

# CURRICULUM VITAE

## TOURAJ BANIROSTAM

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Tehran, Iran

## ACADEMIC ACTIVITY

Assistant Professor of Computer Engineering Department, Islamic Azad University, Central Tehran Branch

2011-up to now

Head of Computer Engineering Department, Islamic Azad University, Electronic Campus

2013-up to now

## EDUCATION

Islamic Azad University, Shahr Qods Branch

**M.Sc. in General Psychology**

2014-Now

Science and Research Branch, Islamic Azad University, Tehran, Iran

**Ph.D. in Computer Engineering, Computer Architecture**

2006-2011

Dissertation: "Self-Protection Modeling Based on Biological Immune System with Autonomous Computing Approach"

Science and Research Branch, Islamic Azad University, Tehran, Iran

**M.Sc. in Artificial Intelligence and Robotic**

2001-2004

Thesis: "Simulation and Presentation of Experimental Tests of Mobile Robot Errors"

Islamic Azad University, Tehran Central Branch, Tehran, Iran

**B.Sc. in Computer Engineering, Hardware**

1996-2000

Project: "Design and Manufacturing a Security System with Using 89C51 Micro Controller"

## GENERAL RESEARCH INTERESTS

- Cognitive Science
- Cognitive Modeling
- Modeling of Mind Activates
- Artificial Intelligence
- Complex Adaptive Systems
- Intelligent System Architecture

## PUBLICATIONS AND PAPERS

### Published book:

***COGNITIVE SCIENCE, An Introduction to the Study of Mind***

by: Friedenber, J., and Silverman, G., Translated to Persian (Translators: T. Banirostam *et. all*),

ISBN: 978-969-5769-558.(2008)

### Journal Papers:

**1- A Conceptual Model for Ontology-Based Mental Model**

International journal of Artificial Intelligence & Applications (IJAA), (in press)

**2- Modeling of Biological Immune System Mapped on Situation Awareness Model**

Procedia (Elsevier), Computer Science, 19 (2013), pp. 1088 – 1093; DOI: 10.1016/j.procs.2013.06.153, (Co-author: H., Parvar) Jun. 2013

**3- A Security Model for Cloud Computing Based on Autonomous Biological Agents**

International Journal on Cloud Computing: Services and Architecture (IJCCSA), Vol.3, No.5, pp. 19-27, DOI: 10.5121/ijccsa.2013.3502, (Co-author: Fatemeh Arabalidousti) Oct. 2013

**4- A Conceptual Model for Ontology-Based Learning**

International Journal of Research in Computer Science (IJORCS 2012), Vol. 2, Issue 6, pp.1-6, DOI: 10.7815/ijorcs. 26.2012.050, (Co-authors: K., Mirzaie and M.N., Fesharaki) Nov. 2012

**5- A New Approach for Biological Complex Adaptive System Modeling and Simulation**

Life Science Journal, Vol. 9, No.3, pp.2257-2263, (Co-author: M.N., Fesharaki) Sep. 2012

**6- MMBSM: A Meta Model for Biological System Modeling**

International Journal of Computer Science Issues (IJCSI 2012), Vol. 9, Issue 5, No 2, pp.140-145, (Co-author: M.N., Fesharaki) Sep. 2012

**7- Effective Cognitive Characteristic in Robustness of Decentralized System**

Procedia (Elsevier), Social and Behavioral Sciences, 32 (2012), pp. 134–140, (Co-author: M.N., Fesharaki) Jun. 2012

**8- Experimental Analysis for Measuring Errors in Wheeled Mobile Robots**

International Journal of Engineering, Vol. 18, No.2, pp.115-133, (Co-author: M.H., Korayem) May 2005

**9- Design, Modeling and Error Measurement of Wheeled Mobile Robots**

International Journal of Advance Manufacturing Technology, pp. 28:403-416, (Co-authors: M.H., Korayem and A., Nakhai) Apr. 2005

**Conference Papers:**

**1- A Maturity Model for Self-Management system in IT Infrastructure Based on Autonomous Computing**

International Conference on Electrical and Computer Engineering (ICECE 2013), pp. 1-2, Istanbul, Turkey (Co-author: H., Soleimani) Sep. 2013

**2- A Novel Intrusion Detection Approach Based on Intelligent Agent in Cloud Computing**

International Conference on Electrical and Computer Engineering (ICECE 2013), pp. 5-6, Istanbul, Turkey (Co-author: N., Khaneghai) Sep. 2013

**3- An Agent based Intrusion Detection Approach for Cloud Computing Security**

International Conference on Electrical and Computer Engineering (ICECE 2013), pp. 7-8, Istanbul, Turkey (Co-author: F., Arabalidousti) Sep. 2013

