

MOJGAN HASHEMIAN

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EDUCATION

- **PhD Candidate in Information Systems and Computer Engineering**, Instituto Superior Técnico, University of Lisbon, Lisbon, Portugal. *2016 - Current*
- **M.Sc. in Computer Engineering - Artificial Intelligence and Robotics**, School of Electrical and Computer Engineering, University of Tehran, Tehran, Iran. *2011 - 2014*
- **B.Sc. in Computer Engineering - Hardware**, School of Computer Engineering, Iran University of Science & Technology, Tehran, Iran. *2005 - 2010*
- **Diploma in Mathematics and Physics**, Nemouneh High School*, Sabzevar, Iran. *2001 - 2005*
* Entrance to this school is only possible via a competitive exam

RESEARCH INTERESTS

Affective Computing, Human-Robot Interaction, Social Robotics, Cognitive Science.

AWARDS & HONORS

- **ACM Student Travel Grant** for AAMAS 2019.
- **AAAC Student Travel Grant** for ACII 2019.
- **H2020-ICT-21-2014** Fellowship, Grant No. 644187 RAGE (Realising an Applied Gaming Ecosystem): 2015-2019.
- **Top 0.3%** of Iran's Nationwide University Entrance Exam for Graduate Students. 72th rank among nearly 20,000 participants, 2010.
- **Top 0.6%** of Iran's Nationwide University Entrance Exam for Undergraduate Students, among nearly 340,000 participants, 2005.

PUBLICATIONS

Conference

M. Hashemian, A. Paiva, S. Mascarenhas, P. A Santos, R. Prada, *The Power to Persuade: A Study of Social Power in Human-Robot Interaction*, in The 28th IEEE International Conference on Robot & Human Interactive Communication (RO-MAN2019), New Delhi, India, (Link).

M. Hashemian, R. Prada, P. Santos, J. Dias, S. Mascarenhas, *Emotion Recognition from Touching Patterns*, 8th International Conference on Affective Computing & Intelligent Interaction (ACII 2019), (Link).

M. Hashemian, R. Prada, P. A. Santos, S. Mascarenhas, *Enhancing Believability of Virtual Agents using Social Power Dynamics*, In ACM International Conference on Intelligent Virtual Agents (IVA), 2018, (Link).

M. Hashemian, H. Moradi, M. S. Mirian, M. Tehrani-doost, *Determining mood via emotions observed in face by induction*. In Robotics and Mechatronics (ICRoM), 2014 Second RSI/ISM International Conference on (pp. 717-722). IEEE. (Link).

M. Hashemian, H.Moradi, M. S. Mirian, M. Tehrani-doost, A. Nikoukaran, *Determining Mood using Emotional Features*, in 7th International Symposium on Telecommunications (pp. 418-423), Tehran, Iran, September 2014. (Link).

Book Chapters

- **M. Hashemian**, R. Paradedda, C. Guerra, A. Paiva, “*Do You Trust Me? Investigating the Formation of Trust in Social Robots*”, 19th EPIA Conference on Artificial Intelligence, (pp.357-369). (Link).
- **M. Hashemian**, H.Moradi, M. S. Mirian, “*How is his/her Mood?: A question that a Companion Robot may be able to answer*”, 8th International Conference on Social Robotics, November 2016, Kansas City, USA, November 2016. Springer International Publishing (pp.274-284). (Link).
- R. B. Paradedda, **M. Hashemian**, R. A. Rodrigues, A. Paiva, “*How Facial Expressions and Small Talk May Influence Trust in a Robot*”, 8th International Conference on Social Robotics, November 2016, Kansas City, USA, November 2016. Springer International Publishing (pp.169-178). (Link).
- **M. Hashemian**, H.Moradi, M. S. Mirian, M. Tehrani-doost, R. K. Ward, *Is the Mood really in the Eye of Beholder?*, 17th International Conference on Human-Computer Interaction, Los Angeles, CA, USA, August 2015. Springer International Publishing (pp. 712-717). (Link).

