

Omid Aladini

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Research Interests

Machine Learning, Computational Neuroscience, Reinforcement Learning, Neural Networks, Robot Locomotion

Education

2008 - Present: M.Sc., Computational Science, **Frankfurt University**, Frankfurt, Germany.

2003 - 2008: B.Sc., Computer Science, Department of Mathematical Sciences, **Sharif University of Technology**, Tehran, Iran.

1999 - 2003: **Allameh Helli High School** (Magnet high school for talented youth), National Organization for Development of Exceptional Talents, Tehran, Iran

Research and Professional Experiences

Research Assistantship, Neuro-Group, Frankfurt Institute of Advanced Studies (FIAS)

Director: Professor Jochen Triesch, since December 2008

- Implementing a virtual reality environment as a testbed for neuro-cognitive research.

Software Designer/Developer, FANAP - subsidiary of Pasargad Bank of Iran

December 2007 - July 2008

- Design, development and deployment of financial transaction switching server for card-based devices based on ISO-8583 in order to connect to the national banking switch, SHETAB.

Research Assistantship, Artificial Intelligence Lab, CE department, Sharif University

Director: Professor Jafar Habibi, 2004 and Fall 2005- Fall 2007

- Research on static and dynamic properties of fitness landscapes.

- Sharif Impossibles 2004 2D soccer simulation team.

Research Assistantship, Dept. of Math. Sciences, Sharif University

Director: Professor Amir Daneshgar, 2004-2007

- Design and development of GraphLab Library - a framework for graph-theoretic research.

Teaching Experience

Teaching Assistant, Spring 2005, Sharif University of Technology, for undergraduate course, Advanced Computer Programming by Dr. Amin Farjudian, covering advanced techniques for computer programming with C++.

Teaching Assistant, Fall 2005, Sharif University of Technology, Data Structures course by Dr. Yahya Tabesh.

Instructor, Summer 2006, Farzanegan High School (Magnet high school for talented youth), A C++ course covering basic C++ knowledge including a brief understanding data structures and generic programming.

Instructor, 2004-2005, Science and Arts Foundation, Sharif University, Java programming language and basic programming skills for selected group of high school students.

Honors and Awards

1st place, RoboCup 2001 Soccer Simulation Scientific Evaluation Challenge as a member of Helli-Respina team, Seattle, USA, 2001.

2nd place, RoboCup 2002 Online Coach Competition, Helli Respina team, Fukuoka, Japan, 2002.

2nd place, Soccer Simulation League, NODET's National Robotic Competitions, Tehran, Iran, 2000.

Skills

Languages: Expert in C/C++. Experience in designing large-scale programs.

Complete knowledge of Java, familiar with J2EE concepts.

Platforms: Working/Programming in Windows and Linux-based platforms.

Tools: Weka Data Mining Software, MATLAB, Simulink, Mathematica, Minitab, Open Dynamics Engine, LaTeX, etc.

Test Scores

TOEFL (iBT, Dec 2008) : 104

TOEFL (PBT, Aug 2006) : 633

GRE (Nov 2007): 800 Quantitative , 400 Verbal, 3.5 Analytical

Publications

Omid Aladini, Bahador Nooraei B., Siavash Rahbar, Helli Respina 2001 team description paper. In Birk A., Coradeschi S., Tadokoro S. editors: RoboCup 2001: Robot Soccer World Cup V. Springer-Verlag London, UK. Pages: 519 - 521 (2001)

Technical Reports

Omid Aladini, GraphLab Library Technical Report, B.S. degree project, under supervision of Dr. Amir Daneshgar (2006).

Available here: <http://cs.sharif.edu/~omid/GraphLabLibraryReportFeb32007.pdf>

Ahmad Morshedian, Omid Aladini, Bahador Nooraei B., Siavash Rahbar, Helli Respina 2002 team description paper. This paper served as the qualification paper for RoboCup 2002 competitions, Fukuoka, Japan.

