

# Dr. ARİF SELÇUK ÖĞRENCİ

**e-mail:** ogrenci@khas.edu.tr, ogrenci@ieee.org

**GSM:** ++90-542- 283 4864

<http://webprs.khas.edu.tr/~sogrenci>

**Linkedin:** <https://www.linkedin.com/in/arifselcukogrenci/>



## EDUCATION:

|           |                      |                                                                                           |
|-----------|----------------------|-------------------------------------------------------------------------------------------|
| 1995-1999 | Boğaziçi University, | Department of Electrical and Electronics Engineering, PhD                                 |
| 1992-1995 | Boğaziçi University, | Department of Electrical and Electronics Engineering, MS                                  |
| 1987-1992 | Boğaziçi University, | Department of Electrical and Electronics Engineering, BS<br>Department of Mathematics, BS |

## PROFESSIONAL EXPERIENCE:

|                 |                                                                                                                                                          |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nov. 1999 - ... | Assistant Professor, Kadir Has University, Department of Electrical-Electronics Engineering<br>Director of BYS (Knowledge Management System) (2001-2015) |
| 1992-1999       | Research Assistant, Boğaziçi University                                                                                                                  |

## AWARD:

- Vehbi Koç Foundation, Superior Performance Award for being in the top 20 in the University Entrance Examination, 1987-1992.
- Kadir Has University: Certificate of Appreciation for the Successful Work in Knowledge Management System (2003); Certificate of Appreciation for Academic Success (2004); Certificate of Appreciation for the Successful Work in Interface Development for the Knowledge Management System (2005); Certificate of Appreciation for High Performance in Putting Kadir Has University on the Map (2007, 2008); Certificate of Appreciation for High Performance (2009)
- Award for the Best Design Project under Supervision, in Computer Engineering: 2004, 2009, 2012, 2017 (second degree); in Electrical-Electronics Engineering: 2017, 2018, 2022, 2023 (third degree).
- Kadir Has University Education Award, 2014-2015

## TECHNICAL-PROFESSIONAL TRAINING (last five years):

|                |                                                                                                            |
|----------------|------------------------------------------------------------------------------------------------------------|
| September 2019 | Applied Entrepreneurship Training, certificate by KOSGEB (Directorate for Developing and Supporting SME's) |
| September 2019 | Successful Academic Writing and Publishing Skills Workshop, Charlesworth Knowledge                         |
| January 2020   | Predictive Analytics Modeler 2018, IBM                                                                     |

## CERTIFICATES:

- OCP (Oracle Certified Professional), Internet Application Development
- CCNA (Cisco Certified Network Associate) Instructor
- First Aider
- Work Health and Safety
- Applied Entrepreneurship
- Predictive Analytics Modeler 2018, Mastery Award Badge

## RESEARCH PROJECTS:

|                  |                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10/1993 – 6/1995 | Project member, “Parallel Techniques for Accelerating Simulation of MOS VLSI Circuits,” Boğaziçi University Research Fund.                                                                                                                                                                                                                                                                    |
| 2/1996 - 2/1998  | Project member, “EEEAG-183: Realization of Artificial Neural Networks Using Analog Integrated Circuits,” TÜBİTAK (Turkish Scientific and Technical Research Council). (In this project, an analog neural network integrated circuit has been designed using Mentor Graphics IC Station software in Alcatel-Mietec’s 2.4µm technology, and it has been produced via the Europractise program.) |
| 6/2014 – 12/2015 | Researcher, Self Learning for Mobile GSM Network (Identification of base station information from log data), funded by Vodafone                                                                                                                                                                                                                                                               |

