

ANDISHEH (ELAHE) GHASEMI

Northeastern University, Boston, MA

ghasemi.e@northeastern.edu

PROFESSIONAL SUMMARY

Doctoral researcher in Computer Science, specializing in theoretical computer science and algorithm design. Published researcher with work accepted at ICALP (2022, 2025) and Algorithmica, focusing on communication complexity, online algorithms, and graph theory. International research experience across leading institutions. Seeking opportunities to apply algorithmic expertise and theoretical insights to solve complex computational challenges in research and practical settings.

EDUCATION

Northeastern University

expected 2028

PhD in Computer Science

Supervisors: Rajmohan Rajaraman, Mahsa Derakhshan

Université Paris Cité

2023

M.Sc. in Computer Science

Parisian Master of Research in Computer Science (MPRI)

Sharif University of Technology

2022

B.Sc. in Computer Science

Department of Mathematical Sciences

PROFESSIONAL EXPERIENCES

Visiting Graduate Student

Fall 2025

Simons Institute for the Theory of Computing, UC Berkeley

Berkeley, CA

- participated in the *Algorithmic Foundations for Emerging Computing Technologies* Boot Camp

Doctoral Researcher

Jan 2024 - Present

Supervisors: Rajmohan Rajaraman, Mahsa Derakhshan

Boston, MA

- Researched the communication complexity of the Minimum Vertex Cover problem, advancing theoretical frameworks. Published findings at ICALP 2025.
- Researching on correlation clustering, focusing on designing efficient algorithms for clustering with minimal disagreements, with applications in data analysis and network science.
- Researching on online stochastic matching problem with patience constraints.

Graduate Researcher

April - September 2023

Supervisor: Chien-Chung Huang

Paris, France

- Formulated innovative solutions to address constraints in job scheduling problem.

Undergrad Researcher

September 2021 - March 2022

Supervisor: Vincent Jugé

Paris, France

- Enhanced theoretical understanding of merging sub-routines, influencing practical implementations like Timsort. Published results in the International Colloquium on Automata, Languages, and Programming (ICALP), a leading conference in theoretical computer science, and in Algorithmica, a prominent journal in algorithms research.

Undergrad Researcher

March 2021 - April 2022

Supervisor: Javad Ebrahimi

- Investigated the properties of entropic submodular functions, advancing theoretical insights. Presented findings in academic seminars.

PUBLICATIONS

- Mahsa Derakhshan, Andisheh Ghasemi, Rajmohan Rajaraman. One-way Communication Complexity of Minimum Vertex Cover in General Graphs. To be presented at *ICALP* 2025.
- Elahe Ghasemi, Vincent Jugé, and Ghazal Khalighinezhad, Helia Yazdanyar. Galloping in Fast-Growth Natural Merge Sorts. In *Algorithmica* 2024. Originally presented at *ICALP* 2022.
- Mohammad Rashid, Elahe Ghasemi, and Javad B Ebrahimi. Entropic weighted rank function. In *IWCIT* 2022.

ACHIEVEMENTS

- Ranked 60th among 148,429 participants in national university entrance examination (Konkour)
- Granted PGSM (Paris Graduate School of Mathematics) scholarship of Fondation Sciences Mathématiques de Paris

PROFESSIONAL CERTIFICATES

- **IBM Data Science Professional Certificate** – Coursera, 2025 [Verify]
Comprehensive training in Python, R, SQL, machine learning, and data visualization with hands-on projects.
- **Introduction to Financial Engineering and Risk Management** – Columbia University (Coursera), September 14, 2025 [Verify]

TEACHING ASSISTANT EXPERIENCES

Algorithms , Mahsa Derakhshan, Northeastern University	Fall 2024
Algorithms Design , Masood Seddighin, Sharif University of Technology	Spring 2021
Operating Systems , Hadi Foroughmand, Sharif University of Technology	Spring 2021
Theory of Languages & Automata , Javad Ebrahimi, Sharif University	Fall 2020
Designing Algorithms , Morteza Alimi, Sharif University of Technology	Spring 2020
Data Structures , Morteza Alimi, Sharif University of Technology	Fall 2019

OTHER EXPERIENCES

Paper Review for TCS conferences
APPROX 2023 - FOCS 2025 - SOSA 2025

Theory Group Seminar at Northeastern University
Organizer

SKILLS & LANGUAGES

Python, R, Java, JavaScript, HTML, SQL, \LaTeX