



**Fariba Bahrami**

*Associate professor*

*Director of Human Motor Control and Computational Neuroscience Laboratory,*

*School of Electrical and Computer Engineering*

*University College of Engineering, University of Tehran, Tehran, Iran*

**TEL:** +98-21-8208 4924

**Email:** fbahrami@ut.ac.ir

## ***Education***

**1992-1998** University of Tehran, Tehran, Iran

**Ph.D.:** Electrical Engineering (Bioelectronics)

**Dissertation:** Simulation and Control of FES-Assisted Standing-up in Paraplegic Subjects

**1985-1988** Technical University of Isfahan, Isfahan, Iran

**M.Sc.:** Communications Engineering

**Master Thesis:** Achievable Rates for Dependent Sources and for Multiple Descriptions of One Source

**1979-1985** Technical University of Isfahan, Isfahan, Iran

**B.Sc.:** Communications Engineering

## ***Professional Experiences***

**1989-present** University of Tehran, Tehran, Iran

Full-time faculty member

**2001-2004** University of Waterloo, Department of Kinesiology,

Waterloo, Canada, Visiting assistant professor

**1996 (2/96-4/96)** Ohio State University, Columbus, USA

Visiting Researcher at the Department of Electrical Engineering

**1994-1997** Technical University of Munich, Munich, Germany.

Research Assistant at the Department of Control Engineering,  
under **Scholarship from DAAD and SFB**

**1992 (9/92)** International Center for Genetic Engineering and Biotechnology,  
Trieste, Italy, Research Fellow



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### ***Offered courses:***

- Dynamical systems in Neuroscience (graduate course)  
*The course was defined for the first time in 2008*
- Control in biological systems: Human Motor Control (graduate course)  
*The course was defined for the first time in 2002*
- Biomedical instrumentation and measurements (graduate course)
- Biological system modeling and simulation (graduate course)
- Seminars on biomedical engineering (graduate course)
- Advanced control systems (graduate course)
- Computational Modeling of Physiological Systems (undergraduate course)  
*The course was defined for the first time in 2019*
- Modern control systems (undergraduate course)
- Clinical and Hospital Equipment (undergraduate course)
- Principles of Rehabilitation and Equipment (undergraduate course)
- Linear control systems (undergraduate course)
- Electronics I (undergraduate course)
- Electronics II (undergraduate courses)
- Linear Algebra (undergraduate course)

### ***Lab Director of:***

- Linear control system lab (undergraduate, Establishing and Supervising) (1988-1991 & 2006- present)
- Biomedical lab (graduate research lab) (1998-2001)
- Bioinstrumentation lab (undergraduate, Setting up and Supervising) (2004-2014)
- Human Motor Control and Computational Neuroscience lab (graduate research lab) (2008-present)



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### ***Field of Interest and Expertise:***

- ◆ Biological system modeling
- ◆ Computational neuroscience (Learning and Brain Plasticity)
- ◆ Modeling neurodegenerative diseases, e.g., Epilepsy, AD, PD
- ◆ Dynamical system approach in analysis of biological systems
- ◆ Motor control and learning
- ◆ Assistive devices with applications in rehabilitation
- ◆ Stability and balance control during human movement
- ◆ Saccadic and smooth pursuit eye movement control
- ◆ Biologically inspired movement control in robots and exoskeletons
- ◆ Design and development of FES-controllers to assist spinal cord injured subjects
- ◆ Modeling and analysis of cancer cell growth to develop different combinatorial therapy procedures
- ◆ Modeling autoimmune diseases to study different therapy procedures

### ***Academic and Executive Activities:***

- Director of Biomedical Engineering Group, School of ECE, University College of Eng., University of Tehran (2015-2019)
- Board member of Biomedical Engineering Committee at Ministry of Science and Research (2007-2010 and 2018-2022)
- Member of the committee in charge of developing graduate program for Sport Engineering (2020-2021)
- Officer in charge of WIE, IEEE Iran section (2010-2011)
- Board member of WIE, IEEE Iran section (2014-2020)



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- Board member of Iranian Society of Biomedical Engineering, ISBME, Head of education committee (2003 -2009)
- Vice president of ISBME (2009-2015)
- Editorial board member of AUT Journal of Modeling and simulation (2017 - present)
- Editorial board member of Scientia Iranica, International Journal of Science & Technology, Transactions on Computer Science & Engineering and Electrical Engineering (D) (2015-2020)
- Editorial board member of Iranian Journal of Biomedical Engineering (2007 – present)
- Chair of Scientific Committee of the 20<sup>th</sup> Iranian Conference on Biomedical Engineering (Dec 2013)
- Guest member of The Academy of Sciences of Iran, Engineering Group, Computer and Electrical Engineering Branch (2023-September 2025)
- Guest member of The Academy of Sciences of Iran, Biomedical Engineering Group, (March to September 2025)
- Adjunct member of The Academy of Sciences of Iran (September 2025-present)

### ***Referee for***

- Iranian National Foundation of Sciences, INFS, (2010-present)
- National Foundation of Experts (BMN) (2010-present)
- Tehran University Science & Technology Park (2015-present)
- University of Tehran Intellectual Property (2016-present)
- Cognitive Science and Technologies Council (COGC) of Iran (2013-2020)

### ***Principal Investor for Project supported by COGC***



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Muscle synergies: What is their role in motor control and learning and how does brain plasticity affect their formation (Project 816), Supported by *Cognitive Sciences and Technologies Councils* (2015-2019)

One of the products of this project is a 5R Vertical Rehabilitation Robot designed and developed for assessment and rehabilitation of arm movements

### ***Reviewer for Journals***

- Journal of Iranian Society of Biomedical Engineering (JISBME)
- Intelligent systems in Electrical Engineering
- Basic and Clinical Neuroscience
- International Journal of Biomedical Engineering and Technology (IJBT)
- International Journal of Engineering
- Journal of Frontiers in Biomedical Technologies,
- Journal of Frontiers in Neurology,
- Journal of Frontiers in Neuroscience
- Communications in Nonlinear Science and Numerical Simulation (Elsevier)
- International Journal of Pattern Recognition and Artificial Intelligence (World Scientific Journals)
- Neural Computing and Applications
- IEEE Journal of Biomedical and Health Informatics
- Scientific Reports
- Journal of Neural Computation and Applications

### ***Member of Scientific Committee of:***

- 12<sup>th</sup> Iranian Conference on Biomedical Engineering (Dec 2005)



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- 14<sup>th</sup> Iranian Conference on Biomedical Engineering (Feb 2007)
- 15<sup>th</sup> Iranian Conference on Biomedical Engineering (Dec 2008)
- 17<sup>th</sup> to 32<sup>nd</sup> Iranian Conferences on Biomedical Engineering (2010 to 2025)
- 15<sup>th</sup> to 32<sup>nd</sup> Iranian Conference on Electrical Engineering (May 2007- 2026)

### ***Languages:***

English, German, French, Arabic, Latin

### **Google Scholar**

	ALL	SINCE 2020
<a href="#">Citations</a>	1796	870
<a href="#">h-index</a>	22	17
<a href="#">i10-index</a>	46	27