|                 |                                                                                                                                                                                                                                                                                                                       |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9/2019-8/2022   | Researcher, Erasmus+ (KA203-077194), Promoting Deep and Wide Thinking / Early Dual Degrees in Basic Sciences (thinkBS)                                                                                                                                                                                                |
| 1/2022-12/2023  | Researcher, TEYDEB-1505 (Project No: 5210098), Smart Technological Solutions to Predict Customer Complaints about Billing (for GSM company Turkcell Technology)                                                                                                                                                       |
| 9/2022-8/2024   | Principal Investigator, TEYDEB-1505 (Project No: 5220055), Artificial Intelligence Based Decision Support System for Financial Scoring and Crediting of Company Credit Applications (for Koc Finans)                                                                                                                  |
| 9/2022-11/2028  | Instructor, Erasmus Mundus Joint Masters-2022, CyberMACS- Master of Applied Cybersecurity                                                                                                                                                                                                                             |
| 10/2022-10/2026 | Member of Working Groups (Development of bi-and multi-lingual disciplinary literacies across educational levels; Involving Stakeholders in bi/multilingual disciplinary literacies), COST CA-21114 Project: CLIL Network for Languages in Education: Towards bi- and multilingual disciplinary literacies (CLILNetLE) |

## 1 x PhD + 17 x MS THESES ADVISED

### RESEARCH INTERESTS:

- Computational intelligence, machine learning, anomaly detection
- IoT, edge computing
- Effective teaching

### PUBLICATIONS:

#### BOOK

- Sina Balkır, Günhan Dünder, A. Selçuk Öğrenci, **Analog VLSI Design Automation**, CRC Press, June 2003.

#### JOURNAL PAPERS

- İ. Bayraktaroğlu, A.S. Öğrenci, G. Dünder, S. Balkır, E. Alpaydın, "ANNSyS: An Analog Neural Network Synthesis System", *Neural Networks*, pp. February, 1999. (SCI, Q1)
- A.S. Öğrenci, G. Dünder, S. Balkır, "Fault Tolerant Training of Neural Networks in the Presence of MOS Transistor Mismatches," *IEEE Transactions on Circuits and Systems-II: Analog and Digital Signal Processing*, Vol.:48, No:3, pp. 272-281, March 2001. (SCI, Q1)
- A.H. Bilge, O. Pekcan, S. Kara, A.S. Öğrenci, "Epidemic models for phase transitions: application to a physical gel," *Phase Transitions*, Vol.:90, No:9, pp. 905-913 <http://dx.doi.org/10.1080/01411594.2017.1286487>, 2017. (SCI, Q3)
- A. S. Öğrenci, T. Arsan, "Transmitter source location estimation using crowd data," *Computers & Electrical Engineering*, ISSN0045-7906, Vo.:66, No:2, pp. 127-138, <https://doi.org/10.1016/j.compeleceng.2017.09.026>, 2018. (SCI-Exp, Q1)
- A.S. Öğrenci, O. Pekcan, S. Kara, A.H. Bilge, "Mathematical Characterization of Thermo-reversible Phase Transitions of Agarose Gels," *Journal of Macromolecular Science, Part B*, Vol:57, No:5, pp. 364-376, DOI:10.1080/00222348.2018.1463052, 2018. (SCI-Exp, Q1)
- A.H. Bilge, A.S. Öğrenci, O. Pekcan, "Mathematical Models For Phase Transitions In Biogels," *Modern Physics Letters B*, DOI: [10.1142/S0217984919501112](https://doi.org/10.1142/S0217984919501112), 15.3.2019, 2019. (SCI, Q3)
- Y. Karadayi, M. N. Aydın, A. S. Öğrenci, "A Hybrid Deep Learning Framework for Unsupervised Anomaly Detection in Multivariate Spatio-Temporal Data," *Applied Sciences*, 2020, 10(15), 5191, <https://doi.org/10.3390/app10155191> - 28 Jul 2020, 2020. (SCI-Exp, Q1)
- Y. Karadayi, M. N. Aydın, A. S. Öğrenci, "Unsupervised Anomaly Detection in Multivariate Spatio-Temporal Data Using Deep Learning: Early Detection of COVID-19 Outbreak in Italy," *IEEE Access*, vol. 8, pp. 164155-164177, doi: 10.1109/ACCESS.2020.3022366, 2020. (SCI-Exp, Q1)
- Gilik, A., Öğrenci, A.S. & Özmen, A. Air quality prediction using CNN+LSTM-based hybrid deep learning architecture, *Environmental Science and Pollution Research*, 29, 11920–11938, 2022. (SCI-Exp, Q2)
- A. S. Öğrenci, A. H. Bilge, O. Pekcan & M. Incegul, "Epidemic Models for Chemical Gel Phase Transformation: Effect of Optical Measurements with Different Wavelengths," *Journal of Macromolecular Science, Part B*, doi:10.1080/00222348.2023.2203556, 2023. (SCI-Exp)

