Artavazd Maranjyan

✉ arto.maranjyan@gmail.com   •   🌐 artomaranjyan.github.io

Education

Ph.D. in Computer Science   **Thuwal, Saudi Arabia**
King Abdullah University of Science and Technology (KAUST)   2023 – 2025
Advisor: Peter Richtárik

M.Sc. in Applied Statistics and Data Science   **Yerevan, Armenia**
Yerevan State University   2021 – 2023
📄 **Thesis:** On local training methods; **co-supervisors:** Peter Richtárik, Mher Safaryan

B.Sc. in Informatics and Applied Mathematics   **Yerevan, Armenia**
Yerevan State University   2017 – 2021
📄 **Thesis:** On the Convergence of Series in Classical Systems; **supervisor:** Martin Grigoryan

Selected Industry and Academic Experiences

Research visit to Yi-Shuai Niu   **Beijing, China**
Beijing Institute of Mathematical Sciences and Applications (BIMSA)   9-22 March 2025
- Gave talks at three universities (PKU, BUAA, BIMSA)
- Worked with Professor Yi-Shuai Niu on a project on Server-Assisted Federated Learning

Internship in the group of Peter Richtárik   **Thuwal, Saudi Arabia**
King Abdullah University of Science and Technology (KAUST)   June 2022 – January 2023
- Worked on the "GradSkip: Communication-Accelerated Local Gradient Methods
  with Better Computational Complexity" paper

Co-Founder   **Yerevan, Armenia**
OnePick   July 2021 – June 2022
- 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

Software Engineer in Test   **Yerevan, Armenia**
Picsart   September 2019 – January 2021
- 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

Awards

CEMSE Dean's List Award
King Abdullah University of Science and Technology (KAUST)   May 2025
Awarded for excellent academic and research performance ($2,500 prize)

Dean's Award
King Abdullah University of Science and Technology (KAUST)   September 2023
Awarded to a few top students accepted to KAUST ($6,000 annually for 3 years)

Outstanding Final Project Award
Yerevan State University   May 2021
Recognized for the Bachelor's thesis (awarded to 6 students among 250+ students)

Selected Publications

5. Ringleader ASGD: The First Asynchronous SGD with Optimal Time Complexity under Data Heterogeneity
   Artavazd Maranjyan, Peter Richtárik
   Submitted to ICLR 2026

4. Ringmaster ASGD: The First Asynchronous SGD with Optimal Time Complexity
   Artavazd Maranjyan, Alexander Tyurin, Peter Richtárik
   ICML 2025: Forty-Second International Conference on Machine Learning

3. ATA: Adaptive Task Allocation for Efficient Resource Management in Distributed Machine Learning
   Artavazd Maranjyan, El Mehdi Saad, Peter Richtárik, Francesco Orabona
   ICML 2025: Forty-Second International Conference on Machine Learning

2. MindFlayer SGD: Efficient Parallel SGD in the Presence of Heterogeneous and Random Worker Compute Times
   Artavazd Maranjyan, Omar Shaikh Omar, Peter Richtárik
   UAI 2025: The 41st Conference on Uncertainty in Artificial Intelligence
   OPT 2024: Optimization for Machine Learning (NeurIPS workshop) Oral presentation (top 5% of 107 submissions)

1. GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity
   Artavazd Maranjyan, Mher Safaryan, Peter Richtárik
   TMLR 2025: Transactions on Machine Learning Research

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

5. **35º Colóquio Brasileiro de Matemática** — **Rio de Janeiro, Brazil**
   Instituto Nacional de Matemática Pura e Aplicada (IMPA) — *July 27-31, 2025*
   Delivered a talk and a poster on **Ringmaster ASGD: The First Asynchronous SGD with Optimal Time Complexity** [slides] [poster]

4. **Federated Learning One World Seminar (FLOW)** — **Online**
   FLOW Talk #126 — *April 16, 2025*
   Delivered a talk on **Ringmaster ASGD: The First Asynchronous SGD with Optimal Time Complexity** [video] [slides]

3. **MLR Weekly Seminar** — **Online**
   Machine Learning Research at Apple — *November 21, 2024*
   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]

2. **Algorithms & Computationally Intensive Inference seminars** — **Coventry, England**
   University of Warwick — *October 6, 2023*
   Delivered a talk on **GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity** [slides]

1. **Federated Learning One World Seminar (FLOW)** — **Online**
   FLOW Talk #88 — *December 7, 2022*
   Delivered a talk on **GradSkip: Communication-Accelerated Local Gradient Methods with Better Computational Complexity** [video]

Hobbies

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