

# Soroush Sahraei

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## Education

### School of Electrical and Computer Engineering, University of Tehran

B.Sc. in Computer Engineering

Tehran, Iran

Sep. 2022 - Present

- Current GPA: 16.76/20.00
- Chair of University of Tehran ACM Student Chapter
- Related Coursework: Data Structures and Algorithms 20/20, Discrete Mathematics 20/20, Advanced Programming 19.9/20, Machines and Language Theory 19.4/20, Artificial Intelligence 18/20

## Publications

### Geometric Freeze-Tag Problem

S. Alipour, K. Baghestani, M. Mirzaei, S. Sahraei

- 24th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2025), 2025, Detroit, Michigan, USA

## Research Experience

### Tehran Institute for Advanced Studies

Instructor: Dr. Sharareh Alipour

Tehran, Iran

Aug. 2024 - Present

- I conducted research on geometric variations of the Freeze Tag Problem, introduced by Arkin et al. (SODA'02), and established new upper bounds in both  $(\mathbb{R}^3, l_1)$  and  $(\mathbb{R}^3, l_2)$  norms. I had a key role in finding these results and came up with creative ideas. I also created visualizers both in 2D and 3D along with various simulators via coding, these contributed greatly to the process of reaching our results. I was also responsible for writing a significant portion of the paper and I did it with utmost clarity, providing crystal clear mathematical proofs and clean figures using LaTeX to produce even 3D imagery.

## Honors and Awards

2024 **Bronze Medal**, West Asia Regional ACM-ICPC Contest

ICPC Foundation

2023 **Silver Medal**, West Asia Regional ACM-ICPC Contest

ICPC Foundation

2021 **Silver Medal**, Iranian National Olympiad in Informatics

Young Scholars Club

## Teaching Experience

### Teaching assistant, Discrete Mathematics

Instructor: Dr. Siamak Mohammadi

University of Tehran

Fall 2023 - Present

- Assisted in course instruction, including grading, leading TA sessions, and designing quizzes and homework. Additionally, supervised all learning materials for the topic of trees.

### Teaching assistant, Data Structures and Algorithms

Instructor: Heshaam Faili

University of Tehran

Spring 2024 - Present

- I design tasks for computer assignments and create instructional videos to aid student understanding. I also supervise both theoretical and computer-based handouts.

### Teaching assistant, Advanced Programming

Instructor: Dr. Ramtin Khosravi

University of Tehran

Spring 2024 - Present

- I design, grade, and assess computer assignments for this course. Additionally, I am tasked with grading midterms and creating educational content.

### Course Instructor

DS and Algorithms course in ACM Summer Of Code

University of Tehran

Summer 2023 & Summer 2024

- Developed and documented my own syllabus, accessible [here].
- Effectively taught the course material to students over a period of 14 weeks.
- Designed a variety of contests and homework assignments for the students.

### Informatics Olympiad Instructor

Informatics Olympiad Prepration

National Organization for  
Development of Exceptional Talents

Oct. 2022 - Present

- My work mostly involves teaching algorithms, data structures and graph theory.

References available upon request.