

**ACADEMIC
CURRICULUM VITAE**

1. Name - Surname: Elbrus Imanov

2. Title: Assist.Prof. Dr.

3. Educational Background:

Degree	Department/Program	University	Year
Bachelor's	Mechanical engineering	Azerbaijan Technical University	1990
Master's	Mechanical engineering	Azerbaijan Technical University	1990
PhD	Information Technology Computer Science	Azerbaijan Technical University	2002

4. Master's / PhD Thesis

4.1. Master's Thesis Title and Thesis Advisor(s):

4.2. PhD Thesis / Medical Specialty Thesis Title and Advisor(s): Development of Planning, Navigation and Control System for Intelligent. Prof. Dr. Qurbanov R.S.

5. Academic Titles:

Date of Assistant Professorship: 2004

Date of Associate Professorship:

Date of Professorship:

6. Supervised Master's and PhD Theses:

6.1. Master's Theses

- 1 Neural Network based Forecasting of Water Production.
2. Neural Network based Lie Detection on Pupil Size.
3. Feature extraction for voice recognition.
4. Gaze detection for patient communication
5. Diabetes diagnoses system by using VP Expert system.

6. Signature Recognition based on backpropagation Neural Network
7. Affective Computing in BCI applications EEG based emotion recognition feature extraction and classification through bidimensional and nonlinear techniques
8. Plants Classification Using SVM and KNN Classifiers.
9. Development of Malaria Diagnosis System Using VP Expert System.
10. Anwar A Ibra A Backpropagation Neural Network for the Left Ventricle Detection
11. Development of a System to Identify Optimal Locations for Safe Water Wells in Africa Using VP Expert
11. Prediction of Secondary Structure of the Protein
12. Diagnosis of Chronic Hepatitis B Using Expert System
13. Celiac Diagnosis by Using Expert system
14. A Prosthesis Control Approach using Mobile Phone and its Implementation on a Bionic ARM.
15. Malaria Fever Diagnosis System with VP Expert System using Rule Based Approach
16. A Microprocessor Based gas leakage Detection system in the oil and gas industry.
17. Ebola Disease Diagnosis with Expert System
18. Automated Classification of brain tumor using deep learning and magnetic resonance imaging (MRI)
19. Apply Multi-Layers Feature Fusion in SSD for Small Objects Detection.
20. Intelligent Fuzzy System for Early Prostate Cancer Diagnosis.
21. Hepatitis B Diagnosis by using Esplan
22. Enhancing Reinforcement Learning Behavior by Pre-Training the Model
23. Deep Fakes Generation using LSTM based generative Adversarial Networks.
24. Navigation of Autonomous Car using Image Processing.
25. Prediction and Detection of COVID 19 using Datasets and X-ray Images by Deep Learning Algorithm.
26. Fuzzy logic controller design for liquid level system.
27. Smart Intrusion Prevention System for Home Security Monitoring using Raspberry PI
28. Detection of Plant Leaf Diseases using Sequential Convolutional Neural Network

6.2. PhD Theses

1. U-NET ARCHITECTURE FOR SEGMENTATION OF OVERLAPPING RED BLOOD CELLS IN MALARIA BLOOD SMEAR IMAGES
2. Unsupervised Classification of Chest Pneumonia using β -Variational Convolutional Auto encoders