Available here: <http://cs.sharif.edu/~omid/Desc-RoboCup2002.pdf>

Jafar Habibi, Omid Aladini, Mohammad Mehdi S. Javadi, Siavash Rahbar, Sharif Impossibles Team Description Paper. This paper summerizes research works of Sharif Impossibles soccer simulation team and served as the qualification paper for RoboCup 2004 competitions.

Available here: <http://cs.sharif.edu/~omid/papers/SharifImpossibles-RoboCup2004.pdf>

Jafar Habibi, Omid Aladini, Mohammad Mehdi S. Javadi, Siavash Rahbar, An Analytic Solution for Pass Problem in Simulated Soccer. This paper gives more details about the new method used in Sharif Impossibles 2004 RoboCup soccer simulator team.

Available here: <http://cs.sharif.edu/~omid/papers/PassProblem-RoboCup2004.pdf>

Major Released Code and Program

GraphLab Library:

GraphLab Library's source code in Java is released under LGPL license as a part of GraphLab project which is an environment consisting of several parts. GraphLab Library contains programming API's to work with graph theoretic algorithms.

Helli-Respina Soccer Simulator Agents:

Linux binaries of award-winning Helli-Respina 2001 and 2002 soccer simulation agents and Helli-Respina coach agent released after respective RoboCup competitions. Various research groups used Helli-Respina in their researches and it has appeared in various publications:

- Carpenter P., Riley P, Veloso M, Kaminka G., Integration of Advice in an Action-Selection Architecture, Gal A. Kaminka and Pedro U. Lima and Raul Rojas editors: RoboCup-2002: Robot Soccer World Cup VI Springer Verlag London, UK. pages 195 - 205 (2003)
- Timo Steffens, Feature-Based Declarative Opponent-Modelling in Multi-Agent Systems, Institute of Cognitive Science Osnabruck, (2002)
- Andreas G.Nie et al, The Osnabrueck RoboCup Agents Project, Institute of Cognitive Science, University of Osnabrueck, 2003.
- Karsten Sturm: Der RoboLog-Coach - Ein Online-Coach fr Fuballmannschaften der Simulationsliga der RoboCup-Initiative. Diplomarbeit D 690, Fachbereich Informatik, Universitt Koblenz-Landau, 2003.
- Keith Wagner, Final Paper for RoboCup Independent Study, 2002

Other Contributions

Multi-Agent Modelling RoboCup Special Interest Group (MAMSIG) Collaboration to design the first Coach Standardized Language together with other SIG active members notably Gal Kaminka, Patrick Riley, Timo Steffens and Luis Paulo Reis. A language for the coach agent in RoboCup soccer simulations to communicate with the soccer playing agents, 2001-2002

Co-founder and coordinator of CS-Weekly, weekly seminars in Computer Science in Department of Mathematical Sciences, Sharif University of Technology.

Member of the editorial board of Organdi Quarterly online cultural journal. <http://www.organdi.net/>

School Java Project, Science and Arts Foundation. One of the sub-projects of Schoolnet project by Science and Arts Foundation which aims teaching high school students the Java programming language (Mar 2004 - Jan 2005). (More info at: www.saf.ir, www.schoolnet.ir, java.schoolnet.ir)

A member of jury of Sharif University's scientific challenge for high school students (Mar 2006). Website: <http://veda.sharif.edu/>

References

Dr. Jochen Triesch

Frankfurt Institute of Advanced Studies, Frankfurt am Main, Germany

Dr. Yahya Tabesh

Department of Mathematical Sciences, Sharif University of Technology, Tehran - Iran

Dr. Amir Daneshgar

Dean of Sharif University of Technology Graduate School

Department of Mathematical Sciences, Sharif University of Technology, Tehran - Iran

Dr. Amin Farjudian

Knowledge Engineering Research Group, Aston University, Birmingham - UK

Mohammad Nejad Sedaghat

Lead Project Manager, FANAP company, Tehran, Iran

Languages

Farsi (Native)

English (Fluent)

German (Beginner)