poster]	<i>March 13, 2024</i>
Algorithms & Computationally Intensive Inference seminars	Coventry, England
2. University of Warwick Delivered a talk on GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity [slides]	<i>October 6, 2023</i>
Federated Learning One World Seminar (FLOW)	Online
1. FLOW Talk #88 Delivered a talk on GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity [video]	<i>December 7, 2022</i>

Hobbies

Ultimate Frisbee, Dancing (bachata, salsa), [Board Games](#), Foosball