**4- Presenting an Autonomous Model for IT Environment with the Approach of Body Immune System**

International Conference on Electrical and Computer Engineering (ICECE 2013), pp. 37-38, Istanbul, Turkey, (Co-author: F., PourAmirArsalani and M.N. Fesharaki) Sep.2013

**5- A Cognitive Model for Self-Management System in IT environment**

5th International Conference of Cognitive Science (ICCS 2013), Tehran, Iran, (Co-author: H., Soleimani) May 2013

**6- Functional Control of Users by Biometric Behavior Features in Cloud Computing**

4<sup>th</sup> International Conference on Intelligent Systems, Modeling and Simulation, pp. 94-98, Bangkok, Thailand, (Co-authors: H., Banirostam and E., Shamsinejhad) Jan. 2013

**7- A New Structure and Routing Algorithm for Optimizing Energy Consumption in Wireless Sensor Network for Disaster Management**

4th International Conference on Intelligent Systems, Modeling and Simulation, Bangkok, Thailand, (Co-author: S., Rasaneh) Jan. 2013

**8- A Self-Management Model for Managing IT Environment Based on Autonomous Computing**

4th International Conference on Intelligent Systems, Modeling and Simulation, Bangkok, Thailand, (Co-authors: H., Soleimani and M.N., Fesharaki) Jan. 2013

**9- Control of Safe Retrieving and Saving Data in Database of Cloud Computing**

First National Conference on Cloud Computing, Amirkabir University of Technology, Tehran, Iran (Persian), (Co-author: F. Latifi) Nov. 2012

**10- A Cognitive Model of Immune System for Increasing Security in Distributed Systems**

14th International Conference on Modeling and Simulation (IEEE, UKSim 2012), Cambridge, UK, (Co-author: E.B., Noeparast) Mar. 2012

**11- Effect of Learning and Database in Robustness of Security Tools Based on Immune System Modeling**

Fifth European Symposium on Computer Modeling and Simulation (IEEE, EMS 2011), Madrid, Spain, DOI:10.1109/EMS.2011.36, pp.47-52. (Co-author: M.N., Fesharaki) Nov. 2011

**12- Effective Parameters in Convergence of Autonomous Distributed Systems using with Immune System Approach**

10th International Symposium on Autonomous Decentralized Systems (IEEE, ISADS 2011), Kobe, Japan (Co-author: M.N., Fesharaki) Jun. 2011

**13- Modeling and Simulation of Influenza with Biological Agent, A New Approach for Increasing System Robustness**

5th Asia Modeling Symposium (IEEE, AMS 2011), Kuala Lumpur, Malaysia, (Co-author: M.N., Fesharaki) May. 2011

**14- Modeling and Simulation of Immune System, A Cognitive Approach for Security Tools**

4th International Conference of Cognitive Science (ICCS 2011) Tehran, Iran, (Co-author: M.N., Fesharaki) May. 2011

**15- Immune System Simulation with Biological Agent Based on Capra Cognitive Framework**

13th International Conference on Modeling and Simulation (IEEE, UKSim 2011), Cambridge, UK, (Co-author: M.N., Fesharaki) Mar. 2011

**16- Calculating the Impact Factor of Neural Networks on Optimization Algorithm for Sensor Selection**

High Performance Computing and Simulation (IEEE, HPCS 2010), Caen, France (Co-authors: A.H., Alipoor and M.N., Fesharaki) Jun. 2010

**17- Modeling and Simulation of Biological Immune System Base on Situated Cellular agent**

4rd National Conference on C4I, Sharif University of Technology, Tehran, Iran (Persian), (Co-author: M.N., Fesharaki) Dec. 2010

**18- Effect of Learning in Robustness of Reactive Agents in Multi Agent System**

4rd National Conference on C4I, Sharif University of Technology, Tehran, Iran (Persian), (Co-author: M.N., Fesharaki) Dec. 2010

**19- An Intelligent Infrastructure for C4I based on Autonomous Computing**

4rd National Conference on C4I, Sharif University of Technology, Tehran, Iran (Persian), (Co-author: M.N., Fesharaki) Dec. 2010

**20- An Intelligent Infrastructure for C4I based on Autonomous Computing**

3rd National Conference on C4I, MUT, Tehran, Iran (Persian), (Co-author: M.N., Fesharaki) Nov. 2009

**21- A Dynamic Infrastructure for C4I based on Autonomous Computing**

3rd National Conference on C4I, MUT, Tehran, Iran (Persian), (Co-author: M.N., Fesharaki) Nov. 2009

**22- Security Architecture for C4I base on Biological Immune System Modelling**

3rd National Conference on C4I, MUT, Tehran, Iran (Persian), (Co-author: M.N., Fesharaki) Nov. 2009

