

Murat Özbayoğlu

Curriculum Vitae

2211. Sok. No 15, Beysukent
Ankara, 06800 Turkey
☎ +90 (535) 616-3735
☎ (+90) (312) 292-4073
✉ mozbayoglu@gmail.com
<http://mozbayoglu.etu.edu.tr>

Areas of Interests

- Applied Computational Intelligence (for Finance, Manufacturing, Chemical Processes, Materials Science)
- Machine/Deep Learning and Pattern Recognition
- Data Science, Big Data Analytics, Internet of Things
- Computer Vision and Image Processing
- Evolutionary Computation

Education

- 1993–1996 **PhD Engineering Management**, *Missouri University of Science & Technology*, formerly known as University of Missouri-Rolla, **GPA: 3.82/4.0**, Rolla, MO, USA.
Thesis: Hierarchical Fingerprint Identification based on an Unsupervised Neural Network
- 1992–1993 **M.S. Engineering Management**, *Missouri University of Science & Technology*, **GPA: 3.91/4.0**, Rolla, MO, USA.
Emphasis on Information Technology, also completed 5 courses in Computer Science.
- 2019–2023 **B.A. Philosophy**, *Istanbul University*, Istanbul, Turkey.
Distant Education, Faculty of Art & Science
- 1987–1991 **B.S. Electrical Engineering**, *Middle East Technical University*, Ankara, Turkey.
Emphasis on Telecommunications and Computer

Employment History

- 2020–2022 **Head of Department**, *Faculty of Engineering*, Department of Artificial Intelligence Engineering.
TOBB University of Economics and Technology (TOBB ETU), Ankara, Turkey
- 2019 **Visiting Scholar**, *E. L. Ginzton Laboratory*, Spilker Engineering and Applied Science Bldg.
Stanford University, Stanford, CA 94305-4088
- 2005– **Faculty**, *Faculty of Engineering*, Department of Computer Engineering.
TOBB University of Economics and Technology (TOBB ETU), Ankara, Turkey
- 2001–2005 **Senior Programmer/Analyst**, *Manufacturing MIS Department*, St. Peters Plant.
MEMC Electronic Materials, Inc., St. Louis, MO, USA
- 2001 **Software/Database Engineer**, *Vizyonsoft*, contracted to ARIA Mobile Services.
Istanbul, Turkey
- 1997–2001 **Software Engineer/Consultant**, *Beyond Inc.*, contracted to MEMC Electronics.
St. Peters, MO, USA
- 1996–1997 **Product Development Engineer**, *Beyond Inc.*, St. Peters, MO, USA.
- 1995–1996 **Industrial Engineer**, *Marathon Electric Co.*, West Plains, MO, USA.
- 1992–1995 **Graduate Research Assistant**, *Smart Engineering Systems Lab*.
University of Missouri-Rolla, Rolla, MO, USA
- 1991 **Technical Department Manager**, *Apple Center Senkron*, Ankara, Turkey.
- 1989 **Intern Electrical Engineer**, *Gold Fields of South Africa*, Johannesburg, RSA.

R&D and Project Experience

Principal Investigator

- 2023–2025 **UDENE - Urban Development Explorations using Natural Experiments**,
European Union HORIZON-EUSPA-2022-SPACE Project with partners from Italy, France, Serbia and Tunisia, Developing an exploration tool for improving urban development activities in member countries using satellite data.
- 2023–2025 **Validation of a longitudinal diagnosis and prognosis for early recurrence of hepatocellular carcinoma in Taiwan and Türkiye - a novel multimodal fusion and interpretable machine learning**,
Joint Research Project with NSTC Taiwan, Developing a novel multimodal fusion and interpretable machine learning for predicting and prognosticating early recurrence of hepatocellular carcinoma.
- 2022–2025 **PREDISURF - PREDictive digital tool for SURFace treatment industry**,
Eurostars 3- Call 2 Project with Teknopar Inc. and 4 partners from Spain and Turkey, Developing and implementing an artificial vision package to improve software for surface treatment lines in the industry.
- 2022–2024 **Predictive Maintenance Estimation and Intelligent Spare Parts Warehouse Management using Artificial Intelligence and Machine Learning on Vehicle Data**,
The Scientific and Technological Council of Turkey, TUBITAK 1711 YZE-2022 project No: 3227015, with TEMSA and Datamind, Developing predictive maintenance models, anomaly detection through usage data, feature analysis and dimensionality reduction using vehicle data.
- 2020–2021 **Dimensionality Reduction for Multidimensional Financial Time Series**,
Citadel, Aperture Program, U.S.A, Developing and implementing deep learning based dimensionality reduction models, performance evaluation of implemented techniques in financial markets.
- 2016–2019 **A Multi-Agent Simulation and Backtesting workbench software for Deep Learning and Evolutionary Algorithm based Options Trading Strategy Optimization**,
The Scientific and Technological Council of Turkey, TUBITAK 1001 project No: 215M248, Analysis and optimization of different option strategies for various market conditions using deep learning and evolutionary computation methodologies.
- 2014–2016 **ATM User Profiling and Menu Optimization**,
Ministry of Science, Industry and Technology SANTEZ project with PROVUS, A.S
Project No: STZ-0367-2013.2, Creating customized user ATM menus optimized for faster navigation and efficiency.
- 2008–2011 **Determination Of Cuttings Transport Properties Of Gasified Drilling Fluids**,
The Scientific and Technological Council of Turkey, TUBITAK 1001 project
Project No: 108M106, Analysis of multiphase gas-liquid-cuttings flow in eccentric annuli for extracting flow characteristics using image processing and computational intelligence techniques.

Researcher

- 2021–2024 **Development of a Hybrid Superconductor/Neuromorphic Microprocessor**,
The Scientific and Technological Council of Turkey, TUBITAK 1001 project
Project No: 121E242, Developing superconductor/neuromorphic hardware for implementing evolutionary optimized machine learning models for spiking neural networks and similar architectures.
- 2021–2023 **AI REGIO - AI4CNC**,
European Union Horizon Project with Teknopar Inc., Developing a Federated Learning System platform for the data collected from the CNC machines to estimate tool wear through AI models and secure data sharing.

- 2020–2023 **FLOWCAM - Floating Offshore Wind Turbine Cable Monitoring**,
European Union H2020 MarTERA ERA-NET Cofund Project with Teknopar Inc., Developing deep learning and computer vision models for underwater cable detection, cable analysis, anomaly detection, signal processing.
- 2021–2022 **Machine Tools Predictive Maintenance and Data Automation**,
Joint Project with Noksel and Teknopar Inc., Developing machine/deep learning models for anomaly detection and predicting unplanned machine stops.
- 2020–2021 **Smart Forestry - Automated Tree Trunk Volume Estimation**,
BridgeWiz & Department of Forestry, Developing computer vision and machine/deep learning models for automated tree detection and tree trunk diameter/volume estimation.
- 2018–2021 **Development of Advanced Machining Monitoring and Prediction Algorithms using Deep Learning for Industry 4.0**,
The Scientific and Technological Council of Turkey, TUBITAK 1001 project
Project No: 118M414, Developing deep learning based prediction models between process control and monitoring parameters and process consequences such as tool wear, tool breakage, and chatter for preventive maintenance.
- 2017–2020 **Establishing Crop Information System for Wheat Production to Sustain Food Security**,
The Scientific and Technological Council of Turkey, TUBITAK 3001 project
Project No: 115O850, Analysis of wheat crop data using classical and machine learning techniques and provide a crop information system and database with a web interface.
- 2016–2017 **Intelligent Flight Path Tracking from Multiple Radars**,
Altair Industrial Application Project.
- 2013–2016 **ECOMANINDUSTRY**,
European Union FP7-LEAD-ERA Project, Creating a web based software for data collection and identifying clean production and industrial symbiosis potentials for companies.
- 2012–2015 **A Virtual Factory Framework for SMEs**,
Ministry of Science, Industry and Technology SANTEZ project with OSTIM Teknoloji, A.S., Development of an Ontology based Multi-Agent Operational Virtual Factory Framework for Production High Value Added Products by SMEs.
- 2009–2010 **SIMOD - Simulation and Modelling for Coal Gasification**,
Turkish Coal Industries Research project, Identifying and optimizing coal gasification parameters and modelling different coal gasification setups with Matlab and MFIX.

Consultant

- 2022– **Algorithmic Trading Strategy Development for Cryptocurrency Markets**,
TRK Technology, Developing machine/deep learning models for buy-sell point classification, order book analysis and trend detection for various cryptocurrencies.
- 2022–2025 **Circular TwAIIn - AI Platform for Integrated Sustainable and Circular Manufacturing**,
European Union H2020 Project with Teknopar Inc. and 21 partners across 10 European countries, Developing a novel AI platform for circularity aiming to increase the performance, resilience and sustainability of direct manufacturing and process industries.
- 2021–2022 **TC-VISION - Computer Vision and Machine Learning based Bearing Quality Control**,
The Scientific and Technological Council of Turkey, TUBITAK TEYDEB project with Teknopar Inc., Developing deep learning and computer vision models to detect bearing defects and anomalies.
- 2018–2020 **PrimeApps - Smart Application Development for Saas Platforms**,
The Scientific and Technological Council of Turkey, TUBITAK TEYDEB project with Ofisim.com, Consulting on machine learning models for developer and user comfort analysis for application development process with a recommendation engine for tool and command selection on the apps.

- 2016–2017 **CyDecSys - Advanced Cybersecurity Decision Support System Development**,
The Scientific and Technological Council of Turkey, TUBITAK TEYDEB project with STM A.Ş, Development of rule-based and machine learning algorithms for vulnerability classification, precondition and postcondition analysis, attack graph generation.
- 2015–2017 **Big Data Analytics, STM Technology** , Technical consultancy in Big Data Analytics projects, such as Traffic Flow Analysis, Social Network Analysis, Forecasting Models, Data Science, User profiling.
- 2014–2017 **SEAS - Smart Energy Awareness System**,
European Union H2020 Project, Developing a framework for smart grids for energy efficiency in producer-consumer networks and demonstrating the system on a micro-grid located in Ankara..
- 2010–2011 **Telegraph-A recommendation system for Interactive TV**,
The Scientific and Technological Council of Turkey, TUBITAK TEYDEB project with ANEL-ARGE A.Ş, Development of a web-based interactive TV application providing a user information and recommendation system.

