

Curriculum Vita

Professor Behnam Rahnama

Artificial Intelligence • Robotics • Intelligent Computational Systems Architect

Founder & CEO, Medis Startup Studio

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Short Biography

Professor Behnam Rahnama is an artificial intelligence researcher, robotics engineer, entrepreneur, and innovation leader whose work bridges academia, industry, and deep-technology commercialization. His research spans artificial intelligence, intelligent healthcare systems, medical robotics, human–robot interaction, advanced computing architectures, heterogeneous high-performance computing, and secure intelligent systems. Throughout his academic and industrial career, he has focused on translating fundamental research into practical technologies with measurable societal impact.

He received his Ph.D. (2010) and M.Sc. (2005) in Computer Engineering from Eastern Mediterranean University and his B.Sc. (2003) in Computer Software Engineering from Islamic Azad University, Shiraz. He has authored many scientific publications, including journal and conference papers, book chapters, and books, and has supervised numerous graduate research projects in artificial intelligence, robotics, computer architecture, cybersecurity, and distributed systems. He has also served as a reviewer, program committee member, editor, and conference chair for several international conferences and scientific events.

Professor Rahnama is the Founder and CEO of Medis Startup Studio, a deep-tech venture builder established to accelerate the translation of research into innovative products and technology ventures. Through Medis, he has led multidisciplinary teams in the development of advanced technologies spanning AI, robotics, digital health, intelligent software systems, embedded platforms, and high-performance computing. His recent work includes the Estella humanoid robot, the Painverse telerobotic healthcare platform, and the architectural design of the Aria heterogeneous computing infrastructure for large-scale AI and scientific applications.

Beyond research and entrepreneurship, Professor Rahnama has held academic leadership positions, established research laboratories and innovation centers, developed new academic programs, and actively promoted stronger collaboration between universities and industry. As an IEEE Senior Member, he continues to pursue research that integrates artificial intelligence, engineering innovation, and entrepreneurship to address real-world scientific and societal challenges.

Experience

Leadership Appointments

Dec 2016 – Present	Founder & CEO, Medis Startup Studio, Shiraz, Iran
Sep 2015 – Dec 2016	Full Professor, Dean, Faculty of Engineering, Cyprus Science
Sep 2013 – Feb 2015	Associate Professor, Department of Computer Engineering, Okan University

Feb 2010 – Sep 2013	Chair, Department of Electronics and Communication Engineering, European University of Lefke
Feb 2010 – Sep 2013	Assistant Professor, Department of Computer Engineering, European University of Lefke
Feb 2010 – Sep 2013	Rector's Coordinator for International Relations & Industry Communications, European University of Lefke
Sep 2008 – Feb 2009	Lecturer, Department of Electrical & Electronics Engineering, Cyprus International University
Feb 2006 – Jun 2008	Lecturer, Faculty of Communication and Media Studies, Eastern Mediterranean University
Sep 2004 – Feb 2006	Research Assistant, Department of Computer Engineering, Eastern Mediterranean University

Research, Advisory & Administrative Appointments

Sep 2020	Phoenix Supercomputing Project — Principal Architect / Project Director
Sep 2015	Consultant to the Chairman, ICT Center, Shiraz University
Sep 2008	Assistant to the Rector's Consultant for Informatics and Campus Automation, Eastern Mediterranean University
Sep 2005	Project Design & Implementation Center, Faculty of Engineering, Eastern Mediterranean University

Industry & Entrepreneurial Appointments

Dec 2016	Founder & CEO, Medis Startup Studio
Feb 2015	Senior Software Engineer, ScaleDB, Silicon Valley
Feb 2004	Managing Director, Ava-Afzar Co
Sep 2001	Director, ETec Research Institute