Abstracts

- **M. Hashemian**, M. Couto, S. Mascarenhas, A. Paiva, P. A. Santos, R. Prada, *The application of Social Power in Persuasive Social Robots*, in the 15th Annual ACM/IEEE International Conference on Human Robot Interaction (HRI2020), Cambridge, UK. (Link).
- **M. Hashemian**, M. Couto, S. Mascarenhas, A. Paiva, P. A. Santos, R. Prada, *Persuasive Social Robots using Reward/Coercion Strategies*, in the 15th Annual ACM/IEEE International Conference on Human Robot Interaction (HRI2020), Cambridge, UK. (Link).
- **M. Hashemian**, *Social Power in Human-Robot Interaction: Towards More Persuasive Robots*, in 18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS’2019), Canada, (Link).
- **M. Hashemian**, A. Paiva, S. Mascarenhas, P. Santos, R. Prada, *Social Power in Human-Robot Interaction: Towards more Persuasive Robots*, in 18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS2019), Canada, (Link).
- R. B. Paradedda, **M. Hashemian**, C. Guerra, R. Prada, J. Dias, A. Paiva, *FIDES: How Emotions and Small Talks May Influence Trust in an Embodied vs. Non-embodied Robot*, in 16th International Conference on Autonomous Agents and Multiagent Systems (AAMAS2017), Brazil. (Link).
- R. B. Paradedda, **M. Hashemian**, R. A. Rodrigues, A. Paiva, *The FIDES: How facial expression may influence the trust in a robot?*, in RO-MAN: The 25TH IEEE International Symposium on Robot and Human Interactive Communication, New York, 2016.
- A. Nadi, **M. Hashemian**, H.Moradi, M. S. Mirian, *Human mood detection using eye tracking*. In in 4th Basic and Clinical Neuroscience Congress, (BCNC 2015), Tehran, Iran, December 2015. (Link).
- **M. Hashemian**, H.Moradi, M. S. Mirian, M. Tehrani-doost, N. Mahmoudiyar, *Recognizing Mood using Facial Emotional Features*, in 3rd Basic and Clinical Neuroscience Congress, (BCNC 2014), Tehran, Iran, October 2014. (Link).

SELECTED ACADEMIC PROJECTS

• Graduate Projects

An approach to Emotion Recognition using Touching Patterns in Games, Affective Computing Course. Fall 2016.

In this project, we proposed a data-driven model to recognize emotions via touching patterns of individuals playing a game on a typical tablet. We have considered a set features highlighting the

differences in performed strokes under different emotional states. The trained model recognizes the six basic emotions with an accuracy of $71.92\% \pm 0.51$.

FIDES: How facial expression may influence the trust in a robot?, Social Robotics and Human Robot Interaction Course. Fall 2015.

In this study, we address the level of trust that a human subject would make in a robot under different circumstances. To examine this hypothesis, we conducted an experiment in which a robot tells a story to a subject, then asks for a help in form of donations. The results showed that the two factors can make a positive influence on people trust in social robots.

Automatic Extraction of User's Mood State, M.Sc. Thesis for Graduation in Artificial Intelligence and Robotics, Summer 2014.

In this project we propose a non-intrusive approach to recognize mood states, using emotional features observed in face. The proposed approach has been designed in two different methodologies, non-inductive and inductive methods. Both methods are tested and evaluated by three different experiments, and it is proved that they are promising.

Automatic Extraction of Users' Mood States Using Keystroke and Mouse Movements in an Intelligent Tutoring System, M.Sc. Seminar Report, Fall 2013.

In this project we propose a non-intrusive approach using mouse movements and keystroke features to recognize mood. The proposed approach has been evaluated by a real experiment.

Population Growth and Cooperation Dynamics in Evolutionary Game Theory, Social Networks Course Project, Spring 2012.

The project consists of two parts, theory and simulation. In the theory phase, basics of Classic Game theory and it's extension as Evolutionary Game Theory have been surveyed. In the simulation part, the Prisoners Dilemma, one classic example in Game Theory, has been simulated the evolution of population growth is investigated.

The effect of Belief on Decision Making, Machine Learning Course Project, Fall 2011.

In this project, the effect of internal beliefs on decision making process is examined. To do so, we propose a model which takes into account fuzzy-coded beliefs of an agent.

- **Undergraduate Projects**

Extending the Neocognitron Neural Network to Complex Space, B.Sc. Thesis for Graduation in Computer Hardware Engineering, Summer 2010.

In this project we extend the Neocognitron Artificial Neural Network, which has been used extensively for handwritten recognition, to complex space with the aim of using spacio-temporal information to make this network capable of processing on-line handwritten recognition.