Industrial Experience

- 2001–2005 **Senior Programmer/Analyst**, *MEMC Electronics Inc.*, St.Louis MO, USA.
 Worked as a member of the Data Automation and Manufacturing MIS Group. Responsibilities include project leading, software development, maintaining and reporting for the plant-wide data collection and automation systems.
 Highlights:
 - Investigated hardware and software platforms to determine approved devices for special client needs and provided the appropriate requirements;
 - Developed GUIs and APIs for wafer manufacturing and test equipments for engineers and technicians;
 - Developed three-tier systems (Windows-Unix-Oracle) for client/server applications for data retrieval, querying and reporting tools for plant-wide usage;
 - Developed low-level services for wafer manufacturing equipments and processes;
 - Provided 24/7 technical assistance for the developed data automation systems;
 - Implemented Software Development Life Cycle (SDLC) model in every stage of the software development process during the automation projects;
 Noteworthy Projects and Tasks:
 - Team Leader in Automated Label Printing System for Wafer Cassette Labels Project (VB, ActiveX, SQL, SAP)
 - Team leader in Lasermark Verification Application Project for wafer mix prevention (CellWorks, SQL);
 - Team leader in ADE Wafer Thickness and Resistivity Automated Data Collection and GUI development (CellWorks, SQL, VB);
 - Tencor and CR80 Wafer Particle Count Data Collection System (Cellworks, SQL);
 - Final Shipping Automated Shipment Verification Application (C);
 - Automated SPC System and GUI Development in Etching, Lapping and Polishing Departments (VB, Cellworks, SQL);
- 2001 **Software/Database Engineer**, *Vizyonsoft, contracted to ARIA Mobile Serv.*, Istanbul, Turkey.
 Worked as a member of the Infrastructure, Software and Database Technical Support team for the newly-formed third mobile telecom service provider in Turkey for a 4 month project
- 1997–2001 **Software Engineer/Consultant**, *Beyond Inc. contracted to MEMC Electronics Inc.*, St.Louis MO, USA.
 Worked as a consultant/project manager in MEMC QRDAP (Quality Renewal Data Automation Project) and developed data collection / process control applications

- 1996–1997 **Product Development Engineer**, *Beyond Inc.*, St.Louis MO, USA.
Worked on developing specific hardware/software tools for enhancing wafer manufacturing data automation systems and also implemented various in-house software applications.
Highlights:
- Implemented the design and development (hardware and software) of Silicount (Wafer Counter) which is an automated wafer counting device using opto-electronic circuitry to provide the capability of touchless accurate wafer count in a cassette which is crucial in Silicon Wafer Manufacturing Industry. Several of them are being used on production floor in MEMC Electronics.
 - Developed the software and database for Beyond Inc. Inventory Control and GUI;
 - Developed an expert system for parts and components identification for wafer polishing equipments;
- 1995–1996 **Industrial Engineer**, *Marathon Electric Co.*, West Plains, MO, USA.
Worked as a co-op industrial engineer in electrical motor production facility. Responsibilities include the development of the production standards for various departments, MTM studies, process design and maintenance, factory layout, scheduling and routings
- 1991 **Technical Department Manager**, *Senkron Apple Center*, Ankara, Turkey.
Responsibilities include organizing the technical service and the distribution of Apple Computers to several private and government offices in Ankara. Management of technical support, presentations, developing in-house software, building systems and networks, installations and troubleshooting for Apple computer systems were also included in the job duties
- 1990 **Intern Electrical Engineer**, *Vega Electromech Systems Inc.*, Ankara, Turkey.
Worked on technical support and installation of biomedical systems, such as sterilizers, ECG systems, surgical instruments, etc.
- 1989 **Electrical Engineering Summer Practice**, *Gold Fields of South Africa*, Johannesburg, RSA.
Worked in the project group on planning and developing the power distribution of Kloof Gold Mine, one of the largest in the world

Teaching Experience

Undergraduate courses at TOBB ETU

BIL 001	Introduction to Computer Engineering	Fall '05
BIL 102	Programming with Java	Fall '05, Spring '06, '08
BIL 106	Database Management	Spring '18
BIL 114	Programming with C/C++	Spring '12, Summer '12
BIL 132	Discrete Mathematics	Spring '07–'09, '14–'22, Summer '14–'18, '20–'22
BIL 331	Analysis of Algorithms	Fall '07–'09, Spring '10, '11, '13, '14, Summer '11, '12
BIL 441	Artificial Intelligence	Fall '07, '08, Spring '10, '21, '22, '23, Summer '13, '20
BIL 442	Artificial Neural Networks	Summer '16
BIL 443	Pattern Recognition	Fall '06, '09, Spring '09, '12, Summer '14, '17, '18
BIL 467	Image Processing	Fall '10, Spring '08
BIL 470	Machine Learning	Summer '21, '22, '23
YAP 471	Computational Finance	Summer '22, '23

Graduate courses at TOBB ETU

BIL 531	Design and Analysis of Algorithms	Fall '07, Spring '06
BIL 574	Computational Intelligence in Finance	Spring '12, '15, '17
BIL 587	Computer Vision	Spring '19, '22, '23, Fall '19

Online courses (for Ahmet Yesevi University)

TBIL 403	Database Design and Management	Fall '12, Spring '13
TBIL 503	Graduation Design Project	Fall '12
	Artificial Intelligence (for Kazakhstan campus)	Fall '12

Invited talks / Tutorials / Short courses

- 2023 **Deep Learning for Algorithmic Trading**, *Invited Talk*, Code of the Century Hackaton, Ankara University, 11 November 2023.
- 2023 **Artificial Intelligence and Innovative Technologies**, *Invited Talk*, TOBB Digital Transformation and Innovation Workshop, Ankara, 13 September 2023.
- 2022 **Deep Learning in Financial Applications**, *Invited Talk*, ISMSIT 2022, Ankara, 22 October 2022.
- 2021 **Deep Learning in Finance**, *Invited Talk*, UBMK 2021, Ankara, 15 September 2021.
- 2021 **AI and Machine Learning Fundamentals**, *Workshop*, Arkhe AI and Philosophy Camp, 8 August 2021.
- 2021 **Artificial Intelligence in Health Sciences**, *Online Workshop*, Izmir Katip Celebi University, 19-20 April 2021.
- 2021 **Introduction to Artificial Intelligence and Machine Learning**, *Online Workshop*, Ankara University, 23-24 February 2021.
- 2020 **Artificial Intelligence and Machine Learning Model Development**, *Online Course*, Ankara Development Agency, 23 November-4 December 2020.
- 2020 **Financial Time Series Forecasting with Deep Learning**, *Podcast - The Data Exchange*, <https://thedataexchange.media/financial-time-series-forecasting-with-deep-learning/>, 8 October 2020.
- 2019 **Machine / Deep Learning Models for High Focus Ultrasound Imaging**, *Stanford University*, Stanford, CA 94305, California, 7 August 2019.
- 2018 **Deep Learning and Evolutionary Optimization Models for Algorithmic Trading**, *Nazarbayev University*, Astana, Kazakhstan, 23 November 2018.
- 2018 **Evolutionary Optimized Options Trading Strategies**, *Ankara University*, Ankara, 21 November 2018.
- 2018 **Algorithmic Trading Models**, *Capital Markets Board of Turkey, SPK.*, Istanbul, 14 November 2018.
- 2018 **Technical Analysis Optimization and Deep Learning based Algorithmic Stock Trading**, *IDEA Technology Solutions, Inc.*, Istanbul, 23 October 2018.
- 2018 **Algorithmic Trading with Evolutionary Algorithms and Deep Learning**, *TOBB University*, Ankara, 18 January 2018.
- 2017 **Machine Learning & Pattern Recognition Course**, *STM Inc.*, Ankara, 15-22 November 2017.
- 2017 **Open Data Analytics with Deep Learning**, *National Workshop on Big and Open Data*, Ministry of Telecommunications, Ankara, 23 May 2017.
- 2016 **Evolutionary Algorithms in Finance**, *Department of Computer Engineering Seminars*, TOBB University of Economics & Technology, Ankara, 16 November 2016.
- 2016 **Data Science in Cyber Environments**, *3. International Cyber Security Workshop*, Gelişim University, Istanbul, 10-14 October 2016.
- 2016 **Data Science with Big Data**, *Data Science Meetup*, Bilkent Univ., Ankara, 25 January 2016.
- 2015 **Design and Development of an Ontology based Multi Agent Virtual Enterprise (OMAVE) System**, *Engineering Management and Systems Engineering Webex seminars*, Missouri University of Science and Technology, Rolla, MO, USA, 13 February 2015.
- 2014 **Pattern Recognition Course**, *Baskent Elektrik, ENERJISA Inc.*, Ankara, 4 September 2014.
- 2012 **Applications of Neural Networks**, *Department of Mathematics Seminars*, Ankara, 15 May 2012.

Computer Skills

Languages	Java, Python, C, C++, Visual Basic
Office	Word, Excel, Powerpoint, OpenOffice
Database	MS Access, MySQL, PostgreSQL, PL/SQL
Analysis	Matlab, WEKA, R
Automation	Cellworks, Factoryworks

Languages

Turkish	Native	Mother Tongue
English	Fluent	Daily practice, All work performed in English
Polish	Beginner	Some practice, One semester beginning level class

Books

- Akın Ömer and **Özbayoğlu A. Murat** (2015). *Ayrık Matematik ve Uygulamaları - Translation of Discrete Mathematics and its Applications, 7th edition by Kenneth Rosen*. Palme Yayıncılık.
- Yazıcı Ali, Dođdu Erdoğan, **Özbayoğlu A.Murat**, Erten Y.Murat, and Ergin Oğuz (2007). *Introduction to Java Programming (in Turkish)*. Palme Yayıncılık.

Book Chapters

- A. Murat Özbayoğlu** (2017). "Open Data Analytics with Deep Learning". In: ed. by Şeref Sağırođlu Orhan Koç. *Big Data and Open Data Analytics: Methods and Applications (in Turkish)*. Grafiker. Chap. 7, pp. 115–130.

