

# Peyman Jabbarzade

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## CONTACT INFORMATION

Department of Computer Science  
University of Maryland, College Park

+1 (240) 413-7609  
peyman.jabbarzade@gmail.com

## EDUCATION

**Ph.D. student, University of Maryland, College Park, US** 2022 - 2025

- Majoring in Theoretical Computer Science
- Designing algorithms for:
  - Fundamental graph theory problems, such as Steiner Forest.
  - Dynamic versions of submodular functions.

**M.Sc. student, Sharif University of Technology, Tehran, Iran** 2019 - 2021

- Majored in Algorithms and Computation
- Studied geometric graph problems in the massively parallel computation model.

**B.Sc. student, Sharif University of Technology, Tehran, Iran** 2015 - 2019

- Majored in Computer Engineering

## PUBLICATIONS

**2-Approximation for Prize-Collecting Steiner Forest** SODA 2024

**Dynamic Algorithms for Matroid Submodular Maximization** SODA 2024

**Dynamic Non-monotone Submodular Maximization** NeurIPS 2023

**Dynamic Constrained Submodular Optimization with Polylogarithmic Update Time** ICML 2023

**A Novel Prediction Setup for Online Speed-Scaling** SWAT 2022

**Geometric Spanner in MPC Model** ICCG 2022

## HONORS AND AWARDS

**Asia West Champion** in ICPC World Final Contest 2018

**14th place** in ACM-ICPC World Final Contest 2016

**1st place** in ACM-ICPC Tehran Regional Contest 2015 & 2016

**Bronze medal** in International Olympiad in Informatics (IOI) 2015

**Gold medal** in Asia-Pacific Informatics Olympiad (APIO) 2015

**Gold medal** in Iranian National Olympiad in Informatics 2014

## TECHNICAL EXPERIENCE

**Software Engineer at Balad (Map & Navigation App)** 2018 - 2021

- Made Balad services more stable, scaled them, and improved communication performance between them using technologies like gRPC and Kubernetes.
- For six months, led a diverse team of ten technical members in the mission of collecting, maintaining, and presenting location-specific data.
- Mainly wrote code in Python. Also experienced other programming languages like C++, Java, Go, etc.

**Summer Intern at Max Planck Institute for Informatics** 2019

- Worked on designing an energy-preserving online scheduling algorithm.

**Summer Intern at Balad (Map & Navigation App)** 2018

- Designed and implemented an algorithm to determine optimal routes for equipped cars in the Balad project, ensuring thorough coverage of all streets in Tehran within the minimum possible time.

## SCIENTIFIC VOLUNTEERING EXPERIENCE

**Coaching Teams and Guiding Students in Competition Preparation** 2020 - 2023

- Coaching University of Maryland's team for the ICPC World Final of 2023.
- Coached Sharif University of Technology's team in the ICPC World Final of 2020.
- Iran's deputy leader in IOI 2020.

<b>Task Author in International Olympiad in Informatics</b>	2019
Third problem of <a href="#">IOI 2019</a> , first day ( <a href="#">Rectangles</a> ).	
<b>International Olympiad in Informatics Host Scientific Committee</b>	2017
Prepared IOI 2017 tasks, solutions, and test data.	
<b>Iranian National Olympiads in Informatics Scientific Committee</b>	2017 - 2021
Designing programming challenges used in Iran's team selection process for IOI.	
<b>ICPC Tehran Regional Contest Scientific Committee</b>	2018 - 2021