# HAMIDREZA MAHINI

## Assistant Professor

Department of Computer Engineering
Gorgan Branch, Islamic Azad University

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## 🔗 LINKS

- 0000-0002-5995-1738
- Google Scholar Profile
- Publons Profile
- hamidreza-mahini.github.io
- github.com/hamidreza-mahini
- Mathworks Community Profile
- LinkedIn Profile
- ResearchGate Profile
- Academia Profile

## 🎓 EDUCATION

**2016** — **Ph.D. Degree**    **Science & Research branch (SRBIAU), Islamic Azad University**

**Field/Major** Computer Software Systems Engineering

📘 **Dissertation** "Game Theory Approach to Resource Allocation in Peer to Peer Video Streaming"

👤 **Supervisor** Dr. Mehdi Dehghan Takht Fooladi

👥 **Advisors** Dr. Hamidreza Navidi and Dr. Amir Masoud Rahmani

★ **GPA** 19.08 of 20

**2010** — **M.Sc. Degree**    **Iran University of Science and Technology (IUST)**

**Field/Major** Information Technology Engineering – Secure Communications

📘 **Thesis** "A Scalable IP Lookup Scheme in Internet Routers"

👤 **Supervisor** Dr. Reza Berangi

★ **GPA** 16.03 of 20

**2006** — **B.Sc. Degree**    **Iran University of Science and Technology (IUST)**

**Field/Major** Computer Software Engineering

📘 **Thesis** "Blur Identification in Linear Motion-Blurred Images using Artificial Neural Networks"

👤 **Supervisor** Dr. Mohsen Ebrahimi Moghaddam

★ **GPA** 16.72 of 20

## ✹ AWARDS

**May 2002** — $1^{th}$ **place in the field of programming - Second National Skills Olympiad (Provincial stage)**

**June 2002** — $4^{th}$ **place in the field of programming - Second National Skills Olympiad (National stage)**

**May 2004** — $2^{th}$ **place - ACM trial competition (North Region of Iran)**

## 💼 EXPERIENCE

| | | |
|---|---|---|
| 1/2011 – Present | **Academic Staff** | **Islamic Azad University**<br>**Gorgan branch** |
| | Assistant Professor in the Computer Engineering Department | |
| 8/2015 – 5/2016 | **Director of Information and Communication Technology office** | **Islamic Azad University**<br>**Gorgan branch** |
| 9/2014 – 9/2015 | **Mathematics Teacher** | **Soroush High School** |
| 7/2011 – 1/2013 | **Director of Information and Communication Technology office** | **Islamic Azad University**<br>**Gorgan branch** |
| 3/2009 – 7/2011 | **Head of Computer Engineering Department** | **SAMA Technical and Vocational Training College**<br>**Gorgan branch** |
| 7/2008 – 12/2008 | **Vice-President for Research and Technology** | **University of Applied Science and Technology**<br>**Gorgan Khane Kargar branch** |
| 7/2008 – 12/2008 | **Head of Industry Department** | **University of Applied Science and Technology**<br>**Gorgan Khane Kargar branch** |
| 7/2005 – 3/2007 | **Programmer and Project Manager** | **SATER Computer Systems Development Company** |
| 6/2003 – 9/2003 | **Programmer** | **Booria CAD, CAM Systems Company** |

## 🔧 SKILLS

- **Scientific Tools and Simulators**
  - MATLAB
  - OMNet++ (Discrete Event Simulator)
  - CLIPS (A Tool for Building Expert Systems)
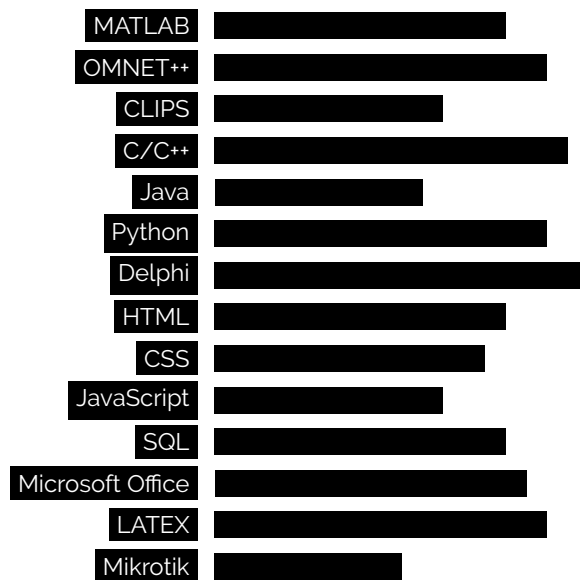- **Programming and Scripting Languages**
  - C/C++
  - Java
  - Python
  - Delphi
  - HTML
  - CSS
  - JavaScript
  - SQL
- **Documentation**
  - Microsoft Office
  - LaTeX
- **Computer Networks**
  - MTCNA (Certificate Number: 1512NA428)