SCI Journal Publications

- Karamuftuoglu, M.A., Bozbey, A., and **Ozbayoglu, A.M.** (2023). "Implementation of Neuro-Inspired Arithmetic and Logic Circuits". In: *IEEE Transactions on Applied Superconductivity*.
- Verdi, E.B., Yilmaz, M., Mülazimoglu, D.D., Turker, A., Kaya, A.G., Isik, O., Karacin, A.B., Yakut, O.V., Yenigun, B.M., Uzun, C., Elhan, A.H., Kumbasar, O.O., Kaya, A., Cangir, A.K., Tasci, C., **Ozbayoglu, A.M.**, and Erol, S. (2023). "Can the generalizability problem of artificial intelligence be overcome?: Pneumothorax detection algorithm". In: *Journal of Investigative Medicine* published online, DOI:10.1177/1081558923120.
- Güdelek, M.U., Serin, G., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2022). "An industrially viable wavelet long-short term memory-deep multilayer perceptron-based approach to tool condition monitoring considering operational variability". In: *Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering*, p. 09544089221142161.
- Verdi, E.B., Mülazimoglu, D.D., Erol, S., Kaya, A.G., Yilmaz, M., Turker, A., **Ozbayoglu, A.M.**, Isik, O., Karacin, A.B., Yakut, O.V., Yenigun, B.M., Tasci, C., Uzun, C., Elhan, A.H., Cangir, A.K., Kumbasar, O.O., and Kaya, A. (2022). "Can the generalizability problem of artificial intelligence be overcome?: Pneumothorax detection algorithm". In: *European Respiratory Journal* 60 (suppl 66).
- Kahya, M., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2021). "Precision and energy-efficient ball-end milling of Ti6Al4V turbine blades using particle swarm optimization". In: *International Journal of Computer Integrated Manufacturing* 34.2, pp. 110–133.
- Karimov, J., **Ozbayoglu, A.M.**, Tavli, B., and Dogdu, E. (2021). "Menu Optimization for Multi-Profile Customer Systems on Large Scale Data". In: *Computational Economics*, 1–22, DOI:10.1007/s10614-021-10147-0.
- Maratkhan, A., Ilyassov, I., Aitzhanov, M., Demirci, M.F., and **Ozbayoglu, A.M.** (2021). "Deep learning based investment strategy: technical indicator clustering and residual blocks". In: *Soft Computing* 25, pp. 5151–5161.
- Ozbayoglu, E., **Ozbayoglu, A.M.**, Ozdilli B., and Erge, O. (2021). "Optimization of Flow Rate and Pipe Rotation Speed Considering Effective Cuttings Transport Using Data-Driven Models". In: *Energies* 14.5, DOI:10.3390/en14051484.
- Sener, B., Güdelek, M.U., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2021). "A Novel Chatter Detection Method for Milling using DeepConvolution Neural Networks". In: *Measurement* 182, p. 109689.

- Yılmaz, M., **Ozbayoglu, A.M.**, and Tavlı, B. (2021). "Efficient Computation of Wireless Sensor Network Lifetime Through Deep Neural Networks". In: *Wireless Networks*, DOI:10.1007/s11276-021-02556-8.
- Arın, E. and **Ozbayoglu, A.M.** (2020). "Deep Learning based Hybrid Computational Intelligence Models for Options Pricing". In: *Computational Economics*, DOI:10.1007/s10614-020-10063-9.
- Ozbayoglu, A.M.**, Güdelek, M.U., and Sezer, Ö.B. (2020). "Deep learning for financial applications: A survey". In: *Applied Soft Computing* 93.106384, DOI:10.1016/j.asoc.2020.106384.
- Serin, G., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2020). "Integrated energy-efficient machining of rotary impellers and multi-objective optimization". In: *Materials and Manufacturing Processes* 35.4, pp. 478–490.
- Serin, G., Sener, B., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2020). "Review of tool condition monitoring in machining and opportunities for deep learning". In: *The International Journal of Advanced Manufacturing Technology* 109, pp. 953–974.
- Sezer, Ö.B., Güdelek, M.U., and **Ozbayoglu, A.M.** (2020). "Financial time series forecasting with deep learning: A systematic literature review: 2005–2019". In: *Applied Soft Computing* 90.106181, DOI:10.1016/j.asoc.2020.106181.
- Sezer, Ö.B. and **Ozbayoglu, A.M.** (2020). "Financial Trading Model with Stock Bar Image Time Series with Deep Convolutional Neural Networks". In: *Intelligent Automation and Soft Computing* 26.2, DOI: 10.31209/2018.100000065.
- Ozbayoglu, A.M.**, Akbaş, A., Yıldız, H.U., and Tavlı, B.B. (2019). "Neural Network based Instant Parameter Prediction for Wireless Sensor Network Optimization Models". In: *Wireless Networks* 25.6, 3405–3418, DOI:10.1007/s11276-018-1808-y.
- Tombul, H., **Ozbayoglu, A.M.**, and Ozbayoglu M.E. (2019). "Computational Intelligence Models for PIV based Particle (Cuttings) Direction and Velocity Estimation in Multi-Phase Flows". In: *Journal of Petroleum Science and Engineering* 172, 547–558, DOI:10.1016/j.petrol.2018.09.071.
- Ozbayoglu M.E., Erge, O., and **Ozbayoglu, A.M.** (2018). "Predicting the pressure losses while the drillstring is buckled and rotating using artificial intelligence methods". In: *Journal of Natural Gas Science and Engineering* 56, 72–80, DOI:10.1016/j.jngse.2018.05.028.
- Seyfioğlu, M.S., **Ozbayoglu, A.M.**, and Gürbüz, S.Z. (2018). "Deep Convolutional Autoencoder for Radar-Based Classification of Similar Aided and Unaided Human Activities". In: *IEEE Transactions on Aerospace and Electronic Systems* 54.4, 1709–1723, DOI: 10.1109/TAES.2018.2799758.
- Sezer, Ö.B., Dogdu, E., and **Ozbayoglu, A.M.** (2018). "Context Aware Computing, Learning and Big Data in Internet of Things: A Survey". In: *IEEE Internet of Things Journal* 5.1, 1–27, DOI: 10.1109/JIOT.2017.2773600.
- Sezer, Ö.B. and **Ozbayoglu, A.M.** (2018). "Algorithmic Financial Trading with Deep Convolutional Neural Networks: Time Series to Image Conversion Approach". In: *Applied Soft Computing* 70, 525–538, DOI:10.1016/j.asoc.2018.04.024.
- Sadigh, B. Lotfi, Nikghadam, S., **Ozbayoglu, A.M.**, Ünver, H.O., Dogdu, E., and Kilic, S.E. (2017). "An ontology-based multi-agent virtual enterprise system (OMAVE): part 2: partner selection". In: *International Journal of Computer Integrated Manufacturing*, DOI:10.1080/0951192X.2017.1285424, 31 January 2017.
- Sadigh, B. Lotfi, Nikghadam, S., Ünver, H.O., **Ozbayoglu, A.M.**, and Kilic, S.E. (2016). "An ontology-based multi-agent virtual enterprise system (OMAVE): part 1: domain modelling and rule management". In: *International Journal of Computer Integrated Manufacturing*, DOI: 10.1080/0951192X.2016.1145811, 19 February 2016.
- Nikghadam, S., Sadigh, B.Lotfi, **Ozbayoglu, A.M.**, Ünver, H.O., and Kilic, S.E. (2015). "A survey of partner selection methodologies for virtual enterprises and development of a goal programming-based approach". In: *International Journal of Advanced Manufacturing Technology*, 1–22, DOI 10.1007/s00170-015-8068-0, 12 November 2015.
- Osgouei, R.E., Özbayoğlu, E., **Özbayoğlu, M.**, and Yüksel, E. (2015a). "A new model to determine the two phase drilling Fluid Behaviors through Horizontal Eccentric Annular Geometry, Part A: Flow Pattern Identification and Liquid Holdup Estimation". In: *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 37.15, 1663–1673, DOI: 10.1080/15567036.2011.574192, 13 July 2015.
- Osgouei, R.E., Özbayoğlu, E., **Özbayoğlu, M.**, and Yüksel, E. (2015b). "A new model to determine the two phase drilling Fluid Behaviors through Horizontal Eccentric Annular Geometry, Part B: Frictional Pressure Losses Estimation". In: *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 37.16, 1756–1765, DOI: 10.1080/15567036.2011.561275, 15 July 2015.
- Osgouei, Reza Etehadi, **Özbayoğlu, A. Murat**, Ozbayoglu, Evren M., Yuksel, Ertan, and Eresen, Aydin (2015). "Pressure drop estimation in horizontal annuli for liquid-gas 2 phase flow: Comparison of mech-

- anistic models and computational intelligence techniques”. In: *Computers & Fluids* 112, 108–115, DOI: 10.1016/j.compfluid.2014.11.003, 2 May 2015.
- Sorgun, Mehmet, **Özbayoğlu, A Murat**, and Ozbayoglu, M Evren (2014). “Support Vector Regression and Computational Fluid Dynamics Modeling of Newtonian and Non-Newtonian Fluids in Annulus With Pipe Rotation”. In: *Journal of Energy Resources Technology* 137.3, 5 pages, paper No 032901, DOI: 10.1115/1.4028694, 21 October 2014.
- Özbayoğlu, AM**, Kasnakoglu, C, Gungor, A, Biyikoglu, A, and Uysal, BZ (2013). “A Two-Stage Water-Gas Shift Reactor Model To Obtain Desired Synthesis Gas Characteristics With Adjustable Reactor Parameters”. In: *Journal of The Faculty of Engineering And Architecture of Gazi University* 28.2, 339–351, June 2013.
- Sorgun, Mehmet, Osgouei, Reza E, Ozbayoglu, M Evren, and **Özbayoğlu, A Murat** (2013). “An Experimental and Numerical Study of Two-phase Flow in Horizontal Eccentric Annuli”. In: *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 35.10, 891–899, DOI: 10.1080/15567036.2011.559524, 8 April 2013.
- Gungor, Afsin, **Özbayoğlu, Murat**, Kasnakoglu, Cosku, Biyikoglu, Atilla, and Uysal, Bekir Zuhtu (2012). “A parametric study on coal gasification for the production of syngas”. In: *Chemical Papers* 66.7, 677–683, DOI: 10.2478/s11696–012–0164–0, July 2012.
- Özbayoğlu, A Murat** and Yuksel, H Ertan (2012). “Analysis of gas–liquid behavior in eccentric horizontal annuli with image processing and artificial intelligence techniques”. In: *Journal of Petroleum Science and Engineering* 81.1, 31–40, DOI: 10.1016/j.petrol.2011.12.008, January 2012.
- Ozbayoglu, Mehmet, Osgouei, Reza, **Özbayoğlu, Murat**, and Yuksel, Ertan (2012). “Hole Cleaning Performance of Gasified Drilling Fluids in Horizontal Well Sections”. In: *SPE Journal* 17.3, 912–923, DOI: 10.2118/131378–PA, September 2012.
- Ozbayoglu, E.M. and **Özbayoğlu, A M.** (2009). “Estimating flow patterns and frictional pressure losses of two-phase fluids in horizontal wellbores using artificial neural networks”. In: *Petroleum Science and Technology* 27.2, 135–149, DOI: 10.1080/10916460701700203, 27 January 2009.
- Özbayoğlu, Gülhan, **Özbayoğlu, A Murat**, and Özbayoğlu, M Evren (2008). “Estimation of Hardgrove grindability index of Turkish coals by neural networks”. In: *International Journal of Mineral Processing* 85.4, 93–100, DOI: DOI: 10.1016/j.minpro.2007.08.003, 31 January 2008.

