Mehdi Khosravian Ghadikolaei

Department of Computer Science and Information Technology

Institute for Advanced Studies in Basic Sciences, Zanjan, Iran, P. O. Box: 11495 – 1159.

+98 243 315 3437

+98 911 824 4054

m_khosravian@iasbs.ac.ir m.khosravian@gmail.com

http://www.iasbs.ac.ir/~m khosravian



EDUCATION

2011 - Present

Research Assistant in Department of Computer Science and Information Technology, Institute for Advanced Studies in Basic Sciences, Zanjan, Iran, <u>link</u>

2008 - 2011

M.Sc. of Computer Science

Institute for Advanced Studies in Basic Sciences, Zanjan, Iran

Thesis:

Modeling and Algorithmic Analysis of Spread Phenomena in Social and Computer Networks

Abstract:

The spread of the influence of a vote or an opinion in a social network is a matter of concern for many sciences in the last decade. Detecting the people who can have the most effect on the processes of social networks is a very important issue.

In this dissertation we study several models of influence spread in social networks of which the independent cascade and the linear threshold are the most applicable. We consider the detection of k most influential nodes in a social network in an algorithmic manner and we show that this is an NP-Hard problem.

2004 - 2008

B.Sc. of Computer Science, <u>University of Vali Asr</u>, Rafsanjan, Iran.

RESEARCH INTERESTS

- Algorithmic Graph Theory
- Approximation Algorithms
- Computational Geometry and it's Applications
- Algorithmic Problems in Social networks
- Online Algorithms

MEMBERSHIPS

- Organizing Committee of ACM Programming Competition in IASBS, 2014.
- Member of Organizing Committee in CICIS12, IASBS, Zanjan, Iran, 2012.
- Member of Organizing Committee in CICIS11, IASBS, Zanjan, Iran, 2011.
- Member of Robotic and Computational Geometry laboratory (RoboCG),
 Department of Computer Science and Information Technology, IASBS,
 Zanjan, Iran, 2008 to present.
- Member of Iranians Mathematical Society (IMS), 2008-2012.
- Member of Computer Olympiad Team, Department of Computer Science, VRU, Rafsanjan, Iran, 2008.

PUBLICATIONS

Journals

- Rebvar Hosseini, Mehdi Khosravian, Mansoor Davoodi, Bahram Sadeghi Bigham, "One Round Voroni Game on Grid", Journal of Theoretical Computer Science, Submitted paper.
- Arman Didandeh, Bahram Sadeghi Bigham, **Mehdi Khosravian**, Farshad Bakhshandegan Moghaddam, "Using Voronoi Diagrams to Solve a Hybrid Facility Location Problem with Attentive Facilities", Information Sciences 234, pp. 203–216, 2013.

Conferences

- Mohammad Mehdi Malekizadeh, **Mehdi Khosravian**, Mansoor Davoodi, "Exploring Rectangular Grid Environment", Robot2015-Second Iberian Robotics Conference, submitted paper.
- Arman Didandeh, Mehdi Khosravian, Bahram Sadeghi Bigham, "A Reactive-Agent Based Approach for a Facility Location Problem Using Dynamic Additively Weighted Voronoi Diagram" (pp. 125-128), 26th European Workshop on Computational Geometry, 2010.
- **Mehdi Khosravian**, Bahram Sadeghi Bigham, Arman Didandeh, "Quench fire and relief based on reactive agent using dynamic additively weighted voronoi diagram", CICIS 2010, Zanjan, Iran.

• Mehdi Khosravian, Bahram Sadeghi Bigham, Sahar Mehrjou, Farshad Bakhshandegan Moghaddam "Soccer Robots Decision in simulation 2D games using by Vector Voronoi Diagram", CICIS 2011, Zanjan, Iran.

Working Papers

- Online Algorithms for Searching and exploration
- Algorithm for Finding Densest Subgraphs in Uncertain Graphs
- Soccer Robots Decision based on Vector Voronoi Diagram

TEACHING EXPERIENCES

- Data structures
- Design and Analysis of Algorithms
- Theory of Languages and Automata
- Discrete Mathematics
- Artificial Intelligence and Intelligence Systems

ATTENDED CONFERENCES AND SCHOOLS

- 6-th Winter School on computational Geometry, Amirkabir University, Iran, March 2014.
- Summer School on Theoretical Computer Science, IPM, July 2012.
- 3-rd Contemporary Issues in Computer and Information Sciences (CICIS 2012), IASBS, Iran, May 2012.
- 4-th Winter School on computational Geometry, Amirkabir University, Iran, March 2012.
- 2-nd Contemporary Issues in Computer and Information Sciences (CICIS 2011), IASBS, Iran, May 2011.
- 3-rd Winter School on computational Geometry, Amirkabir University, Iran, Feb 2011.
- 2-nd Seminar on Financial Mathematics and Mathematics of Social Networks, IASBS, Iran, Feb 2011.
- 1-st Contemporary Issues in Computer and Information Sciences (CICIS 2010), IASBS, Iran, May 2010.

Graduated Course Works

- The Theory of Computer Science 1&2
- Advanced Theory of Computation 1&2
- Advanced Computational Complexity 1
- Advanced Theory of Algorithms 1
- Advanced Computational Geometry 1
- Algorithmic Graph Theory
- Probabilistic Graph Theory
- Neural Networks 1
- Advanced Artificial Intelligence 1
- Coding Theory and transfer information 1

LANGUAGES

English: Very good Persian: Native

ACTIVITIES AND HOBBIES

- Mountaineering, Member of IASBS Mountaineering Core.
- Volley Ball, Member of IASBS and VRU Volleyball Teams.
- Others, Soccer, Climbing, Biking, Swimming.

REFERENCES

• Dr. Manouchehr Zaker

Associate Professor
Faculty of Department of Mathematics
Institute for Advanced Studies in Basic Sciences, Zanjan, Iran
mzaker@iasbs.ac.ir
024-3315 5105
http://www.iasbs.ac.ir/~mzaker

• Dr. Mansoor Davoodi Monfared

Assistant Professor

Department of Computer Science and Information Technology Institute for Advanced Studies in Basic Sciences, Zanjan, Iran mdmonfared@iasbs.ac.ir

024-3315 3376

http://www.iasbs.ac.ir/~mdmonfared

• Dr. Bahram Sadeghi Bigham

Assistant Professor

Department of Computer Science and Information Technology Institute for Advanced Studies in Basic Sciences, Zanjan, Iran b_sadeghi_b@iasbs.ac.ir

024-3315 3379

http://www.iasbs.ac.ir/~b_sadeghi_b

• Dr. Mohsen Afsharchi

Associate Professor

Department of Computer Science and Information Technology University of Zanjan, Zanjan, Iran afsharchim@znu.ac.ir

024-3315 3377

http://www.znu.ac.ir/members/afsharchim