CV of Salma Sadat Mahdavi

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Research Interests

Computational Geometry, Robotics, Design and Analysis of Algorithms, Approximation and Randomized Algorithmics, Graph Theory and its application.

Education

Institute for Research in Fundamental Sciences (IPM), Tehran, Iran

Postdoc Researcher in School of Computer Science, since February 2021.

Sharif University of Technology (SUT), Tehran, Iran

Ph.D. in Computer Engineering December 2011 – October 2020
Thesis: "Covering an orthogonal polygon with sliding robots"
Advisor: Dr. Mohammad Ghodsi

Amirkabir University of Technology (AUT), Tehran, Iran

M.S. in Computer Science September 2009 – September 2011
Thesis: "Computing k-visibility polygon of the objects" October 2011
Advisor: Dr. Ali Mohaddes Khorasani

Shahid Beheshti University (SBU), Tehran, Iran

B.S. in Computer Science September 2005 – June 2009
Advisor: Dr. Kourosh Parand

Honors and Awards

Accepted in PhD program at Sharif University of technology without entrance exam.

Ranked 1^{st} among graduated students of Amirkabir University of technology in computer science branch, 2011.

Accepted in Master program at Amirkabir University of technology without entrance exam.

Ranked 2^{nd} among graduated students of Computer Science at Shahid Beheshti University, 2009.

Publications

Salma Sadat Mahdavi, Mohammad Ghodsi,
"Clearing an orthogonal polygon to find the evaders", Theoretical Computer Science, 847: 175-184, 2020.

Salma Sadat Mahdavi, Mohammad Ghodsi,
"Covering orthogonal polygons with sliding k-transmitters", Theoretical Computer Science, 815: 163-181, 2020.

Salma Sadat Mahdavi, Saeed Seddighin, Mohammad Ghodsi.
"Covering Orthogonal Polygons with Sliding k-Transmitters", CCCG 2014.

Salma Sadat Mahdavi, Ali Mohades, Bahram Kouhestani,
"Computing k-Link Visibility Polygons in Environments with a Reflective Edge", CCCG 2011.

B. Kouhestani, M. Asgaripour, S.S. Mahdavi, A. Nouri, A. Mohades,
"Visibility polygons in the presence of mirror edge", EWCG, 26: 209-212, 2010.

Submitted Papers

Salma Sadat Mahdavi, Mohammad Ghodsi, "Multi-Robots Searching in an x-monotone Orthogonal Region", Submitted to Algorithmica.

Teaching

Teaching, Data structures and algorithms, Sharif university of Technology, Tehran Fall 2021.

Teaching Assistant, Design and Analysis Algorithms (Undergraduate course), Sharif University of Technology, Spring 2014.

Teaching Assistant, Approximation Algorithms (Graduate course), Sharif University of Technology, Spring 2014.

Teaching Assistant, Randomized Algorithms (Graduate course), Sharif University of Technology, Fall 2013.

Selected Coursework

B.Sc: Image Processing (20/20), Principles of computer systems (19/20), Multimedia Environment (19.25/20), Bachelor thesis (19.25/20), Information System Analysis (18.5/20), Computer Simulation (19.6/20), Graph Theory (19.5/20), Data Structure and Algorithm (18.2/20), Computational Geometry (19.5/20), Combinatorial Optimization and Network Analysis (18.5/20), Numerical Analysis (17.5/20), Discrete Mathematics (18/20), Automata.

M.Sc: Master Thesis (20/20), Theory of Computer Science (19/20), Computational Geometry (18/20), Statistical Research Method (20/20), Advanced Artificial Intelligent (17.7), Advanced topics in Computational Geometry (18.25/20), Robotics Geometry (18.8/20), Logic Programming (18.7/20).

Ph.D: Approximation Algorithms (19.1/20), Randomized algorithms (18/20), Massive Data Analysis (18/20), Game Theory Algorithm (18.8/20).