Other Journals

- Tuğaç, M.G., **Ozbayoglu, A.M.**, Torunlar, H., and Karakurt, E. (2022). *Wheat Yield Prediction with Machine Learning based on MODIS and LANDSAT NDVI Time Series at Field Scale*. vol 9 (4). International Journal of Environment and Geoinformatics, pp. 172–184.
- Meriç, O. and **Ozbayoglu, A.M.** (2021). *Software Test Effort Estimation with Machine Learning*. Vol 4.1. Veri Bilimi, pp. 38–44.
- Agca, M. Akif, Atac, Senol, Yucesan, M. Mert, Kucukayan, Gokhan Y., **Ozbayoglu, A. Murat**, and Dogdu, Erdogan (2016). *Opinion Mining of Microblog Texts on Hadoop Ecosystem*. Vol. 1-2. International Journal of Cloud Computing. 2 IBM Cloud Academy Conference, 79–90, DOI: 10.1504/IJCC.2016.075096.
- Nikghadam, S., Lotfi Sadigh, B., **Ozbayoglu, A. M**, Unver, H. O., and Kilic, S. E. (2015). *Evaluation of Partner Companies based on Fuzzy Inference System for Establishing Virtual Enterprise Consortium*. Vol. 577. Lecture Notes in Computer Science – CCIS Communications in Computer Science, 104–115, DOI: 10.1007/978–3–319–27680–9_7, 15 Dec 2015.
- Adalı, Selim F., Demirci, M. Fatih, **Özbayoğlu, A. Murat**, and Ergin, Oğuz (2014). *Why the Names? Anubanini and His Clan in the Cuthaeen Legend*. Vol. 11. Journal of the Ancient History and Cultures of the Eastern Mediterranean, pp. 15–29.
- Güngör, A., **Ozbayoglu, A.M.**, Kasnakoglu, C., Biyikoglu, A., and Uysal, B.Z. (2011). *Determination of Air/Fuel and Steam/Fuel Ratio for Coal Gasification Process to Produce Synthesis Gas*. Vol. 5. Journal of Environmental Science and Engineering, pp. 799–804.

Conference Publications

- Erge, O., **Ozbayoglu, A.M.**, and Ozbayoglu, E. (2022). “A Deep Learning Model for Rate of Penetration Prediction and Drilling Performance Optimization with Genetic Algorithms”. In: *ASME 2022 41st International Conference On Ocean, Offshore and Arctic Engineering (OMAE 2022)*. Hamburg, Germany, 5-10 June 2022.

- Ozbayoglu, A.M.**, Ozbayoglu, E., Ozdilli, B.G., and Erge, Ö. (2022). "Estimation of Cuttings Concentration and Frictional Pressure Losses during Drilling using Data-driven Models". In: *International Conference on Offshore Mechanics and Arctic Engineering*. Vol. 85208, V010T11A008.
- Seyrek, P., Sener, B., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2022). "An Evaluation Study of EMD, EEMD, and VMD for Chatter Detection in Milling". In: *3rd International Conference on Industry 4.0 and Smart Manufacturing, Procedia Computer Science*. Vol. 200, pp. 160–174.
- Temel, S., Ummak, E., Tokgoz, A., Isik, F., Albayrak, O., Unal, P., and **Ozbayoglu, A.M.** (2022). "Control System Design and Implementation Based on Big Data and Ontology". In: *2022 IEEE International Conference on Big Data*, pp. 6048–6056.
- Unal, P., Albayrak, O., Kubatova, M., Deveci, B.U., Cirakman, E., Kocal, C.I., and **Ozbayoglu, A.M.** (2022). "A Big Data Application in Manufacturing Industry-Computer Vision to Detect Defects on Bearings". In: *2022 IEEE International Conference on Big Data*, pp. 6074–6083.
- Unal, P., Deveci, B.U., and **Ozbayoglu, A.M.** (2022). "A Review: Sensors used in Tool Wear Monitoring and Prediction". In: *International Conference on Mobile Web and Intelligent Information Systems*, pp. 193–205.
- Aksan, Y., Yüksel, M., and **Ozbayoglu, A.M.** (2021). "Channel Characterization for Aircraft Integrated Antennas via Machine Learning". In: *2021 IEEE Wireless Communications and Networking Conference, IEEE WCNC 2021*.
- Cömert, C., **Ozbayoglu, A.M.**, and Kasnakoğlu, C. (2021). "Painter Prediction from Artworks with Transfer Learning". In: *2021 IEEE 7th International Conference on Mechatronics and Robotics Engineering, ICMRE2021*.
- Keskin, M.M., Yilmaz, M., and **Özbayoğlu, A.M.** (2021). "A Deep Neural Network Model for Stock Investment Recommendation by Considering the Stock Market as a Time Graph". In: *IEEE 2021 2nd International Informatics and Software Engineering Conference (IISEC)*. Ankara, Turkey, 16-17 December 2021.
- Ozbayoglu, A.M.**, Ozbayoglu, E., Ozdilli B., and Erge, O. (2021). "Estimation of Cuttings Concentration and Frictional Pressure Losses During Drilling Using Data-Driven Models". In: *ASME 2021 40th International Conference On Offshore Mechanics and Arctic Engineering*.
- Sener, B., Serin, G., Güdelek, M.U., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2020). "Intelligent Chatter Detection in Milling using Vibration Data Features and Deep Multi-Layer Perceptron". In: *IEEE International Conference on Big Data*.
- Serin, G., Güdelek, M.U., Sener, B., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2020). "Chatter detection in milling with acoustic emissions and deep learning". In: *9th International Congress On Machining, Congress Proceedings, UTIS*.
- Serin, G., Sener, B., Güdelek, M.U., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2020). "Deep Multi-Layer Perceptron based Prediction of Energy Efficiency and Surface Quality for Milling in The Era of Sustainability and Big Data". In: *30th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM2021), Procedia Manufacturing*. Vol. 51, pp. 1166–1177.
- Erkut, U., Bostancioğlu, F., Erten, Y.M., **Ozbayoglu, A.M.**, and Solak, E. (2019). "HSV color histogram based image retrieval with background elimination". In: *IEEE 1st International Informatics and Software Engineering Conference (UBMYK)*.
- Maratkhon, A., Ilyassov, I., Aitzhanov, M., Demirci, M.F., and **Ozbayoglu, A.M.** (2019). "Financial Forecasting using Deep Learning with an optimized trading strategy". In: *IEEE Congress on Evolutionary Computation (CEC)*, pp. 838–844.
- Ozbayoglu, A.M.** (2019). "Unsupervised Fingerprint Classification with Directional Flow Filtering". In: *IEEE 1st International Informatics and Software Engineering Conference (UBMYK)*.
- Yıldırım, E.O. and Uçar, M. and **Ozbayoglu, A.M.** (2019). "Evolutionary optimized stock support-resistance line detection for algorithmic trading systems". In: *IEEE 1st International Informatics and Software Engineering Conference (UBMYK)*.
- Aksu, U., Bıçakçı, K., Dilek, H., and **Ozbayoglu, A.M.** (2018). "Automated Generation Of Attack Graphs Using NVD". In: *CODASPY '18 Eighth ACM Conference on Data and Application Security and Privacy*. Tempe, AZ, 19-21 March, 2018, 135–142, DOI:10.1145/3176258.3176339.
- Dogdu, E., **Ozbayoglu, A.M.**, Yazıcı, A., and Karakaya, Z. (2018). "Perceptions, Expectations and Implementations of Big Data in Public Sector". In: *UBMK 18, International Conference on Computer Engineering*. 20-23 September, Sarajevo, Bosnia-Herzegovina.