7. Publications

7.1. Articles Published in International Peer-Reviewed Journals (SCI, SSCI, AHCI, ESCI, Scopus)

1. R.H. Abiyev, K. Uyar, U Ilhan, E. Imanov, Assessment of food security risk level using type 2 fuzzy system. 12th International Conference on Application of Fuzzy Systems and Soft Computing Vienna, Austria 2016
2. E. Imanov, O. Ozkilic, G. Imanova Flight information system by using fuzzy expert inference. The 9th International Conference on Theory and Application of Soft Computing, Computing with Words and Perception ICSCCW-2017, Budapest, Hungary, 2017.
3. F. V. Nurçin, E. Imanov, A. Işın, D. U. Ozsahin, Lie detection on pupil size by back propagation neural network. The 9th International Conference on Theory and Application of Soft Computing, Computing with Words and Perception ICSCCW-2017, Budapest, Hungary, 2017.
4. Elbrus Imanov, Abdallah Khaled Alzouhbi “Machine Learning Comparative Analysis for Plant” Classification 13th International Conference on Theory and Applications of Fuzzy Systems and Soft Computing ICAFS – 2018, Warsaw, Poland 2018,
7. Elbrus Imanov, Hamit Altıparmak, Gunay E. Imanova “Rule Based Intelligent Diabetes Diagnosis System” 13th International Conference on Theory and Applications of Fuzzy Systems and Soft Computing ICAFS – 2018, Warsaw, Poland 2018,
5. Elbrus Imanov , Ezekiel Daniel Knowledge Base Intelligent System of optimal locations for safe water wells. 10th International Conference on Theory and Application of Soft Computing, Computing with Words and Perceptions - ICSCCW-2019 Prague, Czech Republic, 2019.
6. Elbrus Imanov, Anwar A Ibra Artificial Neural Network for the Left Ventricle Detection 10th International Conference on Theory and Application of Soft Computing, Computing with Words and Perceptions - ICSCCW-2019 Prague, Czech Republic, 2019.
7. Elbrus Imanov Fidelis Jumare Asengi Artificial Intelligence for Lassa Fever Diagnosis System The 14th International Conference on Application of Fuzzy Systems, Soft Computing and AI tools – ICAFS2020 Budva - Montenegro. 2020.
8. Elbrus Imanov, RittaShaheen, Soft Computing for Prediction of Secondary Structure of the Protein The 14th International Conference on Application of Fuzzy Systems, Soft Computing and AI tools – ICAFS2020 Budva - Montenegro. 2020.
9. Elbrus Imanov, Ehsan Faramarzi A Strategy of Prosthesis Control using Artificial Intelligent and Execution on Robotic fingers The world conference "Intelligent systems for industrial automation-WCIS" November 26-28, 2020 in Tashkent.
10. Elbrus Imanov, Zubair Shah, Applying Multi-Layers Feature Fusion in SSD for Detection of Small-scale Objects 11th International Conference on Theory and Application of Soft Computing, Computing with Words and Perceptions and Artificial Intelligence Your chapter in [978-3-030-92126-2, ICSCCW 2021, LNNS 362, schedule for paper approval (511990_1_En, Chapter 74)]
11. Elbrus Imanov, Vidura Lakshitha Liyanagamage Using Deep Learning Algorithm for Prediction and Detection of Covid-19 15th International Conference on Applications of Fuzzy Systems, Soft Computing and Artificial Intelligence Tools – ICAFS-2022
12. Seraj Mohammad, Elbrus Imanov, Khaled Almezghwi Analysis of knee Osteoarthritis Grading Using Deep Learning 15th International Conference on Applications of Fuzzy Systems, Soft Computing and Artificial Intelligence Tools – ICAFS-2022
13. Elbrus Imanov, Mohamad Essa Fuzzy Logic Controller Design for Liquid Level System 16th International Conference on Applications of Fuzzy Systems, Soft Computing and Artificial Intelligence Tools.
14. Rahib H. Abiyev, Kaan Uyar, Umit Ilhan, Elbrus Imanov, and Esmira Abiyeva, “ Estimation of Food Security Risk Level Using Z-number Based Fuzzy System”, Journal of Food Quality, vol. 2018, Article ID 2760907, 9 pages, 2018.

15. Fatih Veysel Nurcin, Elbrus Imanov Segmentation of Overlapping Red Blood Cells for Malaria Blood Smear Images by U-net Architecture Journal of Medical Imaging and Health Informatics ISSN: 2156-7018 (Print); EISSN: 2156-7026 (Online).2021.

16. Fatih Veysel Nurcin, Elbrus Imanov "Selective Hole Filling of Red Blood Cells for Improved Marker-Controlled Watershed Segmentation" Hindawi Scanning Volume 2021, Article ID 5678117, 9 pages

17. Serag Mohamed Akila, Elbrus Imanov, Khaled Almezghwi Investigating Beta-Variational Convolutional Autoencoders for the Unsupervised Classification of Chest Pneumonia, Journal Diagnostics *Diagnostics* 2023, 13(13), 2199 28 June 2023

7.2. Articles Published in Other International Peer-Reviewed Journals

7.3. Papers Presented at International Scientific Conferences and Published in Conference Proceedings

7.4. National/international Books or Book Chapters

7.5. Articles Published in National Peer-Reviewed Journals

1. E. Imanov. 'Expert system for hotel registration problem'. ICSCCW – 2015 Eighth International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control. Antalya, Turkey 2015

1. R.H. Abiyev, K. Uyar, E. Imanov, R. Dover, "Behavior based mobile robot navigation in 3d workspace" Tenth International Conference on Application of Fuzzy Systems and Soft Computing Lisbon, Portugal, 2012

1. E.B. Imanov, "Line following robot control using IF-THEN rule" International Symposium on Advances in Applied Mechanics and Modern Information Technology (ISAAM&MIT) 2011, Baku, Azerbaijan.

2. R.S. Gurbanov, R.A. Aliev, E.B. Imanov. "Fuzzy intelligent transport robot control system". Proceedings of the International Conference on Application of Fuzzy Systems-ICAFS-94 held at the University of Tabriz, Iran, 1994.

2. E.B. Imanov, H.K. Najafi, K.R. Alieva. "Neuro-fuzzy controller for control of industrial robot" Proceedings of the International Conference on Application of Fuzzy Systems-ICAFS-94 held at the University of Tabriz, Iran, 1994.

3. E.B. Imanov, R.S. Gurbanov. "Neural Identification and Control of the Manipulators" Second International Conference on Application of Fuzzy Systems and Soft Computing, ICAFS'96, Siegen, Germany-June 25-27, 1996.