Education

Sep 2005 – Feb 2010	Ph.D., Computer Engineering, Eastern Mediterranean University (EMU); Thesis: Extended Open World Assumption as Core for Reasoning in Collaborative Problem Solving on Multiple Autonomous Semantic Robots; under supervision of Prof. Dr. Atilla Elçi
Feb 2004 – Jun 2005	MSc., Computer Engineering, Eastern Mediterranean University; Thesis: A Novel Approach to Represent Hierarchical Data in Relational Database Systems; under supervision of Prof. Dr. Alexander Chefranov
Sep 1999 – Feb 2003	BSc., Computer Engineering (Software), Shiraz Azad University; Thesis: Design and Implementation of Software and Hardware of a General-

Publications

Journals

- [1] Pegah Pedramfard, Habib Zakeri, Mohammad Radmehr, Behnam Rahnama, Aliasghar Karimi; Remote Robotic Technology in Minimally Invasive Spinal Surgery: A Comprehensive Literature Review, Under Review in International Journal of Telemedicine and Applications, 2025.
- [2] Habib Zakeri, Mohammad Radmehr, Farnaz Khademi, Pegah Pedramfard, Leala Montazeri, Mahshid Ghanaatpisheh, Behnam Rahnama, Parisa Mahdiyar, Saba Moalemi, Farnaz Hemati, Aliasghar Karimi; Utilizing Artificial Intelligence for the Diagnosis, Assessment, and Management of Chronic Pain; Journal of Biomedical Physics and Engineering, Shiraz University of Medical Sciences, 2023.
- [3] Leila Rahnama, Asghar Rezasoltani, Minoo Khalkhali Zavieh, Behnam Rahnama, Farhang Noori- Kochi, "Reliability of new software in measuring cervical multifidus diameters and shoulder muscle strength in a synchronized way; an Ultrasonographic study", Brazilian Journal of Physical Therapy, Volume 19, Issue 4. 2015.
- [4] Rahnama, Behnam; "Towards Improved Parallelism through Order Reduction of Accessing Data in nD Matrices", The Journal of Supercomputing: Volume 70, Issue 2 (2014), Page 977-986 doi:10.1007/s11227-014-1271-1 (SCI)
- [5] Sari, A. Rahnama, B., Caglar, E. (2014); "Ultra-Fast Lithium Cell Charging Architecture for Mission Critical Applications", *Transactions on Machine Learning and Artificial Intelligence*, TMLAI, ISSN: 2054-7390. (Refereed International Journal)
- [6] Kivanc Bilecen, Behnam Rahnama, Ender Altioek, High Performance Computing Based Smart Scan for the Identification of Species Based Unique DNA Sequences, New Biotechnology, Volume 31, Supplement, July 2014, Page S106 (SCI)
- [7] Kuren, E., Rahnama, B., Sari, A. (2013); "Performance Analysis of Reactive MANET Protocols under DoS attacks", *International Journal of Networking*, ISSN: 2249-2798. (Refereed International Journal)
- [8] Rahnama, B., Sari, A., Makavandi, R., (2013); "Countering PCIe Gen. 3 Data Transfer Rate Imperfection Using Serial Data Interconnect", *Special Issue of International Journal of New Computer Architectures and Their Applications*, Vol. 3, No. 1, ISSN: 2220-9085. (Refereed International Journal)
- [9] Manuel Carcenac and Behnam Rahnama, Parallel Resolution of Dense Linear Systems with Cuda and Cublas, Journal of Electrical and Computer Sciences, Vol. 1, No. 1, June 2013, ISSN:1308-237X pp. 63-69 (Refereed International Journal)
- [10] Sari, A. Rahnama, B. (2013); "Dynamic Source Routing Management for Mobile Networks", *Jökull Journal*, ISSN: 0449-0576. (SCI-E)
- [11] Atilla Elçi and Behnam Rahnama, Ramin Bakhshi, Hamid Mir-Mohammad Sadeghi: A Novel and Simple-to-implement Friend or Foe Identification System in Multi-robot battlefield, SDU
- [12] International Journal of Technological Sciences, Vol. 3, no:1(2011)., Isparta, Turkey. (Refereed International Journal)
- [13] Atilla Elci, Behnam Rahnama, and Amirhasan Amintabar: Tracking Reported Vehicles in Traffic Management and Information System using Intelligent Junctions. In Special Issue on Vehicular