- Güdelek, U., Çırak, C., Arın, E., Sezgin, E., **Ozbayoglu, A.M.**, and Göl, M. (2018). "Load and PV generation Forecast based Cost Optimization for Nanogrids with PV and Battery". In: *53rd International Universities Power Engineering Conference (UPEC)*. 4-7 September, Glasgow, Scotland.
- Önal, A.C., Sezer, Ö.B., **Ozbayoglu, A.M.**, and Dogdu, E. (2018). "MIS-IoT: Modular Intelligent Server based Internet of Things Framework with Big Data and Machine Learning". In: *IEEE International Conference on Big Data, 2018*. Seattle, WA, USA, 10-13 December 2018, pp. 2270–2279.
- Sarı, M. and **Ozbayoglu, A.M.** (2018). "Classification of Turkish Documents using Paragraph Vector". In: *International Artificial Intelligence and Data Processing Symposium*. 27-28 September, Malatya, Turkey.
- Sarıkan, S.S. and **Ozbayoglu, A.M.** (2018). "Anomaly Detection in Vehicle Traffic with Image Processing and Machine Learning". In: *Complex Adaptive Systems 2018*. 5-7 November, Chicago, IL, USA, pp. 64–69.
- Ufuk, D.U., Temizel, A., and **Ozbayoglu, A.M.** (2018). "Optimized GPU Implementation of JPEG 2000 for Satellite Image Decompression". In: *CSE 2018, 21st IEEE International Conference on Computational Science and Engineering*. 29-31 October, Bucharest, Romania.
- Arın, Efe, Güdelek, U., and **Ozbayoglu, A.M.** (2017). "Quora Duplicate Query Elimination". In: *LTC '17, 8th Language and Technology Conference*. Poznan, Poland, 17-19 November 2017.
- Güdelek, M.U., Bölük, S.A., and **Ozbayoglu, A.M.** (2017). "A Deep Learning based Stock Trading Model with 2-D CNN Trend Detection". In: *IEEE Computational Intelligence in Financial Engineering (IEEE CIFE 2017) in IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2017)*. 27 November - 1 December, Honolulu, HI, USA.
- Kahya, M., Serin, G., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2017). "Investigation of rough milling of Ti6Al4V using response surface methodology". In: *8th International Symposium on Machining*. Antalya, Turkey, 02-04 November 2017.
- Önal, A.C., Sezer, Ö.B., **Ozbayoglu, A.M.**, and Dogdu, E. (2017). "Weather Data Analysis and Sensor Fault Detection Using An Extended IoT Framework with Semantics, Big Data, and Machine Learning". In: *IEEE International Conference on Big Data, 2017*. Boston, MA, USA, 11-14 December 2017.
- Sarıkan, S.S., **Ozbayoglu, A.M.**, and Zilci, O. (2017). "Automated Vehicle Classification with Image Processing and Computational Intelligence". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2017*. Vol. 114. Chicago, IL, USA, 30 October-1 November, 2017, pp. 515–522.
- Serin, G., Güdelek, M.U., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2017). "Estimation of parameters for the free-form machining with deep neural net". In: *IEEE International Conference on Big Data, 2017*. Boston, MA, USA, 11-14 December 2017.
- Serin, G., Kahya, M., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2017). "An artificial neural network based power prediction model for rough cutting of AISI 304". In: *8th International Symposium on Machining*. Antalya, Turkey, 02-04 November 2017.
- Seyfioğlu, M.S., Gürbüz, S.Z., **Ozbayoglu, A.M.**, and Yüksel, M. (2017). "Deep learning of micro-Doppler features for aided and unaided gait recognition". In: *2017 IEEE Radar Conference*. Seattle, WA, USA, 8-12 May 2017, pp. 1125–1130.
- Seyfioğlu, M.S., Serinöz, A., **Ozbayoglu, A.M.**, and Gürbüz, S.Z. (2017). "Feature Diverse Hierarchical Classification Human Gait with CW Radar for Assisted Living". In: *International Conference on Radar Systems (Radar 2017)*, Belfast, U.K. 23-26 October.
- Sezer, Ö.B., **Ozbayoglu, A.M.**, and Dogdu, E. (2017a). "A Deep Neural-Network Based Stock Trading System Based on Evolutionary Optimized Technical Analysis Parameters". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2017*. Vol. 114. Chicago, IL, USA, 30 October-1 November, 2017, pp. 473–480.
- Sezer, Ö.B., **Ozbayoglu, A.M.**, and Dogdu, E. (2017b). "An Artificial Neural Network-based Stock Trading System Using Technical Analysis and Big Data Framework". In: *ACM Southeast Conference, ACMSE 2017*. Kennesaw State University, GA, April 13-15, 2017, pp. 223–226.
- Kulcu, S., Dogdu, E., and **Ozbayoglu, A.M.** (2016). "A Survey on Semantic Web and Big Data Technologies for Social Network Analysis". In: *IEEE International Conference on Big Data, 2016*. Washington, DC, 5–8 December, 2016, pp. 1768–1777.
- Ozbayoglu, A.M.**, Küçükayan, G., and Dogdu, E. (2016). "A Real-Time Autonomous Highway Accident Detection Model Based on Big Data Processing and Computational Intelligence". In: *IEEE International Conference on Big Data, 2016*. Washington, DC, 5–8 December, 2016, pp. 1807–1813.

- Nikghadam, S., **Özbayoğlu, A.M.**, Unver, H. O., and Kilic, S. E. (2016). "Design of a Customer's Type Based Algorithm for Partner Selection Problem of Virtual Enterprise". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2016*. Vol. 95. Los Angeles, CA, USA, 2-4 November, 2016, 467-474, DOI:10.1016/j.procs.2016.09.323.
- Sezer, O.B., Dogdu, E., **Ozbayoglu, A.M.**, and Onal, A.C. (2016). "An Extended IoT Framework with Semantics, Big Data, and Analytics". In: *IEEE International Conference on Big Data, 2016*. Washington, DC, 5-8 December, 2016, pp. 1849-1856.
- Demiray, Y.S., **Özbayoğlu, A.M.**, and Taş, B.K.O. (2015). "Estimation of the Number of Participants in Government Tenders with Computational Intelligence". In: *3rd Workshop on Social and Algorithmic Issues in Business Support (SAIBS) 2015*. Poznan, Poland, 27-29 November 2015, pp. 433-437.
- Karimov, J., **Özbayoğlu, M.**, and Dogdu, E. (2015). "k-means Performance Improvements with Centroid Calculation Heuristics both for Serial and Parallel environments". In: *2015 IEEE Big Data Congress*. New York, NY, 27 June-2 July 2015, 444-451, DOI: 10.1109/BigDataCongress.2015.72.
- Karimov, Jeyhun and **Ozbayoglu, A Murat** (2015a). "Clustering Quality Improvement of K-means Using a Hybrid Evolutionary Model". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2015*. Vol. 61. San Jose, CA, 2-4 November, 2015, 38-45, DOI:10.1016/j.procs.2015.09.143.
- Karimov, Jeyhun and **Ozbayoglu, A Murat** (2015b). "High quality clustering of big data and solving empty-clustering problem with an evolutionary hybrid algorithm". In: *IEEE International Conference on Big Data, 2015*. Santa Clara, CA, 29 October - 1 November 2015, pp. 1473-1478.
- Karimov, Jeyhun, **Özbayoğlu, A Murat**, Tavli, Bülent, and Doğdu, Erdoğan (2015). "Generic Menu Optimization for Multi-profile Customer Systems". In: *IEEE International Symposium on Systems Engineering, ISSE 2015*. Rome, Italy, 28-30 September 2015, 163-169, DOI: 10.1109/SysEng.2015.7302750.
- Nikghadam, S., Sadigh, B.Lotfi, **Ozbayoglu, A. M.**, Unver, H. O., and Kilic, S. E. (2015). "Partner selection in formation of virtual enterprises using fuzzy logic". In: *International Conference on Operations Research and Enterprise Systems, ICORES 2015*. Lisbon, Portugal, 10-12 January 2015, pp. 82-88.
- Ucar, I., **Ozbayoglu, M.**, and Ucar, M. (2015). "Developing a Two Level Options Trading Strategy Based on Option Pair Optimization of Spread Strategies with Evolutionary Algorithms". In: *IEEE Congress on Evolutionary Computation, CEC 2015*. Sendai, Japan, May 25-28 2015, 2526-2531, DOI: 10.1109/CEC.2015.7257199.
- Agca, M. Akif, Atac, Senol, Yucesan, M. Mert, Kucukayan, Gokhan Y., **Özbayoğlu, A. Murat**, and Dogdu, Erdogan (2014). "Opinion Mining of Microblog Texts on Hadoop Ecosystem". In: *2nd IBM Cloud Academy Conference, ICA CON 2014*. Atlanta, GA, 8-9 May, 2014.
- Doğdu, Erdogan, **Özbayoğlu, A. Murat**, Benli, Okan, Erdener Akınç, Hülya, Erol, Erdeniz, Atasoy, Tugrul, Gurec, Ozan, and Erçin, Özden (2014). "Ontology-centric data modelling and decision support in smart grid applications a distribution service operator perspective". In: *Proc. of the 2014 IEEE International Conference on Intelligent Energy and Power Systems (IEPS)*. Kyiv, Ukraine, June 2-6, 2014, 198-204, DOI: 10.1109/IEPS.2014.6874179.
- Gumus, Tuna, Hugi, Christoph, Hengevoss, Dirk, Kılıç, Engin, Massard, Guillaume, **Özbayoğlu, Murat**, and Unver, Ozgur (2014). "Conceptualization of a Web-based Software Platform that enables Clean Production and Industrial Symbiosis". In: *16th International Conference on Machine Design and Production, UMTIK 2014*. İzmir, Turkey, 30 June - 2 July 2014.
- Sadigh, B Lotfi, Arıkan, F, **Ozbayoglu, AM**, Unver, HO, and Kilic, SE (2014). "A Multi-agent System Model for Partner Selection Process in Virtual Enterprise". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2014*. Vol. 36. Philadelphia, PA, 3-5 November 2014, 367-372, DOI:10.1016/j.procs.2014.09.007.
- Sahin, Ugur and **Ozbayoglu, A Murat** (2014). "TN-RSI: Trend-normalized RSI Indicator for Stock Trading Systems with Evolutionary Computation". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2014*. Vol. 36. Philadelphia, PA, 3-5 November 2014, 240-245, DOI:10.1016/j.procs.2014.09.086.
- Osgouei, R.E., Özbayoğlu, M.E., **Özbayoğlu, A.M.**, and Eren, T. (2013). "Three phase flow characteristics in Inclined Eccentric Annuli". In: *2013 IADC/SPE Drilling Technology Conference and Exhibition (MEDT)*, Dubai, UAE, 7-9 October 2013, 1-23, DOI: 10.2118/166687-MS.
- Osgouei, Reza Ettehadi, Ozbayoglu, Mehmet Evren, **Ozbayoglu, Murat**, and Yuksel, Ertan H (2013). "The Determination of Two Phase Liquid-Gas Flow Behavior Through Horizontal Eccentric Annular Geometry by Modification of Beggs & Brill and Lockhart & Martinelli Models". In: *ASME 2013 Fluids Engineering Division Summer Meeting*. Incline Village, NV, 7-11 July 2013, 1-9, DOI:10.1115/FEDSM2013-16206.