## CONFERENCE PAPERS (last five years)

- A. S. Ogrenci, "Anomaly Detection in Walking Trajectory," 26. IEEE Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SİU), İzmir, 2-5.5.2018.
- Arif Selçuk ÖĞRENCİ, Atilla ÖZMEN, Batuhan ALBAYRAK, Buket DARICI, Furkan KİRACI, Kerem ERTEZ, "Sickle Cell Anemia Detection," TIPTEKNO2018 Medical Technologies Conference, 8-10.11.2018, Kıbrıs
- Ayşenur Gilik, Batuhan Albayrak, Arif Selçuk Öğrenci, "Clustering of Countries using Computational Models," INTERNATIONAL CONFERENCE ON THEORETICAL AND APPLIED COMPUTER SCIENCE AND ENGINEERING 2018, 23-24.11.2018, Ankara.
- Mhd Tahssin Altabbaa, Arif Selcuk Ogrenci, Erdal Panayirci, and H. Vincent Poor, "Sparse Channel Estimation for Space-Time Block Coded OFDM-Based Underwater Acoustic Channels," 2018 IEEE Global Communications Conference (GLOBECOM), UAE, 2018.
- F. K. Mirza, A. S. Ogrenci, "Using Hybrid Approaches for Credit Application Scoring," 23th IEEE International Symposium on Computational Intelligence and Informatics (CINTI 2023), pp. 111-116, Budapest, Hungary, 2023. DOI: 10.1109/CINTI59972.2023.10382025

## ADMINISTRATIVE DUTIES:

- Vice Dean, Faculty of Engineering and Natural Sciences, (Jul. 2015-Aug. 2019)
- Vice chairman, Dept. of Electronics Engineering (Nov. 1999 – June 2006)
- Member of the Executive Board, Faculty of Engineering (Nov. 1999 – Jun. 2012)
- Member of the Executive Board, School for Technical Vocational Studies (Nov. 1999 – Oct. 2002, Oct. 2006-Feb. 2010)
- Chairman of the Electronics-Communication Program, School for Technical Vocational Studies (Oct. 2002 – Oct. 2006)

## COURSES OFFERED:

Undergraduate: **Engineering Guide and Ethics, Electronic Circuits, Electronics Design Project, Design, Scientific Discoveries and Engineering, Computational Intelligence, Database Management Systems**

Graduate: **Neural Networks and Fuzzy Systems, Advanced Computational Intelligence, Special Topics in Electrical-Electronics Engineering: IoT; Research Methods, Research Methods and Scientific Ethics, Machine Learning and Business Applications, Applied Statistical Methods**

## ACADEMIC/TECHNICAL SERVICES

- Member of TPC (Technical Program Committee), IEEE Int. Conference on Ubiquitous Intelligence and Computing, UIC 2019, UIC 2020, UIC 2021
- Reviewer, IEEE Trans. on Very Large Scale Integration Systems
- Reviewer, IEEE Conference Signal Processing and Communication Applications
- Reviewer, DAC (Design Automation Conference)
- Reviewer, TÜBİTAK 1501-1505 Programs
- Reviewer, TÜBİTAK 1002-1003 Programs
- Reviewer, TÜBİTAK 2209 Program

**LANGUAGES:** Turkish (Native), English (fluent), German (fluent)

## ACTIVITIES:

Turkish music choir, orienteering, gardening, basketball, running.

## PERSONAL INFORMATION:

Date of birth: 22.5.1969

Nationality: Republic of Turkey

Married, two children, military service completed, non-smoker, Class-B driving license (1992)