MATLAB
OMNET++
CLIPS
C/C++
Java
Python
Delphi
HTML
CSS
JavaScript
SQL
Microsoft Office
LATEX
Mikrotik

## ⚙ INDUSTRIAL PROJECTS

- Setting up a video conferencing server based on Jitsi meet for the Golestan region of Iran Telecommunication company

- Designing and implementing a WiFi push notification system based on Raspberry Pi for the Golestan province ADSL subscribers of the Iran Telecommunication company

- Project manager in design and Implementing the Wireless Infrastructure of Gorgan Islamic Azad University

- Member of the Steering Committee in the Islamic Azad University BPMS Project

- Senior programmer in Diet software project, which is a medical application

- Senior programmer in Skin Care software project, which is a medical application

- Senior programmer in Sabt Sherkat software project, which is a legal and automation application for Africa holding Corporation.

- Senior programmer in Iran Termeh software project, which is a textile application

- Senior programmer in Carpet Weaving software project, which is a textile application

## 🏛 TEACHING

I have offered a couple of computer science and engineering courses from Fall 2006 in many colleges and universities in Iran, which some of them are listed below:

### UNDERGRADUATE COURSES

- Computer Networks
- Web Design and Development
- Data Structures and Algorithms
- Design and Analysis Algorithms

### GRADUATE COURSES

- Game Theory
- Advanced Computer Networks
- Real-Time Embedded Systems

Some of my video lectures can be visited at https://www.aparat.com/MahiniAcademy.

## 🔍 RESEARCH INTERESTS

- **Game Theory and Mechanism Design**
- **Computer Networking**
  - Multimedia Networks
  - High-Speed Networks
- **Distributed Systems**
  - Cloud Computing
  - Fog Computing
  - Edge Computing
- **Cyber Security**
  - Intrusion Detection and Prevention Systems
- **Real-Time Systems**
- **Internet-of-Things (IoT)**
- **Machine Learning**
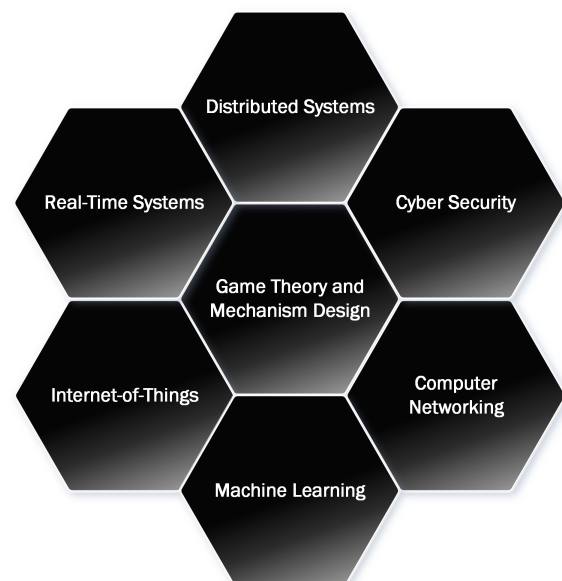
## ★ RESEARCH PROJECTS (SCIENTIFIC GRANTS)

**2013-2014**  **Design a Wireless Intrusion Detection and Prevention System against the Man-In-The-Middle Attack**
SAMA Technical and Vocational Training College
Gorgan branch

The leader of the project

**2011-2012**  **Design and Implementation of SAMA Schools Web Site**
SAMA Technical and Vocational Training College
Gorgan branch

The leader of the project

## 👥 PH.D. STUDENTS

**2016-Present**  **Mehrdad Asadi**  Ph.D. candidate in Computer Software Systems

- Co-Supervised with Prof. Mahmood Fathy
- *Fog/Cloud computing based safe driving assistant model in Intelligent Transportation Systems*

**2016-Present**  **Yousef Ostadi**  Ph.D. candidate in Computer Software Systems

- *Game theory approach to caching mechanism in mobile edge computing*

**2017-Present**  **Fatemeh Babaei**  Ph.D. candidate in Applied Mathematics

- Co-Supervised with Prof. Hamidreza Navidi
- *Cost and resource allocation in bankruptcy problem*

