

Artavazd Maranjyan

✉ arto.maranjyan@gmail.com • artomaranjyan.github.io
🆔 0000-0001-8409-817X

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

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

Hobbies

Ultimate Frisbee, Dancing (bachata, salsa), **Board Games**, Foosball