**23- Modeling Study and Simulation Analysis of a Redundant Mobile Manipulator**

International Conference on Mechanical Engineering, Iran, (Co-author: Y., Maddahi) May 2005

**24- Design, Modeling and Experimental Analysis of Wheeled Mobile Robot**

3<sup>rd</sup> IFAC Symposium on Mechatronic Systems, Sydney, Australia, (Co-author: M.H., Korayem) Sep. 2004

**25- Mechanical Design and Modeling of an Omni-directional Mobile Robot**

12<sup>th</sup> International Annual Mechanical Engineering Conference, Tehran, Iran (Persian) (Co-authors: M.H., Korayem and Y., Maddahi) May 2004

**26- Modeling, Simulation and Evaluation of Odometry test on Differential Drive Mobile Robot**

8<sup>th</sup> National Annual Mechanical Engineering Conference, Tehran, Iran (Persian) (Co-authors: M.H., Korayem and Y., Maddahi) May 2004

## PROJECTS

Islamic Azad University, Central Tehran Branch, Tehran, Iran

**Assistant Professor and Supervisor**

**2007- up to now**

- Cognitive Engineering
- Mind Activity Modeling and Simulation
- Autonomous Computing Approach, Features and Application
- Data Mining

Islamic Azad University, Electronic Campus, Tehran, Iran

**Head of Artificial Intelligent Department**

**2013- up to now**

**Head of Computer Engineering Department**

**2015- up to now**

**Visiting Lecturer**

**2013- up to now**

**Supervisor**

**2013- up to now**

- Modeling of Mental process
- Modeling of learning, Perception, Decision Making and planning process
- Intelligent Systems

Bank Melli Iran (BMI), Tehran, Iran

**IT System Engineer**

**2002-2007**

- Designed, developed, testes and applied Software and Communication Network for establishing the e-Banking in BMI

Iran University of Science and Technology

**Research Assistant**

**2002-2003**

Modeling, Simulation and Evaluation of Odometry test on Mobile Robot:

- Differential Drive Robot
- Omni-directional Robot
- Sweeper Robot
- Soccer Robot

Computer Department, Islamic Azad University, Central Tehran Branch, Tehran, Iran

**Designing and Implementation Advisor**

**1999 – 2000**

- Sweeper mobile robot designing and implementation

## ACADEMIC SERVICES

### Reviewer

- Journal of Advances in Computer Engineering and Technology 2015
- The first Artificial Intelligence Conference, Behbahan, Iran 2012
- 5<sup>rd</sup> National Conf. of Iran's Scientific Society of C4I, Tehran, Iran 2011
- 4<sup>rd</sup> National Conf. of Iran's Scientific Society of C4I, Tehran, Iran 2010
- 3<sup>th</sup> National Conf. of Iran's Scientific Society of C4I, Tehran, Iran 2009

## TEACHING EXPERIENCE

### Courses Taught:

Islamic Azad University, Central Tehran Branch, Tehran, Iran

**Faculty Member of Computer Engineering Department**

**2007-up to now**

Graduate Courses taught:

- Evolutionary Computing
- Fuzzy logic
- Neural Networks
- Research Method
- Final project
- Seminar

Undergraduate Courses taught:

- Data Communication
- Expert System
- Signals and Systems
- Liner Control Systems

Islamic Azad University, Electronic Campus, Tehran, Iran

**Manager of Artificial Intelligent Department and Visiting Lecturer in IT Department**

**2012-up to now**

- Evolutionary Computing
- Fuzzy Logic
- Machine Learning
- Artificial Intelligent

Islamic Azad University, Varamin Branch, Varamin, Iran

**Visiting Lecturer- Computer Department**

**2009-2012**

- Data Structure
- Assembly

Applied Science University, Tehran, Iran

**Visiting Lecturer- Computer and IT Department**

**2003-2014**

- Data Structure
- Assembly
- Operating System
- Programming

### Education Skills:

Islamic Azad University, Tehran, Iran

**Participation in courses related to Education Skills (120 hours)**

**2010-2012**

- Lesson Planning and Syllabus Design
- Teaching and Learning methodology
- Assessing and Evaluating Educational Progress
- Learning and Training Psychology
- Fundamentals of Education Philosophy
- Application of IT in Education
- Effective Teaching and Class Motivating
- Introduction to Evolution Psychology
- Introduction to Training and Research Regulations

### COMPUTER SKILLS

- Simulation Environments and Tools (Netlogo, MATLAB)
- Programming (Visual C++/C++/Pascal/VB)
- Microsoft Office Pack (Word, Excel, PowerPoint, Access)

### LANGUAGES

Farsi (Native)

English (Upper Intermediate)

French (Beginner)

Azeri (Mother Tongue)