**2017-Present**  **Ali Jannati Ataei**  Ph.D. candidate in Computer Software Systems

- *Resource management in fog/cloud based Internet-of-Healthcare-Things (IoHT)*

## 👥 M.SC. STUDENTS

**2020-Present**  **Aref Aberi**  M.Sc. student in Computer Software Engineering

- *A cooperative apporach to cache placment in cloud/fog computing*

**2020-Present**  **Mohammad Hossein Nemati Ghazvini**  M.Sc. student in Computer Software Engineering

- *A game theory approach to proactive cache placement in cloud/fog computing*

**2018-Present**  **Mobin Taneh**  M.Sc. student in Computer Software Engineering

- *Design and implementation of an adaptive video conferencing system based on WebRTC*

**2015-2019**  **Mobin Koosha**  Graduated with M.Sc. in Computer Software Engineering

- *Resource allocation in real-time fog computing-based IoT services*

**2015-2020**  **Seyyed Mohammad Javad Mirkatooli**  Graduated with M.Sc. in Computer Software Engineering

- *Virtual-Machine trading in a cloud federation to maximize cloud providers' profits*

| 2014-2018 | **Azar Ghamangiz** | **Graduated with M.Sc. in Computer Software Engineering** |

- *Dealing with RPL attacks in the Internet-of-Things based on 6LoWPAN*

| 2016-2018 | **Hamed Molaeinejad** | **Graduated with M.Sc. in Computer Software Engineering** |

- *Trigger strategy approach to resource allocation in Peer-to-Peer systems*

| 2016-2018 | **Mahboubeh Aghili** | **Graduated with M.Sc. in Computer Software Engineering** |

- *Smart data pricing in a cloud federation*

| 2016-2018 | **Rouhollah Lolaei** | **Graduated with M.Sc. in Computer Software Engineering** |

- *Byzantine fault tolerable clock synchronization in the real-time distributed systems against*

| 2015-2018 | **Mina Shahini** | **Graduated with M.Sc. in Computer Software Engineering** |

- *Resource allocation in fog computing based Internet-of-Things*

| 2015-2018 | **Esmaeil Gorzin** | **Graduated with M.Sc. in Computer Software Engineering** |

- *Resource allocation in an adaptive P2P video streaming based on HetNets*

| 2014-2017 | **Effat Khorraminia** | **Graduated with M.Sc. in Computer Software Engineering** |

- *Game theory approach to incentive mechanism in the peer-to-peer video streaming overlay network*

## PUBLICATIONS

### JOURNALS

1. `JCR (2019): Q2 – IF: 2.480`, Mehrdad Asadi, Mahmood Fathy, **Hamidreza Mahini**, and Amir Masoud Rahmani. A systematic literature review of vehicle speed assistance in intelligent transportation system. *IET Intelligent Transport Systems*, n/a(n/a), 2021

2. `JCR (2019): Q1 – IF: 6.319`, Mehrdad Asadi, Mahmood Fathy, **Hamidreza Mahini**, and Amir Masoud Rahmani. An Evolutionary Game Approach to Safety-Aware Speed Recommendation in Fog/Cloud-Based Intelligent Transportation Systems. *IEEE Transactions on Intelligent Transportation Systems*, 2021. Query date: 2021-05-09 18:04:58

3. `JCR (2019): Q2 – IF: 2.469`, **Hamidreza Mahini**, Amir Masoud Rahmani, and Seyyedeh Mobarakeh Mousavirad. An evolutionary game approach to IoT task offloading in fog-cloud computing. *The Journal of Supercomputing*, pages 1–28, 2020

4. `SJR (2019): Q3 – 0.254`, **Hamidreza Mahini**, and Seyyedeh Mobarakeh Mousavirad. WiFi Intrusion Detection and Prevention Systems Analyzing: A Game Theoretical Perspective. *International Journal of Wireless Information Networks*, 27(1):77–88, 2020

5. `SJR (2019): Q4 – 0.179`, **Hamidreza Mahini**, Reza Hajisheykhi, and Mina Shahini. QoS and traffic aware greedy resource allocation in foggy internet of things. *International Journal of Communication Networks and Distributed Systems*, 25(1):95–121, 2020

6. `SJR (2019): Q4 – 0.164`, **Hamidreza Mahini**, Mehdi Dehghan, Hamidreza Navidi, and Amir Masoud Rahmani. Game theory approach to peer-to-peer video streaming: a comprehensive survey. *International Journal of Autonomous and Adaptive Communications Systems*, 11(4):333–364, 2018