Conferences

- [1] L. Rahn timer, B. Rahn timer, M. Saberi, M. Rahn timer, A. Ostovari, Y. Saberi, "Lumbar multifidus sarcopenia: A missing link in age-related low back pain and a new frontier for AI-driven imaging", 12th Interdisciplinary World Congress on Low Back & Pelvic Girdle Pain, Portugal 2026.
- [2] B. Rahn timer, F. Heiran, "Estella: A Humanoid Robot for Enhanced Human-Robot Interaction.", 6th Shiraz International Congress on Mobile Health, 2025.
- [3] B. Rahn timer, F. Heiran, A. Karimi, M. Radmehr, H. Zakeri, "Revolutionizing telemedicine with Painverse: The Role of Telerobotics in Addressing the Physician Shortage", 6th Shiraz International Congress on Mobile Health, 2025.
- [4] B. Rahn timer, F. Heiran, L. Rahn timer; Estella Humanoid Robot: An Anatomical Replicant; 2nd World Congress on Rheumatology and Orthopedics, Paris, France, 26-27 September 2019, pp 48.
- [5] B. Rahn timer, H. Amoozegar, Application of robotic technology in cardiology and cardiac surgery; 7th international Kowsar Hospital Congress on "Updates of: how to approach, how to manage cardiovascular diseases, April 2016, Shiraz, Iran
- [6] B. Rahn timer, Robotics in Rehabilitation; 16th Specific Spinal Physical Therapy Seminar, USWR, 23-24 December 2015, Tehran, Iran
- [7] L. Rahn timer, A. Rezasoltani, M. Khalkhali, F. Noori Kochi, A. Akbarzadeh, B. Rahn timer; Intrarater Reliability of a New Software for Recording the Muscle Strength and Size in a Synchronized Way, 7th World Congress of Biomechanics Boston, Massachusetts July 6-11, 2014
- [8] Behnam Rahn timer, Yunus Kiran, Raz Dara, Countering AES static s-box attack, SIN '13 Proceedings of the 6th International Conference on Security of Information and Networks, Pages 256-260 ISBN: 978-1-4503-2498-4
- [9] Arif Sari, Behnam Rahn timer, Addressing security challenges in WiMAX environment, SIN '13 Proceedings of the 6th International Conference on Security of Information and Networks, Pages 454-456, ISBN: 978-1-4503-2498-4
- [10] Rahn timer, B., Sari, A., Makvandi, R. (2013); "Countering PCIe Gen. 3 Data Transfer Rate Imperfection Using Serial Data Interconnect", *The IEEE International Conference on Technological Advances in Electrical, Electronics and Computer Engineering (TAECE2013)*, Vol X, May 09-11, Turkey.
- [11] Behnam Rahn timer, Atilla Elci, and Cankat Özermen, "Design and Implementation of Cooperative Labyrinth Discovery Algorithms in Multi-Agent Environment", *The International Conference on Technological Advances in Electrical, Electronics and Computer Engineering (TAECE2013)*, Vol X, May 09-11, Turkey.
- [12] Sari, A., Rahn timer, B. (2013); "Simulation of 802.11 Physical Layer Attacks in MANET", *The 5th International Conference on Computational Intelligence, Communication Systems and Networks (CICSyN2013)*, Volume 16, June 05-07, Spain.
- [13] Sari, A., Rahn timer, B. (2013); "Dynamic Route Forwarding Mechanisms in Multi-hop Wireless Networks", *IEEE 24th International Symposium on Personal, Indoor and Mobile Radio Communications: Special Sessions (PIMRIC13)*, Volume 13, September 08-11, United Kingdom.
- [14] Behnam Rahn timer, Makbule Canan Özdemir, Yunus Kiran, Atilla Elçi, "Design and Implementation of a Novel Weighted Shortest Path Algorithm for Maze Solving Robots", ESAS 2013: The 8th IEEE International Workshop on Engineering Semantic Agents - Intelligence & Robotics, Held in

conjunction with COMPSAC, the IEEE Signature Conference on Computers, Software & Applications - July 22-26, 2013 - Kyoto, Japan