4. R.A. Aliev, R.S. Gurbanov, E.B. Imanov, Akif V.A. "Optimal path planning for the mobile intelligence robot with fuzzy resolution principle in presence of static and dynamic obstacles" Third International Conference on Application of Fuzzy Systems and Soft Computing, ICAFS'98, Wiesbaden, Germany-October, 5-7, 1998.

5. R.S. Gurbanov, E.B. Imanov, Akif V.A. "Planning of the trajectory of an industrial robot by means of fuzzy resolution" Fourth International Conference on Application of Fuzzy Systems and Soft Computing, ICAFS'2000, Siegen, Germany-June 27-29, 2000.

6. R.A. Aliev, R.S. Gurbanov, E.B. Imanov, Akif V.A. "Planning of the behavior of an industrial robot by genetic algorithm" World Conference on Intelligent Systems for Industrial Automaton, WCIS-2000, Tashkent, Uzbekistan – September 14-16, 2000.
7. R.S.Gurbanov, K.R. Aliyeva, E.B Imanov." Computer simulation and experimental investigation of intellectual industrial robot " First International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control, ICSCCW' 2001 Antalya, Turkey, June 6-8, 2001.
8. R.S.Gurbanov, E.B. Imanov, Akif V.A, F. T. Aliew. "Planning of the end effectors trajectory of an industrial robot by means of fuzzy resolution and genetic algorithm" First International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control, ICSCCW' 2001 Antalya, Turkey, June 6-8, 2001.
- 9.R.S.Gurbanov, E.B. Imanov. " Fuzzy-Genetic Approach Based Path Planning of Intelligent Robot" Fifth International Conference on Application of Fuzzy Systems and Soft Computing ICAFS – 2002 Milan, Italy, September, 17 – 18, 2002.
10. R.S.Gurbanov, E.B. Imanov. " Fuzzy-Neuro Control System for Intelligent Robot" Second World Conference On Intelligent Systems for Industrial Automation WCIS– 2002 Antalya, Turkey, June 6-8, 2001.
- 11.R.S.Gurbanov, E.B. Imanov, F.T.Aliew."OPTIMAL PATH PLANNING OF INTELLIGENT INDUSTRIAL ROBOT" Second International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control, ICSCCW' 2003 Antalya, Turkey, September, 9 -11, 2003.
12. R.S.Gurbanov, E.B. Imanov. "Navigation system on the bases of neuro-fuzzy technology for intelligent robots" Sixth International Conference on Application of Fuzzy Systems and Soft Computing ICAFS – 2004
13. R.S.Gurbanov, E.B. Imanov. "Soft computing based mobile robot Third world conference on intelligent systems for industrial automation" WCIS – 2004, Tashkent, Uzbekistan 2004
14. R.S.Gurbanov, E.B. Imanov, Akif V. A. "Near-optimal path planning of an industrial robot fuzzy - genetic approach" Third International Conference on Soft Computing, Computing with Words and Perceptions in System Analysis, Decision and Control Falez Hotel, Antalya, Turkey,
15. E.B.Imanov, B.H. Agayev. "Development of navigation system for intelligent robots" Seventh International Conference on Application of Fuzzy Systems and Soft Computing ICAFS -2006, Siegen, Germany 2006
16. E.B.Imanov, F.K Aliev. 'Multicriteria method of decision making on the basis of fuzzy preference relation for tourism service problem'. ISEECE 2006, Nicosia, North Cyprus. 2006.
17. K.R.Aliyeva, E.H.Musayeva, E.B.Imanov. "Intelligent supply chain management system architecture". Proceedings of the Eighth International Conference on Application of Fuzzy Systems and Soft Computing (ICAFS-2008), Helsinki, Finland, September 1-3, pp.319-325, 2008.
18. E.B.Imanov,"Line following robot control using IF-THEN rule" International Symposium on Advances in Applied Mechanics and Modern Information Technology (ISAAM&MIT) 2011, Baku, Azerbaijan .

8. Art and Design Activities

9. Projects

10. Administrative Responsibilities**11. Memberships in Scientific and Professional Organizations****12. Awards****13. Undergraduate and Graduate Courses Taught in the Last Two Years**

Academic Year	Semester	Course Name	Weekly Hours		Number of Students
			Theoretical	Practical	
2021 - 2022	Fall	Soft Computiing	3		16
		Introduction to Artificial Intelligence	3	3	34
		Decision Making	3		20
		Process Control	3		4
		İşlem Kontrol	3		4
	Spring	Real Time Systems	3		25
		Control Systems	3		40
		Programming languages II	3		17
		Decision Making	3		42
		Gerçek zaman sistemleri	3		9
		Kontrol Sistem	3		6
2022 - 2023	Fall	Soft Computiing	3		26
		Introduction to Artificial Intelligence	3	3	35
		Decision Making	3		44
		Process Control	3		2
		İşlem Kontrol	3		7
	Spring	Real Time Systems	3		16
		Control Systems	3		24
		Programming languages II	3		19
		Introduction to Artificial Intelligence	3	3	40
		Kontrol Sistem	3		5
		Real Time Systems	3		16