Hanmin Li 李瀚民

About Me

Place and Date of Birth:	Anhui, China	31 July 1999
Address:	Exploration Avenue, KAUST, 23955, Thuwal, Saudi Arabia
email:	hanmin.li AT kaust.edu.sa

Education

Present — Ph.D. student in Computer Science
King Abdullah University of Science and Technology, Thuwal, Saudi Arabia
Supervisor: Prof. Peter Richtárik

December 2022 — Master of Engineering in Computer Science
King Abdullah University of Science and Technology, Thuwal, Saudi Arabia
Major: Computer Science
Department: Computer, Electrical and Mathematical Sciences and Engineering
GPA: 3.86/4.00

July 2021 — Bachelor of Engineering in Computer Science and Technology
University of Science and Technology of China (USTC), Hefei, Anhui, China
Major: Computer Science and Technology
Department: School of Gifted Young
GPA: 3.64/4.30

August 2018 — Summer School Student
University of Texas at Austin, Austin, Texas
Major: Computer Science (Software Engineering)

Publications and Preprints

Preprint — "The Ball-Proximal (="Broximal") Point Method: a New Algorithm, Convergence Theory, and Applications"
Kaja Gruntkowska, **Hanmin Li**, Aadi Rane, Peter Richtárik
arXiv preprint arXiv:2502.02002

Workshop — "On the Convergence of FedProx with Extrapolation and Inexact Prox"
Hanmin Li and Peter Richtárik.
arXiv preprint arXiv:2410.01410 OCT, 2024; OPT2024-NeurIPS Poster

Conference — "The Power of Extrapolation in Federated Learning"
Hanmin Li, Kirill Acharya, and Peter Richtárik.
Conference on Neural Information Processing Systems, 2024

Workshop — "Variance Reduced Distributed Non-Convex Optimization Using Matrix Stepsizes"
Hanmin Li, Avetik Karagulyan, and Peter Richtárik.
arXiv preprint arXiv:2310.04614 Oct, 2023; FL@FM-NeurIPS'23 Poster

Conference — "Det-CGD: Compressed Gradient Descent with Matrix Stepsizes for Non-Convex Optimization"
Hanmin Li, Avetik Karagulyan, and Peter Richtárik.
International Conference on Learning Representations 2024.

JOURNAL "SD^2: spatially resolved transcriptomics deconvolution through integration of dropout and spatial information" Haoyang Li, **Hanmin Li**, Juexiao Zhou, Xin Gao. Bioinformatics, 38(21), pp.4878-4884. SEPTEMBER, 2022.

INVITED TALKS

7 May 2024, Vienna, Austria — International Conference on Learning Representations, ICLR Poster
"Det-CGD: Compressed Gradient Descent with Matrix Stepsizes for Non-Convex Optimization".

26 June 2024, Lund, Sweden — EURO working group on Continuous Optimization
Invited Talk
"Compressed Gradient Descent with Matrix Stepsizes for Non-Convex Optimization".

12 Dec. 2024, Vancouver, Canada — Conference on Neural Information Processing Systems, NeurIPS Poster
"The Power of Extrapolation in Federated Learning".

15 Dec. 2024, Vancouver, Canada — Annual Workshop on Optimization for Machine Learning, NeurIPS Workshop Poster
"On the Convergence of FedProx with Extrapolation and Inexact Prox".

REVIEW SERVICES

Reviewer: NeurIPS 24', NeurIPS OPT 24', ICLR 25', ICML 25', JMLR, IEEE TNNLS, IEEE TSP, Optimization Methods and Software.

WORK EXPERIENCE

JAN 2021 - JUNE 2021 | Research Intern at QULAB/USTC
Supervised by Prof. Kun Qu

SEPT 2019 - MARCH 2019 | Research Intern at USTC
Supervised by Prof. Yongkun Li

SCHOLARSHIPS AND CERTIFICATES

SEPT. 2024 — Marked as "outstanding" in the Ph.D. student yearly evaluation by my advisor Prof. Peter Richtárik. KAUST

SEPT. 2023 — Marked as "outstanding" in the Ph.D. student yearly evaluation by my advisor Prof. Peter Richtárik. KAUST

SEPT. 2019 — Scholarship for outstanding students (top % 20 students)
School of Gifted Young, USTC

SEPT. 2018 — Scholarship for outstanding students (top % 20 students)
School of Gifted Young, USTC

SEPT. 2017 — Scholarship for Shitsan Pai class of talented students, (top % 10 students)
University of Science and Technology of China

SEPTEMBER 2019 — TOEFL®: 110 (READING:30; LISTENING:30; SPEAKING:23; WRITING:27)

FEBRUARY 2018 — GRE®: 333 (VERBAL:163; QUANTITATIVE:170; AW:3,5)

Languages

Chinese:	Mothertongue
English:	Fluent
French:	Intermediate

Computer Skills

Proficient	C++, Python, PyTorch, NumPy, Pandas, Matplotlib, R, Linux.