- Ucar, Mustafa, Bayram, Ilknur, and **Ozbayoglu, A Murat** (2013). "A Two-Level Cascade Evolutionary Computation Based Covered Call Trading Model". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2013*. Vol. 20. Baltimore, MD, 13-15 November 2013, 472–477, DOI:10.1016/j.procs.2013.09.305.
- Guven, Erhan and **Ozbayoglu, A Murat** (2012). "Note and Timbre Classification by Local Features of Spectrogram". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2012*. Vol. 12. Washington D.C., 14-16 November 2012, 182–187, DOI:10.1016/j.procs.2012.09.051.
- Ozbayoglu, A.Murat**, Ozbayoglu, M.Evren, and Ozbayoglu, Gulhan (2012). "Comparison of Gross Calorific Value Estimation of Turkish Coals using Regression and Neural Networks Techniques". In: *XXVIth International Mineral Processing Congress (IMPC 2012), Paper No: 420*. New Delhi, India, 24-28 September 2012, pp. 4011–4023.
- Özbayoğlu, A Murat** and Bozer, Recep (2012). "Estimation of the Burned Area in Forest Fires Using Computational Intelligence Techniques". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2012*. Vol. 12. Washington D.C., 14-16 November 2012, 282–287, DOI:10.1016/j.procs.2012.09.070.
- Osgouei, Reza Etehadi, Ozbayoglu, Mehmet Evren, and **Ozbayoglu, Murat** (2012). "A Mechanistic Model to characterize the Two Phase Drilling Fluid Flow through inclined Eccentric Annular Geometry". In: *SPE Oil and Gas India Conference and Exhibition*. Mumbai, India, 28-30 March 2012, 1–14, DOI: 10.2118/155147–MS.
- Sorgun, Mehmet, **Ozbayoglu, Murat**, and Ozbayoglu, Evren (2012). "Estimation of Frictional Pressure Losses in Annulus with Pipe Rotation Using Neural Networks and Computational Fluid Dynamics". In: *10th International Conference on Advances in Civil Engineering, ACE 2012*. Ankara, Turkey, 17-19 October 2012.
- Imamoglu, N, Eresen, A, and **Ozbayoglu, AM** (2011). "Hierarchical rule-based neural network for multi-object classification using invariant features". In: *2011 International Symposium on Innovations in Intelligent Systems and Applications (INISTA)*. Istanbul, Turkey, 15-18 June 2011, 296–299, DOI: 10.1109/INISTA.2011.5946079.
- Ozbayoglu, A Murat** and Yuksel, H Ertan (2011). "Estimation of Multiphase Flow Properties using Computational Intelligence Models". In: *Procedia Computer Science, Complex Adaptive Systems, CAS 2011*. Vol. 6. Chicago, IL, 31 October-2 November 2011, 493–498, DOI:10.1016/j.procs.2011.08.091.
- Sorgun, Mehmet, **Ozbayoglu, A.Murat**, and Ozbayoglu M.Evren (2011). "Gas-Liquid Flow Through Horizontal Eccentric Annuli: CFD and Experiments Compared". In: *ASME-JSME-KSME Joint Fluids Engineering Conference 2011*. Hamamatsu, Japan, 24-29 July 2011, 1–6, DOI:10.1115/AJK2011–24007.
- Biyikoğlu, Atilla, Güngör, Afşin, Kasnakoğlu, Coşku, **Özbayoğlu, Murat**, and Uysal, Zühtü (2010). "Effect of Operation Parameters on Gasification For The Production of Synthesis Gas". In: *27th Annual International Pittsburgh Coal Conference*. İstanbul, Turkey, 11-14 October 2010.
- Gungor, Afsin, **Ozbayoglu, Murat**, Kasnakoglu, Cosku, Biyikoglu, Atilla, and Uysal, Bekir Zuhtu (2010). "Determination of Air/Fuel and Steam/Fuel ratio for Coal Gasification process to produce Synthesis Gas". In: *2nd International Conference on Nuclear and Renewable Energy Sources, Ankara, Turkey, 4-7 July 2010*.
- Gungor, Afsin, **Özbayoğlu, Murat**, Kasnakoglu, Cosku, Biyikoglu, Atilla, and Uysal, Bekir Zuhtu (2010). "A Parametric Study on Coal Gasification For The Production Of Syngas". In: *8th European Conf. On Coal Research and Its Applications-ECCRIA-8, Leeds Univ., 6-8 September 2010*.
- Ozbayoglu, A.Murat** and Erkut, Umur (2010). "Stock Market Technical Indicator Optimization by Genetic Algorithms". In: *Artificial Neural Networks for Engineering 2010 (ANNIE 2010)*. St. Louis, MO, 1-3 November 2010, 589–596, DOI: 10.1115/1.859599.paper73.
- Ozbayoglu, Murat**, Kasnakoglu, Cosku, Gungor, Afsin, Biyikoglu, Atilla, and Uysal, Bekir Zuhtu (2010). "An Analysis of Water Gas-Shift Reactor Battery System for Synthesis Gas Refinement". In: *11th International Combustion Symposium, Sarajevo, Bosnia-Herzegovina, 24-27 June 2010*.
- Özbayoğlu, A.M.**, Özbayoğlu, M.E., and Özbayoğlu, G. (2010). "Regression Techniques and Neural Network for the Estimation of Gross Calorific Value of Turkish Coals". In: *XIIth International Mineral Processing Symposium*. Cappadocia-Neveşehir, Turkey, 6-8 October 2010, pp. 1175–1180.
- Osgouei, R.E., Ozbayoglu, M.E., **Ozbayoglu, A.M**, and Yuksel, E. (2010). "Hole Cleaning Performance of Gasified Drilling Fluids in Horizontal Well Sections". In: *SPE International Oil and Gas Conference & Exhibition, Paper SPE 131378*. Beijing, China, 8-10 June 2010, 1–18, DOI: 10.2118/131378–MS.
- Osgouei, Reza Etehadi, Ozbayoglu, ME, **Ozbayoglu, MA**, and Yuksel, E (2010). "Flow pattern identification of gas-liquid flow through horizontal annular geometries". In: *Paper SPE 129123, SPE Oil and Gas India Conference and Exhibition*. Mumbai, India, 20-22 January 2010, 1–9, DOI: 10.2118/129123–MS.

- Ozbayoglu, Mehmet Evren, Osgouei, Reza Ettehad, **Ozbayoglu, Ahmet Murat**, and Yuksel, Ertan (2010). "Estimation of "Very-Difficult-to-Identify" Data for Hole Cleaning, Cuttings Transport and Pressure Drop Estimation in Directional and Horizontal Drilling". In: *IADC/SPE Asia Pacific Drilling Technology Conference and Exhibition (APDT)*. Ho Chi Minh City, Vietnam, 1-3 November 2010, 1–18, DOI: 10.2118/136304-MS.
- Imamoglu, N, Eresen, A, Yağcı, A, and **Ozbayoglu, A.M** (2009). "Performance Analysis of Moments in Invariant Object Classification". In: *Intelligent Engineering Systems Through Artificial Neural Networks*. Vol. 19. St. Louis, MO, 2-4 November 2009, 447–454, DOI: 10.1115/1.802953.paper56.
- Ozbayoglu, A.M** and Bahadır, I (2008). "Comparison of Bayesian Estimation and Neural Network Model in Stock Market Trading". In: *Intelligent Engineering Systems Through Artificial Neural Networks*. Vol. 18. St. Louis, MO, 9-12 November 2008, 581–586, DOI: 10.1115/1.802823.paper73.
- Ozbayoglu, A.Murat**, Aydiner, Z, Kasnakoglu, C, and Ozbayoglu, M.E. (2008). "Neural network and genetic programming in pressure loss estimation in eccentric pipe flow". In: *Intelligent Engineering Systems Through Artificial Neural Networks*. Vol. 18. St. Louis, MO, 9-12 November 2008, 163–170, DOI: 10.1115/1.802823.paper21.
- Özbayoğlu, A.M.** and Özbayoğlu, G. (2008). "Hardgrove Grindability Index Estimation using Neural Networks". In: *XI. International Mineral Processing Symposium (IMPS 2008)*. Antalya, Turkey, 21-23 October 2008, pp. 621–626.
- Ozbayoglu, AM** and Ozbayoglu, ME (2007). "Using Neural Networks For Flow Pattern And Frictional Loss Estimation For Aerated Drilling Fluids". In: *Canadian International Petroleum Conference*. Calgary, Canada, 12-14 June 2007, 1–10, DOI: 10.2118/2007-211.
- Ozbayoglu, A.Murat** (2007). "Neural based Technical Analysis in Stock Market Forecasting". In: *Intelligent Engineering Systems Through Artificial Neural Networks*. St. Louis, MO, 11-14 November 2007, 261–266, DOI: 10.1115/1.802655.paper40.
- Ozbayoglu, M.Evren and **Ozbayoglu, A.Murat** (2007). "Flow pattern and frictional-pressure-loss estimation using neural networks for UBD operations". In: *IADC/SPE Managed Pressure Drilling & Underbalanced Operations*. Galveston, TX, 28-29 March 2007, 1–9, DOI: 10.2118/108340-MS.
- Strauss, H., **Ozbayoglu, A.M.**, and Ozbayoglu, M.E. (2006). "Estimation of Foam Stability Properties Using Image Processing and Artificial Neural Networks". In: *5th North American Conference on Multiphase Technology*. Banff, Canada, 31 May - 2 June 2006, pp. 353–361.
- Ozbayoglu, AM** and Dagli, CH (1997). "Unsupervised hierarchical fingerprint matching". In: *IEEE International Conference on Neural Networks, 1997*. Vol. 3. Houston, TX, 9-12 June 1997, 1439–1442, DOI: 10.1109/ICNN.1997.614006.
- Enke, D., Lee, H.C., **Özbayoğlu, A.M.**, Thammano, A., and Dağlı, C.H. (1995). "SimNet: An application to speaker identification". In: *Intelligent Engineering Systems through Artificial Neural Networks*. Vol. 5. ASME Press, New York, 1995, pp. 69–76.
- Lee, HC, Dagli, CH, Ercal, F, and **Ozbayoglu, AM** (1995). "SimNet: A Parallel Neuro-Fuzzy Paradigm for Data Clustering". In: *Ohio Aerospace Institute Neural Networks Symposium and Workshop (OAINN'95)*. Athens, OH, 23-24 August, 1995.
- Burkett, K, **Ozbayoglu, Murat A**, and Dagli, Cihan H (1994). "Automated visual inspection system based on HAVNET architecture". In: *Proceedings of SPIE, Machine Vision Applications, Architectures, and Systems Integration III*. Vol. 2347. Boston, MA, 31 October-2 November 1994, 361–371, DOI: 10.1117/12.188757.
- Ozbayoglu, MA**, Dagli, CH, and Fulkerson, B (1994). "A hierarchial neural network implementation for forecasting". In: *IEEE World Congress on Computational Intelligence., 1994 IEEE International Conference on Neural Networks*. Vol. 5. Orlando, FL, 28 June-2 July 1994, 3184–3189, DOI: 10.1109/ICNN.1994.374744.
- Rosandich, Ryan G, **Ozbayoglu, Murat A**, Roddiger, Eric W, and Dagli, Cihan H (1993). "Autonomous parts assembly: comparison of ART and Neocognitron". In: *Proceedings of SPIE, Applications of Neural Networks IV*. Vol. 1965. Orlando, FL, 12-16 April 1993, 480–490, DOI: 10.1117/12.152548.