Simulating a Cache Server, Computer Networks course Project, Spring 2010. In this project we simulate a cache server using Socket Programming in JAVA.

TECHNICAL STRENGTHS

Modeling & Analysis	SPSS, R
Academic Software Packages	Weka, Clementine, Elan, Netlogo, Gephi, Webots (Robotic Sim.)
Software & Tools	ModelSim Simulator, Moodle CMS; FaceReader
Programming Languages	Python, Java, Matlab, C/C++, C#. <i>Logic:</i> (PROLOG), <i>Hardware Description Language:</i> (Verilog, VHDL), <i>Web:</i> (HTML, PHP, JavaScript), <i>Database:</i> (MySQL & Oracle).

WORK EXPERIENCE

GAIPS INESC-ID*Researcher*

July 2015-Present

Lisbon, Portugal

Projects

- Fides: a study on Trust in Human-Robot Interaction
- RAGE: Emotion Recognition from Touching Patterns
- AMIGOS: Empowering Social Robots using Social Power Dynamics

FANAP*Java Developer*

January 2015-August 2015

Tehran, Iran

- MIDHCO Enterprise Total Solution Database Middleware: Developing an Object Relational Mapping (ORM), which maps Java OOP objects to Oracle and MySQL tables.

Advanced Robotics and Intelligent Systems Lab, University of Tehran*Researcher*

June 2012 - 2016

Tehran, Iran

- Modeling humans in human-computer interaction
- Evaluation of Cognitive Games

Asre Dino Danesh (ADD University)*Guest Lecturer*

2013-2014

Tehran, Iran

- Web-Based Programming, Fall 2013.
- Data Structure, Fall 2013.
- Information Technology in Organizations, Spring 2014.

School of ECE, Univeristy of Tehran*Teaching Assistant*

2011-2013

Tehran Iran

- Social Networks (Graduate), Fall 2012.
- Introduction to Computer Systems and Programming, Fall 2011, 2012, 2013.
- Introduction to E-Learning, Spring 2013.

Instituto Superior Tecnico*Teaching Assistant*

2017-2018

Lisbon, Portugal

- Autonomous Agents and Multi-Agent Systems, Spring 2018.

STUDENTS MENTORED

Payam Jom'e Yazdian.

Fojan Babaali.

PROFESSIONAL PREPARATIONS

Workshop on statistics - from basic to advanced level (Feb 13-15 2019), Mind-Brain College of ULisboa, Lisbon, Portugal.

Workshop on Methods and Research on gaze tracking, Mind-Brain College of ULisboa, 2018, Lisbon, Portugal.

Advanced School on Artificial Intelligence applied to the development of Digital Games (EAIA'16), 2016, Barcelos, Portugal.

How to Write a Scientific Paper-Workshop by Springer, 27 May 2015, Tehran, Iran.

Workshop on Observing and Simulating Human Behavior, 5th International Conference on Cognitive Science, IRICSS, 2013, Tehran, Iran.

COMMUNITY SERVICE

GHC (Grace Hopper Celebration of Women in Computing), Program Committee of the Artificial Intelligence track 2018 and 2019.

Referee/Reviewer

- IEEE Transaction on Affective Computing
- The 15th Annual ACM/IEEE International Conference on Human Robot Interaction (HRI 2020)
- The 8th International Conference on Social Robotics (ICSR 2016)
- The 24th Iranian Conference on Electrical Engineering (ICEE 2016)

VOLUNTEER

Student Volunteer in ACII (8th International Conference on Affective Computing & Intelligent Interaction), 2019.

Student Volunteer in AAMAS (International Conference on Autonomous Agents and Multiagent Systems), 2019.

Remote Volunteer in Women of MENA in Tech Conference, 2019.

Head of Scientific Unit of the Union of Islamic Students Associations in Lisbon, 2018.

Supervisor of Mehrabani Charity.

LANGUAGE SKILLS

Persian: Native.

English: Fluent (IELTS Score: Overall 7 (Listening 7, Reading 7, Writing 7, Speaking 7)).

Portuguese: Intermediate (B2 Level).

Arabic: Familiar.

HOBBIES

Hiking, Traveling, Reading, Listening to Music, Watching Movies, Live Theatre.

PERSONAL TRAITS

Highly motivated and eager to learn new things.

Strong motivational and leadership skills.

Ability to work as an individual as well as in group.

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