- [15] Behnam Rahnema, Kemal Ebedi, and Hamid M. Sadeghi, "Self-Corrective Cascade Control Obstacle Avoidance and Deviation Correction System for Robotics Systems" 2013 IEEE RO-MAN: The 22nd IEEE International Symposium on Robot and Human Interactive Communication, Gyeongju, Korea, August 26-29, 2013
- [16] B. Rahnema, R. Makvandi, "Designing Energy Efficient Ultra-Dense Scalable Supercomputing Cluster for the Parallelization of the Dense Systems" Poster Presentation, Third Annual International Conference on Energy Aware Computing, organized by the Middle East Energy Efficiency Research Center (MER). 2012 ICEACB.
- [17] Rahnema, R. Makvandi, "Designing Ultra-Dense Scalable GPGPU Supercomputing Node for the Parallelization of Dense Systems", EEECS'12: 7th International Symposium on Electrical & Electronics Eng. and Computer Systems. 2012
- [18] Behnam Rahnema, Atilla Elci, Shadi Metani; An Image Processing Approach to Solve Labyrinth Discovery Robotics Problem, IEEE COMPSAC 2012, 16-20 July 2012, Izmir, Turkey.
- [19] Atilla Elçi, Behnam Rahnema, Reza Makvandi; Microcontroller-Based Implementation of parseKey+ for Limited Resources Embedded Applications, ACM SINCONF 2011, 14-19 November 2011, Sydney, Australia, ISBN: 978-1-4503-1020-8.
- [20] A. Cellatoglu, M. Sari, B. Rahnema, K. Balasubramanian, Remote Sensing of a Geographical Environment with Portable Radars and Satellite Link, Third International Conference on Advances in Recent Technologies in Communication and Computing, ARTCom 2011, IET-Digital Lib. 14-15 Sep 201, Bangalore, India, pp: 137 – 141
- [21] Elçi, A., Rahnema, B., Bakhshi, R., and Sadeghi, H. M. (2011): A Secure Scheme for Friend or Foe Identification in Battle Scene. The Third International Conference on Wireless & Mobile Networks (WiMo-2011), June 26 ~ 28, 2011, by www.airccse.org, Ankara, Turkey. (Invited talk).
- [22] Peyman Aghajamaliaval, Reza Makvendi, Behnam Rahnema; Analysis of processing gain and number of symbols per slot in DS-CDMA closed loop power control systems, The 6th International Symposium on Electrical and Electronics Engineering and Computer Systems (EEECS'10), European University of Lefke, Gemikonağı, Northern Cyprus, 25-26 Nov 2010.
- [23] Manuel Carcenac, Behnam Rahnema; Application to the parallelization of the resolution of a dense linear system, The 6th International Symposium on Electrical and Electronics Engineering and Computer Systems (EEECS'10), European University of Lefke, Gemikonağı, Northern Cyprus, 25-26 Nov 2010.
- [24] Behnam Rahnema, Atilla Elçi, Hamid Mir-Mohammad Sadeghi, Ramin Bakhshi; Semantic Intelligent Decision Maker Self Localizing Client CLDR, The 6th International Symposium on Electrical and Electronics Engineering and Computer Systems (EEECS'10), European University of Lefke, Gemikonağı, Northern Cyprus, 25-26 Nov 2010.
- [25] Behnam Rahnema, Atilla Elci, SelcukCelik; Securing RFID-Based Authentication Systems Using ParseKey+, 3rd International Conference on Security of Information and Networks (SIN'10), Sept. 7–11, 2010, Taganrog, Rostov-on-Don, Russian Federation.
- [26] Atilla Elçi and Behnam Rahnema: AWGN based Seed for Random Noise Generator in ParseKey+. In Proc. Int'l Conf. on Security of Information and Networks (SIN 2009) 6-10 October 2009, Salamis Bay Conti Resort Hotel, Gazimagusa, TRNC, North Cyprus. pp: 244-248, ACM Press, 2009