Preprints or Working Papers

- Ercan, E., Hatipoglu, O.I., Türker, A., Ünal, P., and **Ozbayoglu, A.M.** (2022). *A Survey on Underwater Cable Detection and Tracking*. submitted to International Transactions on Electrical Energy Systems.

- Çelik, B.B., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2022). *Intelligent Chatter Detection in Turning Operations with Imbalanced Data Using Conditional Generative Adversarial Networks*. submitted to Applied Soft Computing.
- Aydos, F., **Ozbayoglu, A.M.**, Şirin, Y., and Demirci, M.F. (2020). *Web page classification with Google Image Search results*. arXiv preprint arXiv:2006.00226.
- Ozbayoglu, A.M.**, Durlu, N., and Calışkan, N.K. (2019). *Automated Image Analysis and Contiguity Estimation for Liquid Phase Sintered Tungsten Heavy Alloys*. arXiv:1902.05382.
- Bozbey, A., Karamüftüođlu, A., Razmkhah, S., and **Ozbayoglu, A.M.** (2018). *Single Flux Quantum Based Ultrahigh Speed Spiking Neuromorphic Processor Architecture*. arXiv e-prints, arXiv: 1812.10354.

Poster Presentations

- Adali, Selim F., Demirci, M. Fatih, **Özbayođlu, A. Murat**, and Uçar, Mustafa (2013). *Towards the Automated Autograph and the Recognition of Cuneiform Signs: Preliminary Results*. Law and (Dis)order in the Ancient Near East 59th Rencontre Assyriologique Internationale, pp. 1-2, 15-19 July 2013, Ghent University, Belgium.

Publications in Turkish

- Aktas, Y.F. and **Ozbayoglu, A.M.** (2022). "A Hybrid Method by Integrating Deep Reinforcement Learning and Heuristics Approach for Capacitied Vehicle Routing Problem". In: *2022 Innovations in Intelligent Systems and Applications Conference (ASYU)*. 7-9 September, Antalya, Turkey.
- Yuksel, N.I., Keskin, M.M., and **Ozbayoglu, A.M.** (2021). "Extraction of Personality Traits from Handwriting with Machine Learning". In: *2021 Innovations in Intelligent Systems and Applications Conference (ASYU)*. 6-8 October, Elazığ, Turkey.
- Özdilli, B.G., Arslan, M.B., Alp, T., Albayrak, Ö., Ünal, P., Bozkurt, Ö., and **Ozbayoglu, A.M.** (2021). "Performance Analysis of Machine Learning Models for Object Recognition in Underwater Video Images". In: *2021 IEEE 29th Signal Processing and Applications Conference (SIU)*. 9-11 June, Istanbul, Turkey.
- Adalı, E., Afyonluođlu, M., Güvenir, H.A., Ergin, O., Ertekin, Ş., Karakaya, Z., Kolat, A., **Özbayođlu, A.M.**, Tuncer, T., Varol, A., Vural, F.T.Y., and Yazıcı, A. (2020). "Türkiyede Yapay Zekanın Gelişimi için Görüş ve Öneriler". In: *Turkish Computing Society*. Ankara, Turkey.
- Meriç, Ö. and **Ozbayoglu, A.M.** (2020). "Yapay Öğrenme ile Yazılım Test Eforu Tahmini". In: *3rd International Conference on Data Science and Applications (ICONDATA '20)*. June 25-28, Istanbul.
- Ozbayoglu, A.M.**, Ozbayoglu, E., and Erge, O. (2020). "Eşdeđer Sirkülasyon Basıncının Yapay Zeka Yöntemleri ile Tespiti ve Performans Karşılaştırması". In: *Türkiye IV. Bilimsel ve Teknik Petrol Kongresi*. Ankara, Turkey.
- Serin, G., Kahya, M., **Ozbayoglu, A.M.**, and Ünver, H.Ö. (2019). "TI6AL4V Malzemesinin Tornalama İşleminde Özgül Kesme Enerjisi ve Yüzey Pürüzlülüđünün İncelenmesi ve Yapay Sinir Ağları Temelli Tahmin Modeli Geliştirilmesi". In: *Uludağ University Journal of The Faculty of Engineering*. Vol. 24. 2, pp. 517–536.
- Ufuk, D.U., Açıkgöz, I.S., Teke, M., and **Ozbayoglu, A.M.** (2018). "Satellite Image Band Registration with Dynamic Time Warping and Discrete Wavelet Transform". In: *IEEE Conference on Signal Processing and Communications Applications (SIU 2018)*, 2-5 May, Cesme, Izmir, Turkey, DOI: 10.1109/SIU.2018.8404249.
- Güneş, U., Elbir, Ö., and **Özbayođlu, A.M.** (2016). "Yapay Sinir Ağları ile Kullanıcı Profilleme ve Konfor Seviyesi Tahmini". In: *International Artificial Intelligence and Data Processing Symposium (IDAP- 16)*. İnönü Üniversitesi, Malatya, Türkiye, 413–418, 17–18 September 2016.
- Tuğçi, R., Çelen, B., and **Özbayođlu, A.M.** (2013). "Comparison of Classifiers for Chatter Detection (in Turkish) - Pürüz Tespiti için Sınıflandırıcıların Karşılaştırılması". In: *IEEE Sinyal İşleme ve İletişim Uygulamaları Konferansı (SIU 2013)*. DOI: 10.1109/SIU.2013.6531300, Girne, TRNC, 24–26 April 2013.
- Özbayođlu, A.M** and Kök, İ.Ş (2011). "Comparison of Indoor Localization Models based on Relative Signal Strength (in Turkish) - Sinyal Gücüne Bağlı Bina İçi Konum Tespiti Modelleri Karşılaştırılması". In: *Firat Üniversitesi Elektrik-Elektronik Bilgisayar Sempozyumu (FEEB 2011)*. Vol. 2. Elazığ, Turkey, 99–104, 5–7 October 2011.
- Bıyıkođlu, Atilla, Kasnakođlu, Coşku, **Özbayođlu, A. Murat**, Güngör, Afşin, Özgür, D.Ö, and Uysal, B. Zühtü (2010). "Determination of Coal Gasification parameters for the production of Synthesis Gas (in Turkish) Sentez Gazı Üretimine Yönelik Kömür Gazlaştırma Parametrelerinin Tayini". In: *9th National Chemical Engineering Congress (UKMK-9)*. Gazi University, Ankara, Turkey, 22–25 June 2010.

- Özbayoğlu, A.M.** (2007). "Implementations of Intelligent Agents in e-Health (in Turkish) - Akıllı araçların e-sağlıkta kullanımı: Hastalık teşhis modelleri". In: 2. *E-Sağlık Çalıştayı*. Antalya, Turkey, 18–20 October 2007.
- Yazıcı, Ali, Erten, Murat, **Özbayoğlu, Murat**, and Tavlı, Bülent (2007). "CS0: Introduction to Computer Engineering in TOBB ETU (in Turkish) - CS0: TOBB ETÜ'de Bilgisayar Mühendisliğine Giriş Dersi". In: *Akademik Bilişim 2007*. Dumlupınar University, Kütahya, Turkey, 31 January –2 February 2007.
- Özbayoğlu, A.M.** (2006). "A Stock Market Forecasting Application using Neural Networks (in Turkish) - Yapay Sinir Ağları kullanarak hazırlanan bir Hisse senedi değer tahmini uygulaması". In: *TOK 06, Otomatik Kontrol Ulusal Toplantısı*. TOBB, ETU, Ankara, Turkey, 149–152, 6–8 November 2006.
- Özbayoğlu, A.M.** (2005). "An Automated Fingerprint Classification and Identification System based on Directional Band Pass Filtering and Neural Networks (in Turkish) - Yönel Bant geçiren filtre ve yapay sinir ağları yardımıyla otomatik parmak izi sınıflandırma ve tanıma işlemi". In: *II. Polis Bilişim Sempozyumu*. Ankara, Turkey, 234–237, 14–15 April 2005.
- Özbayoğlu, A.M.**, Lee, H.C, Dağlı, C.H., Erçal, F., and Enke, D. (1995). "SimNet: An Artificial Neural Network for Classification Applications (in Turkish) - SimNet: Sınıflandırma uygulamaları için bir yapay sinir ağı". In: *XVIIth National Conference on Operational Research and Industrial Engineering Conference*. METU, Ankara, Turkey, 10–11 July 1995.
- Sönmezer, O, Özbayoğlu, G, Atalay, Ü, **Özbayoğlu, M**, and Dağlı, C. (1995). "Grinding Stage Modeling by Using Artificial Neural Networks (in Turkish) - Öğütme Devresinin Yapay Sinir Ağları ile Modellenmesi". In: *Madencilikte Bilgisayar Uygulamaları Sempozyumu*. İzmir, Turkey, 211–217, 28–29 September 1995.