7. `JCR (2019): Q2 – IF: 2.924`, **Hamidreza Mahini**, Mehdi Dehghan, Hamidreza Navidi, and Amir Masoud Rahmani. Peer-assisted video streaming based on network coding and Beer-Quiche game. *AEU-International Journal of Electronics and Communications*, 73:34–45, 2017

8. `JCR (2019): Q3 – IF: 1.319`, **Hamidreza Mahini**, Mehdi Dehghan, Hamidreza Navidi, and Amir Masoud Rahmani. GaMe-PLive: a new game theoretic mechanism for P2P live video streaming. *International Journal of Communication Systems*, 29(6):1187–1203, 2016

9. `JCR (2019): Q4 – IF: 1.288`, S Mobarakeh Moosavirad, Peyman Kabiri, and **Hamidreza Mahini**. Rashnu: a Wi-Fi intrusion response scheme. *Security and Communication Networks*, 8(12):2070–2078, 2015

10. S Mobarakeh Moosavirad, Peyman Kabiri, and **Hamidreza Mahini**. RSSAT: A Wireless Intrusion Detection System Based on Received Signal Strength Acceptance Test. *Journal of Advances in Computer Research*, 4(1):65–80, 2013

11. `SJR (2019): Q4 – 0.17`, **Hamidreza Mahini**, and Reza Berangi. EASTFILE: AN ENERGY AWARE, SCALABLE, AND TCAM BASED FAST IP LOOKUP ENGINE. *International Journal of Computer Networks & Communications*, 4(5):35–55, 2012

12. `SJR (2019): Q4 – 0.17`, **Hamidreza Mahini**, Reza Berangi, and Alireza Mahini. MLET: a power efficient approach for TCAM based, IP lookup engines in Internet routers. *International Journal of Computer Networks and Communications*, 2(3):13–26, 2010

13. `SJR (2019): Q4 – 0.19`, **Hamidreza Mahini**, Alireza Mahini, and Javad Ghofrani. XDANNG: XML based distributed artificial neural network with globus toolkit. *International Journal of Computer Science and InformationSecurity*, 2(1), 2009

## INTERNATIONAL CONFERENCES

1. Alireza Mahini, Reza Berangi, **Hamidreza Mahini**, and Hossein Mohtashami. Scalable, low power and storage efficient parallel lookup engine architecture for IP packets. In *2008 15th International Conference on Mixed Design of Integrated Circuits and Systems*, pages 611–617. IEEE, 2008

2. Alireza Mahini, Reza Berangi, Hossein Mohtashami, and **Hamidreza Mahini**. Low Power and Storage Efficient Parallel Lookup Engine Architecture for IP Packets. In *Computer Society of Iran Computer Conference*, pages 718–722. Springer, 2008

3. Alireza Mahini, Reza Berangi, and **Hamidreza Mahini**. A power efficient approach for ternary content addressable memory based, ip lookup engines in internet routers. In *12th International CSI Computer Conference*, pages 748–755. CSI, 2007

4. Alireza Mahini, Reza Berangi, Seyedeh Fatemeh, Khatami Firouzabadi, and **Hamidreza Mahini**. Low Power TCAM Forwarding Engine for IP Packets. In *MILCOM 2007-IEEE Military Communications Conference*, pages 1–7. IEEE, 2007

5. Mohsen Ebrahimi Moghaddam, Mansour Jamzad, and **Hamidreza Mahini**. Motion blur identification in noisy images using feed-forward back propagation neural network. In *International Workshop on Intelligent Computing in Pattern Analysis and Synthesis*, pages 369–376. Springer, 2006

- Also, dozens of papers in the national conferences in Persian in the form of oral presentations and posters

## REVIEWER

I have been a reviewer in some prominent journals. Some of them are listed below:
- *The Journal of Supercomputing*
- *Multimedia Systems*
- *IEEE Transactions on Circuits and Systems for Video Technology*
- *International Journal of Electrical and Computer Engineering (IJECE)*
- *Security and Communication Networks*
- *Journal of Advanced Mathematical Modeling*
- *IET intelligent transport systems*

The verification of the claim can be found in my *Publons profile*.

## MEMBERSHIP IN SCIENTIFIC SOCIETIES

IEEE Graduate Student Member Since 2014 to 2016

## LANGUAGES

- **Persian** - Native Language
- **English** - Speak fluently and read/write with high proficiency