- [27] Behnam Rahnema, Atilla Elçi, Ramin Bakhshi, Alirad Malek, and Arjang Ahmadi: Microcontroller-based AWGNG for Security Enhancement of Embedded Real-time Web Services. In Proc. 2nd IEEE International Workshop on Real-Time Service-Oriented Architecture and Applications (RTSOAA 2009) in conjunction with 33rd COMPSAC, 20 July 2009, Seattle, WA, USA. IEEE CPS.
- [28] Atilla Elçi and Behnam Rahnema, Ramin Bakhshi, Hamid Mir-Mohammad Sadeghi: A Novel and Simple-to-implement Friend or Foe Identification System in Multi-robot battlefield, 2nd International Joint Robotics Competition and Symposium (IJRCS 2009) 20-24 May at Suleyman Demirel University, Isparta, Turkey.
- [29] Atilla Elçi, Behnam Rahnema, Saman Kamran. (2008). Defining a Strategy to Select Either of Closed/Open World Assumptions on Semantic Robots. *COMPSAC2008*. Turku, Finland: IEEE. July 28 - August 1, 2008
- [30] Elçi Atilla, Rahnema Behnam, and Bahreini Kiavash; Embedding Matrices Ontology into Math Software Engines to Support Reasoning and Mission Oriented Calculation in Developing Semantic Agents, The International Conference on Semantic Web and Web Services (SWWS'08), Monte Carlo Resort, Las Vegas, Nevada, USA (July 14-17, 2008).
- [31] Atilla Elçi and Behnam Rahnema (2008): Securing the Enterprise Semantic Web Resources: Towards Secured OWL? In Proc. 10th Information Security International Research Conference (ISIRC'08), 23 – 27 June 2008, Taganrog, Russia. Vol. 1, pp: 302-308. Invited Paper.
- [32] Elçi Atilla, Rahnema Behnam; Human-Robot Interactive Communication Using Semantic Web Technologies in Design and Implementation of Collaboratively Working Robots, 16th IEEE International Symposium on Robot and Human Interactive Communication, IEEE Roman 2007, 26-29 August 2007, Jeju Island, Korea, Notification of acceptance: April 30, 2007
- [33] B. Rahnema and A. Elçi: "ParseKey+: a Five-Way Strong Authentication Procedure as an Approach to Client/Server Impersonation Avoidance Using Steganography for Key Encryption", in Proc. the 2007 International Conference on Security and Management (SAM'07), June 25-28, 2007, Las Vegas, USA, in the federated conferences The 2007 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'07). pp: 97-106.
- [34] Elçi Atilla, Rahnema Behnam, Applying ParseKey+ as an approach to resolve imperfect counter utilization in IEEE802.11i, International Conference on Security of Information and Networks (SIN 2007) May 8-10, 2007, Gazimagusa, TRNC, Turkey
- [35] Elçi, Atilla and Rahnema, Behnam; Applying Semantic Web in Engineering a Modular Architecture for Design and Implementation of a Cooperative Labyrinth Discovery Robot, 4th FAE International Symposium on Computer Science and Engineering, European University of Lefke, 30 Nov - 1 Dec 2006, Gemikonağı, Northern Cyprus.
- [36] Elçi, Atilla, Rahnema, Behnam, and Amintabar, Amirhasan; Security through Traffic Network: Tracking of Missing Vehicles and Routing in TMIS using Semantic Web Services, The Second IEEE International Conference on Technologies for Homeland Security and Safety (TEHOSS 2006) 09-13 October 2006, Istanbul, Turkey.
- [37] Rahnema, Behnam and Elçi, Atilla; Upon human-robot inter communication, RO-MAN 06 Robot Companion Design Contest, Proc. the 15th IEEE International Symposium on Robot and Human Interactive Communication, 6-8 September 2006, University of Hertfordshire, Hatfield, UK.

- [38] Elçi, Atilla and Rahnema, Behnam; XMLEase: A Novel Access- and Space-Efficiency Model for Maintaining XML Data in Relational Databases, 2006 International Conference on Semantic Web and Web Services (SWWS'06) June 26-29, 2006, Las Vegas, USA
- [39] Rahnema, Behnam and Elçi, Atilla; A Novel No-Latency and Simple-to-Implement Packet Loss Recovery Technique for Multimedia Streams, ISCN 2006 IEEE 7th International Symposium on Computer Networks, (ISCN'06), 16-18 June 2006, Istanbul, Turkey.
- [40] Elçi, Atilla and Rahnema, Behnam; Intelligent Junction: Enhancing Quality of Life through Traffic Management, Proc. YvKB'06 4th Congress on Informatics in Built and Municipality, Ankara, 8-9 June 2006, p.: 67-74, TBD Publications, ISBN: 9944-5291-0-9 (in Turkish).
- [41] Elçi, Atilla and Rahnema, Behnam; XML Ease- A Speed Efficient Approach to Courseware Data Representation in Relational Databases, Proc. 6th International educational Technology Conference", IETC 2006, Vol. 2, pp: 634-643, 19-21 April 2006, Gazimagusa, Northern Cyprus.
- [42] Elçi, Atilla and Rahnema, Behnam; Considerations on a new Software Architecture for Distributed Environments using Autonomous Semantic Agents, Proc. 29th COMPSAC, IWSC 2005, 26-28 July 2005, Edinburgh, UK, IEEE Press, ISBN: 0-7695-2413-3, ISSN: 0730-3157, pp.: 133-138.
- [43] Elçi, Atilla and Rahnema, Behnam; ParseKey, a New Approach to Unbreakable Secure Authentication Service, ABG2005, National Symposium on Network and Information Security, pp.108-113, 9-12 June 2005, Istanbul, Turkey.

Books and Book Chapters

- [1] Hierarchical Data in RDBMS: A New Horizon for Data Storage and Retrieval, Behnam Rahnema, LAP LAMBERT Academic Publishing (September 2011), ISBN-13: 978-3846517604 Available online at Amazon.com
- [2] Behnam Rahnema, Arif Sari, and Marwan Yassin Ghafour; Solving SSL Security Vulnerability by Applying ECC Authentication, Handbook of Research on Network Security Attacks and Countermeasures. (2015)
- [3] Behnam Rahnema, Arif Sari, and Raz Dara Amin; Countering AES Vulnerabilities, Emerging Security Solutions Using Public Key and Private Key Cryptography: Mathematical Concepts. (2015)
- [4] Birim Balci Demirci, Behnam Rahnema, and Atilla Elçi; New Trends in Semantic Oriented Cloud Based Educational Systems Handbook of Applied Learning Theory and Design in Modern Education. (2015)
- [5] Sari, A., Rahnema, B., "Security Issues in Mobile Wireless Networks", Security for Multi-hop Wireless Networks, Averbach Publications, Taylor & Francis Group, January 2013.
- [6] A. Elçi & B. Rahnema (2009): Semantic Robotics: Cooperative Labyrinth Discovery Robots for Intelligent Environments. In Complex Systems in Knowledge-Based Environment: Theory, Model, and Application (Editors: A. Tolc & L. C. Jain) in Series: Studies in Computational Intelligence, Vol. 168 by Springer Publishing. 272 p. 113 illus., Hardcover. ISBN: 978-3-540-88074-5. pp: 163-198.
- [7] Atilla Elçi and Behnam Rahnema (2009): Towards Semantically Intelligent Robots. In Advances in Human-Robot Interaction, ISBN 978-953-7619-X-X. In-TECH Publishers.

PhD Theses:

- [1] Reza Makvandi (EMU), Design and Implementation of Ultra-Dense scalable GPGPU Supercomputing node for the parallelization of the resolution of a dense linear system, Doctor of Philosophy, Eastern Mediterranean University (Discontinued September 2013)
- [2] Meltem Kurt (Kocaeli), Design and Implementation of Semantic Reasoning Engine based on Four-Valued Logic, Doctor of Philosophy, Eastern Mediterranean University (Discontinued September 2013)
- [3] Mohsen Mohammadi (EMU), Secure Data and Voice Communication Protocol over Cellular Network, Doctor of Philosophy, Eastern Mediterranean University (Discontinued September 2013)

MSc Theses:

- [1] Marwan Ghafour (EUL), Countering RSA imperfection using Elliptic Curve Cryptography Technique, Master of Science in Computer Engineering, European University of Lefke (Graduated 2013)
- [2] Raz Dara (EUL), Countering AES S-Box Vulnerability, Master of Science in Computer Engineering, European University of Lefke (Discontinued May 2013)
- [3] Kemal Ebedi (EUL), Self-Corrective Cascade Control Obstacle Avoidance and Deviation Correction System for Robotics Systems, Master of Science in Electrical and Electronic Engineering, European University of Lefke (Graduated 2012)
- [4] Roghayeh Dehghani (SRBIAU), Implementation of $ALCK_{EF}$ Reasoning Engine through Pellet for Semantic Web based Information Retrieval, Science and Research Branch Azad University of Tehran (Graduated 2012)
- [5] Reza Makvandi (EMU), Microcontroller-based Implementation of ParseKey+: a Multi-Way Strong Authentication Procedure as an Approach to Client/Server Impersonation Avoidance for Embedded Applications, Master of Science in Electrical and Electronics Engineering, Eastern Mediterranean University (Graduated 2011)
- [6] Cankat M. Özermen (EUL), Implementation of $ALCK_{EF}$ as Core of Decision Making in Collaborative Micro-mouse Robotics, Master of Science in Computer Engineering, European University of Lefke (Graduated 2011)
- [7] Andyson Utomudo (EUL), Design and Implementation of Digital Menu for Restaurants, European University of Lefke (Graduated 2011)
- [8] Ibukun Eweoya (EUL), Countering Vulnerabilities of Advanced Encryption Standard (AES), European University of Lefke (Graduated 2011)
- [9] Shadi S. M. Metani (EUL), Cooperative Labyrinth Discovery Robotics based on Solving Uncharted Maze through Image Processing Techniques, European University of Lefke (Graduated 2011)
- [10] Mustafa Sarı (EUL) Design and Implementation of Self-Powered Remote Sensing Nodes with Ability of Transmitting Acquired Data Over Satellite, European University of Lefke (Discontinued 2011)

Courses Taught

Over the course of his academic career, Professor Rahnema has designed and taught undergraduate and graduate courses in computer engineering, artificial intelligence, robotics, cybersecurity, software engineering, computer architecture, and embedded systems.

Computer Science & Software Engineering

- Object-Oriented Programming in C++
- Data and File Structures
- Software Engineering
- Programming Languages Design
- Automata Theory
- Database Design

Computer Systems & Architecture

- Operating Systems Design
- Computer Organization and Architecture
- Microprocessor Systems
- Embedded System Design
- Parallel and Distributed Programming
- Advanced Computer Architecture

Artificial Intelligence & Robotics

- Artificial Intelligence
- Introduction to Robotics
- Advanced Topics in Robotics
- Machine Learning
- Deep Learning
- Intelligent Healthcare Systems
- Semantic Intelligence and Neuro-Symbolic AI
- AI Ethics

Cybersecurity & Networks

- Cryptography and Network Security
- Database Security
- Computer Communication and Networks

Emerging Technologies

- High-Performance Computing (HPC)
- AI for Healthcare
- Technology Entrepreneurship and Commercialization
- Research Methodology
- Startup Engineering / Venture Creation

Academic Leadership & Professional Service

Academic Infrastructure Development

Founded the CUDA Research and Teaching Center, Cognitive Robotics Laboratory, Supercomputing Laboratory, and IEEE and ACM Student Branches at Okan University (2013).

Editorial Responsibilities

- Associate Editor, 6th International Symposium on Electrical and Electronics Engineering and Computer Systems (EEECS 2010).
- Editorial production and proceedings preparation for the International Conference on Security of Information and Networks (SIN 2007).
- Journal production and manuscript formatting, Journal of Electrical and Computer Sciences (2013).

Conference Leadership

- Conference Executive Co-Chair and Board Member, SINCONF 2007 – SIN2026
- Chair, Mobile and Embedded Supercomputing Workshop (MES2015), held in conjunction with IEEE Computer Software and Applications Conference.
- Symposium Co-Chair, International Joint Robotics Competition and Symposium (IJRCS 2009).
- Assistant Chair, International Joint Robotics Competition (IJRC 2008).
- Program Committee Member, COMPSAC 2013.
- Conference Co-Chair, ESAS 2013.
- Conference Co-Chair, IJRCS 2013.

Major Research Projects

Artificial Intelligence & Semantic Intelligence

- Hybrid Scheme for CWA/OWA Reasoning (2008)
- Applying Semantic Web Technologies to Cooperative Labyrinth Discovery Robots (2006)

Robotics & Intelligent Systems

- Cooperative Labyrinth Discovery Project (2005–2006)
- Cooperative Mini Fighter Robots (2008)
- Self-Corrective Compass Cascaded Control System for AGVs (2008)

High-Performance Computing & Computer Architecture

- Aria Heterogeneous Computing Infrastructure (2024–Present)

- GPU-based Supercomputer Architecture (2011)
- CUDA Dense Matrix Computation Library (2011)
- High-Performance Computing for DNA Species Identification (2014)
- 128-Node Parallel Cluster using MPI-2 (2005)

Intelligent Infrastructure

- Universal Campus Automation System (2012)
- Campus Automation using Plone CMS and Microsoft SharePoint (2008)

Intelligent Networks & Embedded Systems

- RF Wireless Sensor and Actuator Network for Border Monitoring (2016)

Early Systems Software

- Persian Web Mail Server (2004)
- DaemonEX Mail Server Platform (2004)

Honors, Awards, Distinctions & Competitive Grants

Academic Distinctions

- 2016 Appointed Full Professor, Faculty of Engineering, CSU.
- 2013 Promoted to Associate Professor in Computer Engineering.
- 2012 Elevated to IEEE Senior Member.
- 2010 Appointed Assistant Professor, Department of Computer Engineering, EUL

Competitive Research Grants

- 2006 Principal Investigator, Cooperative Labyrinth Discovery (CLD) Project, funded by the Ministry of National Education and Culture (TRNC), 7-month competitive grant.
- 2005 Autonomous Semantic Agents Project, funded by the Ministry of Higher Education and Culture (TRNC).

Awards & Honors

- 2009 Jury's Special Prize for Technical Merit, Cooperative Labyrinth Discovery Client Robots, 2nd International Joint Robotics Competition and Symposium (IJRCS), Turkey.
- 2009 Second Place, Mini Sumo Competition, IJRCS.
- 2009 Third Place, Free Style Robotics Competition, IJRCS.
- 2008 Fourth Place, Innovation Project Competition, GMTGB Teknopark, North Cyprus.

- 2007 First Place, Free Style Category, Cooperative Labyrinth Discovery Robot, METU Robotics Days, Ankara.
- 2006 Special Prize for Technical Merit, Robot Companion Design Contest, IEEE RO-MAN, UK.
- 2003 First Place, National Robotics Competition (Labyrinth Discovery), Iran.

Patents

- 2023 B. Rahnama and F. Heiran, Multi-Purpose Expandable Computing Case with Detachable Enclosures. National Patent (ipm.ssaa.ir), Application No.: 140150140003005180, Apr. 5, 2023.
- 2022 B. Rahnama, E. Arianyan, D. Maleki, S.M. Nematollah-Zadeh, A. Nezarat, Hardware and Software Infrastructure Architecture for High Performance Computing with a Focus on Cloud Computing, Artificial Intelligence and Big Data Based on Hybrid of Virtual and Physical Resources. National Patent (ipm.ssaa.ir), Application No.: 140050140003006927, Jun. 16, 2022.

Membership of Professional societies

- ACM ID: 4259800, Association for Computing Machinery, brahnama@acm.org
- IEEE ID: 80505661, Senior, Institute of Electrical and Electronics Engineers, rahnama@ieee.org
IEEE Robotics and Automation Society ;
IEEE Computer Society
- IFIA ID: IR2023SEP1784BXR, Inventor, International Federation of Inventors Associations