Abstracts / Extended Abstracts

- Karamüftüoğlu, A., Bozbey, A., and **Ozbayoglu, A.M.** (2017). *Development of Superconductor Integrated Logic Circuit Design with Artificial Neural Network Structure*. International Conference on Condensed Matter and Materials Science, ICCMMS-2017, 11-15 October 2017, Adana, Turkey, pp:60.
- Özbayoğlu, A.Murat** and Yavuz, M.H. (2016). *Algorithmic music composition with stochastic processes and genetic algorithms (in Turkish) - Rastlantısal Süreç ve Genetik Algoritmalar ile Algoritmik Kompozisyon*. International Conference on Mathematics and Mathematics Education (ICMME-2016), Fırat University, 12-14 May, Elazığ, Turkey.
- Nikghadam, S., Unver, H. O., **Özbayoğlu, A.M.**, and Kilic, S. E. (2016). *A Structurally Enhanced Fuzzy Inference System Partner Selection Technique In Forming Virtual Enterprise*. INFORMS 2016, Nashville, TN, USA, 13-16 November 2016.
- Şahin, Uğur and **Özbayoğlu, A.Murat** (2015). *Trend-normalized RSI Indicator for Stock Trading Systems with Evolutionary Computation (in Turkish) - Finansal İşlemler için Evrimsel Hesaplamalar yoluyla Eğilimden Arındırılmış Bağlı Güç Endeksi Göstergesi*. MATDER, 14. Matematik Sempozyumu, 14-16 May, Niğde, Turkey.
- Sadigh, B Lotfi, Nikghadam, S., Unver, H. O., **Özbayoğlu, A.M.**, and Kilic, S. E. (2014). *Operasyonel Sanal Fabrika için Esnek Veri Modeli ve Veritabanının Geliştirilmesi (in Turkish)*. 5th Workshop on Advanced Technologies, İstanbul, October 2014.
- Özbayoğlu, A.M.**, Osgouei, R.E., Özbayoğlu, M.E., and Yüksel, H.E. (2011). *Gaz sıvı karışımli sondaj akışlarının kesinti (kırıntı) taşıma özelliklerinin tayini (Determination of Cuttings Transport Properties of Aerated Drilling Fluids)*. IPETGAS 2011, Ankara-Turkey.
- Ozbayoglu M.E., **Ozbayoglu A.M.**, Osgouei R.E., and Yuksel E. (2009a). *Determination of Cutting Concentration through Horizontal Annular Geometry by using Image Processing Techniques*. IPETGAS 09, Ankara - Turkey.
- Ozbayoglu M.E., **Ozbayoglu A.M.**, Osgouei R.E., and Yuksel E. (2009b). *Determination of Liquid Hold up through Horizontal Annular Geometry by using Image Processing Techniques*. IPETGAS 09, Ankara-Turkey.

Thesis

- Ozbayoglu, Ahmet Murat** (1996). "Hierarchical fingerprint identification based on an unsupervised neural network model". PhD thesis. Engineering Management Dept, University of Missouri-Rolla.

Students Supervised

PhD Students

- 2015 – **Uğur Şahin**, *ongoing*.
- 2016 – **Selim Sefa Sarıkan**, *ongoing*.
- 2017 – **Muhammed Yılmaz**, *ongoing*.
- 2014 – 2018 **Ömer Berat Sezer**, *Thesis*: Analysis and Optimization of Time Series Data with Deep Artificial Neural Networks: Financial Estimation Algorithms.
- 2011 – 2016 **Ayhan Akbaş**, *Thesis*: Joint Optimization of Transmission Power Level and Data Packet Size for Wireless Sensor Network Lifetime Maximization, co-supervised with Bulent Tavli.

M.S. Students

- 2019 – 2022 **Mustafa Mert Keskin**, *Thesis*: Analysis of Graph Time Series with Deep Learning.
- 2019 – 2022 **Yasin Furkan Aktaş**, *Thesis*: Learning Coordination Behavior and Mission Planning in a Multi-Agent System using Deep Reinforcement Learning.
- 2017 – 2020 **Özgenil Meriç**, *Thesis*: Software Testing Effort Estimation with Machine Learning.
- 2016 – 2019 **Uğur Güdelek**, *Thesis*: Time Series Analysis and Forecasting: Deep Learning Approach.
- 2016 – 2019 **Derviş Utku Ufuk**, *Thesis*: Performance Optimization of JPEG 2000 Decompression for Ground Observation Satellite Operations.
- 2015 – 2019 **Aras Can Önal**, *Thesis*: MIIoT-Modular Intelligent Server Based Internet of Things Framework.
- 2016 – 2018 **Mustafa Sarı**, *Thesis*: Classification of Turkish Documents using Deep Learning Techniques.
- 2015 – 2017 **Mehmet Saygın Seyfioğlu**, *Thesis*: Deep Neural Network Initialization and Training Methodologies for Radar Micro Doppler Signature Classification, co-supervised with Sevgi Zubeyde Gurbuz, Melda Yüksel.
- 2013 – 2016 **Gökhan Küçükayan**, *Thesis*: Analysis of the Traffic Flow and Accidents with Big Data Algorithms.
- 2014 – 2016 **Ceyhun Karimov**, *Thesis*: Menu Optimization with Large-Scale Data.
- 2011 – 2014 **Uğur Şahin**, *Thesis*: Parameter Optimization of Oscillator-based Technical Analysis Indicators Using Evolutionary Algorithms on Trend-normalized Financial Data.
- 2011 – 2014 **Mustafa Uçar**, *Thesis*: Developing a Two Level Option Trading Strategy based on Option Pair Optimization of Spread Strategies with Evolutionary Algorithms.
- 2011 – 2014 **Fatih Arıkan**, *Thesis*: A Multi-Agent System Model for Company Selection Process in an Ontology-based Virtual Enterprise.
- 2011 – 2014 **İlknur Bayram**, *Thesis*: Three Level Covered Call Options Trading Model Optimized with Evolutionary Algorithms.
- 2010 – 2013 **Hatice Tombul**, *Thesis*: Computational Intelligence Models for Particle Direction and Velocity Estimation in Multi-Phase Flows.
- 2008 – 2011 **Recep Bozer**, *Thesis*: Estimation of the Expected Loss from a Forest Fire by Geographical and Meteorological Parameters using Artificial Intelligence Methods.
- 2008 – 2010 **Umur Erkut**, *Thesis*: Selection of Technical Analysis Indicator for Optimizing Portfolio Performance with Genetic Algorithms.
- 2008 – 2010 **H. Ertan Yüksel**, *Thesis*: Estimation of Flow Properties in Eccentric Annulus using Digital Image Processing and Artificial Intelligence Techniques.
- 2007 – 2009 **Gökay Gökser Gül**, *Thesis*: Object Extraction from Real Time Video Image and an Automated Object Tracking Application.
- 2007 – 2009 **İstemihan Şakir Kök**, *Thesis*: An Indoor Localization System.
- 2006 – 2009 **Zeynep Aydın**, *Thesis*: Estimating Flow Control with Genetic Programming.

- 2006 – 2008 **İsmet Bahadır, Thesis:** Stock Market Forecasting based on Bayesian Decision Theory and Artificial Neural Networks.
- 2005 – 2007 **Veli Mert Altaş, Thesis:** Extracting the features of Drilling Foams with Image Processing Techniques and Data Analysis using Artificial Neural Networks.

Academic Activities

Program / Organizing Committee

- Complex Adaptive Systems Conference, USA
- Complexis International Conference on Complex Information Systems, Italy
- Ulusal Karmaşık Dinamik Sistemler ve Uygulamaları Çalıştayı

International Journal Refereeing

- ACM Transactions on the Web, AIMS Mathematics, Ain Shams Engineering Journal, Applied Artificial Intelligence, Applied Computational Intelligence and Soft Computing, Applied Computing and Informatics, Applied Sciences, Applied Soft Computing, Applied Stochastic Models in Business and Industry, Arabian Journal of Chemistry, Artificial Intelligence Review, Automatika: Journal for Control, Measurement, Electronics, Computing and Communications, Automation in Construction, Balkan Journal of Electrical and Computer Engineering, Biomedical Signal Processing & Control, Communications in Statistics – Case Studies and Data Analysis, CIRP Journal of Manufacturing Science and Technology, Cogent Engineering, Communications Engineering, Complexity, Computational and Applied Mathematics, Computational Economics, Computer Communications, Computer Networks, Computers, Materials & Continua, Computers & Security, Computers in Biology and Medicine, Computers in Industry, Connection Science, Data Mining and Knowledge Discovery, Discover Analytics, Electronics, Energies, Energy Strategy Reviews, Engineering Applications of Artificial Intelligence, Engineering Science and Technology, Environmental Challenges, Environmental Monitoring and Assessment, Expert Systems with Applications, Finance Research Letters, Financial Innovation, Future Business Journal, Gazi University Faculty of Engineering and Architecture Journal, Geomatics, Natural Hazards and Risk, Health Data Science, Icelandic Research Fund
- IEEE Access, IEEE Transactions on Aerospace and Electronic Systems, IEEE Transactions on Automation Science and Engineering, IEEE Transactions on Geoscience and Remote Sensing, IEEE Transactions on Industrial Informatics, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Neural Networks and Learning Systems, IEEE Transactions on Parallel and Distributed Systems
- Industrial Marketing Management, Information Fusion, Information Processing and Management, Information Sciences, Information Systems Frontiers, Intelligent Automation and Soft Computing, Intelligent Systems with Applications, International Journal of Automotive Engineering and Technologies, International Journal of Electrical and Computer Engineering, International Journal of Electrical Power & Energy Systems, International Journal of Forecasting, International Journal of General Systems, International Journal of Information Management Data Insights, International Journal of Intelligent Systems, International Journal of Intelligent Systems and Applications in Engineering, International Journal of Mineral Processing, International Journal of Multiphase Flow, International Journal of Oil, Gas and Coal Technology, International Journal of Pure and Applied Sciences, International Journal of Semantic Computing, International Review of Economics and Finance, Internet of Things, Iranian Journal of Numerical Analysis and Optimization

- JKSU-Computer and Information Sciences, Journal of Accounting and Taxation, Journal of Advanced Research in Natural and Applied Sciences, Journal of Ambient Intelligence and Humanized Computing, Journal of Autonomous Intelligence, Journal of Business Research, Journal of Communications, Journal of Computer Science and Technology, Journal of Database Management, