MOHAMMAD ALI SHARPASAND

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Research Interests

Internet, Peer to Peer Networks, Bayesian Estimators, Machine Learning and Artificial Intelligence

Education

Qazvin Azad University — B.Sc. in Software Engineering, class of 2017
Thesis: A Cheap and Low Power Peer to Peer RF Network for Internet Of Things
GPA: 17.2/20 (as of August 1st)

University of Texas at Austin — Machine Learning Summer School, 2015

National Organization for Development of Exceptional Talents (NODET) — Diploma in Mathematics, class of 2011

Projects

- A Cheap and Low Power **Peer to Peer RF Network** for Internet Of Things — Qazvin Azad University

- Automatic Simultaneous **Calibration** of Joints and Camera for Humanoid Robots — Mechatronics Research Laboratory

- Particle Filter **Self-Localization** for NAO Biped Robots in RoboCup Standard Platform Field — Mechatronics Research Laboratory

- **Bipedal Walk** (Zero Momentum Point Based) General for Biped Robots Developed on Aldebaran NAO— Mechatronics Research Laboratory

- **Motion Planning** in Dynamic Cluttered Environments, a Geometric Realtime Approach — Mechatronics Research Laboratory

- Efficient Overt Top-Down **Visual Attention** for Humanoid Robots — Mechatronics Research Laboratory

- A Framework for Reactive **Autonomous Agents** on RoboCup Standard Platform League — Mechatronics Research Laboratory

- Shifting **Organizational Culture** and a Democratic Adaptation of **Agile** Software Engineering Paradigms for Research — Mechatronics Research Laboratory

Experience

Senior Researcher, Mechatronics Research Laboratory; Qazvin, Iran — Nov. 2011-Present
Executive Officer, Jahan Pardazesh Alborz (JPA) Inc.; Karaj, Iran — 2011-2013

Awards and Honors

- Awarded **research scholarship** from Qazvin Azad University, 2011 – Present

- A number of International **RoboCup** awards. — GermanOpen, 3rd Place of Standard Platform League (SPL) 2014 — IranOpen, 1st place of SPL 2014 and 2012 and SPL Research Innovation 2016 and 2013, 2nd Place of SPL 2015 and 2013

- Ranked among top 20% in **ACM Junior Programming Contest** of Sharif University of Technology in 2009

- Admitted to National Organization for Development of Exceptional Talents (**NODET**) for middle school and high school, in 2004 and 2006.

Publications

- **Efficient Overt Top-Down Visual Attention for Humanoid Robots** (In preparation, a short description is presented in projects section)

- **Automatic Simultaneous Calibration of Joints and Camera for Humanoid Robots** (In preparation for IEEE Conference on Robotic and Automation, a short description is presented in projects section)

- Mehr, A. M., **Sharpasand, M. A.**, Shahroudi, N., Beyglou, F. F., & Hasanzadeh, M. MRL-SPL Team Description for RoboCup 2016. In RoboCup 2016, Leipzig, Germany

- AmirGhiasvand, O., Shahroudi, N., **Sharpasand, M. A.**, Mehr, A. M., Ha, P. S., Ghazeli, M. R., ... & Harandi, M. A. Z. Team Description for RoboCup 2015. In RoboCup 2015, Hefei, China

Skills

- Non-Parametric Bayesian Estimation, Kalman Filtering, Monte Carlo Localization, Motion Planning, Kinematic Analysis, Simulation, Biped Locomotion, Autonomous Agents

- Teamwork experience, Agile Software Development, Leadership and Organization skills (e.g.: Successful experience in JPA and MRL — see experience section)

- C++, MATLAB, Linux, Git, Python, Bash, Full Stack Web Programming

- Technical Writing and proficiency in several languages: **English** (TOEFL iBT 94/120; writing 28/30), **Persian** (native), **Spanish** (elementary)

References

Omid AmirGhiasvand

Director of Software Research Center in QIAU R&D Center & Supervisor and Team Leader in Humanoid Robot Lab. (SPL)
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