

Shayan Talaei

Curriculum Vitae

 stalaei@stanford.edu |  shayantalaei.com |  [ShayanTalaei](#) |  [shayan-talaei](#)

Education

Ph.D. in Management Science and Engineering <i>Stanford University, CA, USA</i>	Fall 2023 - present
M.Sc. in Management Science and Engineering <i>Stanford University, CA, USA</i>	Fall 2023 - Winter 2025
CGPA: 4.18/4	
Bachelor of Computer Engineering <i>Sharif University of Technology, Tehran, Iran</i>	Fall 2019 - Spring 2023
Rank 2 out of 199 students in the computer engineering department.	
CGPA: 19.82/20	

Selected Publications and Preprints

E. Biju*, **S. Talaei***, Z. Huang*, M. Pourreza, A. Mirhoseini, A. Saberi, “SPRINT: Enabling Interleaved Planning and Parallelized Execution in Reasoning Models.” NeurIPS 2025, COLM SCALR workshop 2025
Oral Presentation [paper](#), [code](#)

S. Talaei, M. Li, K. Grover, J. K. Hippler, D. Yang, A. Saberi, “StorySage: Conversational Autobiography Writing Powered by a Multi-Agent Framework.” UIST 2025 [paper](#), [code](#)

Z. Zhou*, F. Wu*, **S. Talaei***, H. Zhao, C. Meixin, T. Xu, A. Saberi, Y. Choi, “When to Trust Context: Self-Reflective Debates for Context Reliability.” Under review. [paper](#)

M. Pourreza*, **S. Talaei***, R. Sun, X. Wan, H. Li, A. Mirhoseini, A. Saberi, S. O. Arik, “Reasoning-SQL: Reinforcement Learning with SQL Tailored Partial Rewards for Reasoning-Enhanced Text-to-SQL.” COLM 2025 [paper](#)

M. Pourreza*, H. Li*, R. Sun, Y. Chung, **S. Talaei**, G. Tarlok Kakkar, Y. Gan, A. Saberi, F. Özcan, S. Ö. Arik, “CHASE-SQL: Multi-Path Reasoning and Preference Optimized Candidate Selection in Text-to-SQL.” ICLR 2025 [paper](#)

S. Talaei, M. Pourreza, Y. Chang, A. Mirhoseini, A. Saberi, “CHESS: Contextual Harnessing for Efficient SQL Synthesis.” ICML 2025, MAS workshop [paper](#), [code](#)

A. AhmadiTeshnizi, W. Gao, H. Brunborg, **S. Talaei**, C. Lawless, M. Udell, “OptiMUS-0.3: Using Large Language Models to Model and Solve Optimization Problems at Scale.” Under review. [paper](#), [code](#)

S. Talaei*, M. Ansaripour*, G. Nadiradze, D. Alistarh, “Hybrid Decentralized Optimization: First- and Zeroth-Order Optimizers Can Be Jointly Leveraged for Faster Convergence.” AAAI 2024 [paper](#), [code](#)

H. Zakerinia, **S. Talaei**, G. Nadiradze, D. Alistarh, “Communication-Efficient Federated Learning With Data and Client Heterogeneity.” AISTATS 2024 [paper](#), [code](#)

Research Internships

Internship in Machine Learning Theory June 2022 - Sept. 2022

Swiss Federal Institute of Technology in Lausanne (EPFL Switzerland)

Supervised by: Prof. Emmanuel Abbe, Theodor Misiakiewicz

Developed iterative kernel learning methods bridging traditional kernel techniques with neural networks for small-sample learning scenarios.

Internship in Distributed and Federated Optimization

July 2021 - June 2022

*Institute of Science and Technology Austria (IST Austria)***Supervised by: Prof. Dan Alistarh, Dr. Giorgi Nadiradze**

Designed and analyzed distributed optimization and federated learning algorithms under computation constraints and communication overhead.

Awards

- 2024 **First place** AGI House's hackathon on fine-tuning and RAG, USA.
- 2023 **Two-year of fellowship for PhD studies** School of Engineering, Stanford.
- 2022 **Top rank** student among 199 students in the Computer Engineering department, SUT Iran.
- 2019 **Gold medal** International Mathematical Olympiad (IMO), United Kingdom.
- 2019 **Gold medal** ELMO Mathematical Olympiad, USA MOP.
- 2019 **Silver medal** Romanian Master of Mathematics (RMM), Romania.
- 2019 **First-degree Diploma** XVIII Silk Road Mathematical Competition (SRMC), Kazakhstan.
- 2019 **Iran's National Elites Foundation (INEF) fellowship** Iran, Since 2019.
- 2018 **Gold medal (Perfect score)** European Mathematical Cup (EMC), Croatia.
- 2018 **Gold medal (Rank 1)** Iranian National Mathematical Olympiad, Iran.
- 2018 **First-degree Diploma** XVII Silk Road Mathematical Competition (SRMC), Kazakhstan.
- 2017 **Gold medal (as national and international)** Iranian Geometry Olympiad (IGO), Iran.
- 2017 **First Diploma** XIII Olympiad in Geometry in honor of I.F.Sharygin, Russia.
- 2016 **Gold medal (as national and international)** Iranian Geometry Olympiad (IGO), Iran.
- 2016 **Second Diploma** XII Olympiad in Geometry in honor of I.F.Sharygin, Russia.

Selected presentations

Set agreement impossibility proof through Combinatorial Topology

Dec. 2021

Modern distributed systems and algorithms course at IST Austria

Presentation on the proof of FLP impossibility from the perspective of Combinatorial Topology, as the course project.
[\(slides\)](#)

Constraint satisfaction technique for Combinatorics problems

Feb. 2021

The joint Iran-Ukraine mathematics olympiad camp

Lectured on a self-developed technique and thinking method for multi-conditional statement problems.

Explained and utilized the technique in the IMO and RMM most challenging problems.

Presentation in English for **the national gold medalists of Iran and Ukraine**.

Teaching experience

Teacher assistant

Spring 2021

Sharif University of Technology (SUT Iran)

Teacher assistant for the course discrete mathematics and structures lectured by [Prof. Mohammad Ali Abam](#).

Organized and taught problem-solving sessions for a third of the course syllabus.

Graded midterm exam of the course for 100 students.

Scientific committee member

2019-2021

Iranian Young Scholar Club(IYSC)

Proposing and selecting problems for the Iranian National Mathematical Olympiad: first, second rounds, summer camp exams, IMO team selection tests.

Instructor and consultant in mathematics competitions for the Iranian gold medalists and Iran's IMO team members.

Scientific committee member

Sept. 2020

Iranian Geometry Olympiad (IGO)

Gauged and crafted solutions for more than 90 problems proposed from 12 countries.

Collaborated with other members in designing contests for three levels, held in 49 countries. [\(booklet\)](#)

References

Prof. Amin Saberi*Stanford University* Email saberi@stanford.edu  Webpage stanford.edu/~saberi/**Prof. Azalia Mirhoseini***Stanford University* Email azalia@stanford.edu  Webpage azaliamirhoseini.com/**Prof. Emmanuel Abbe***Swiss Federal Institute of Technology in Lausanne (EPFL Switzerland)* Email emmanuel.abbe@epfl.ch  Webpage sma.epfl.ch/~abbe/**Prof. Dan Alistarh***Institute of Science and Technology Austria (IST Austria)* Email dan.alistarh@ist.ac.at  Webpage people.csail.mit.edu/alistarh/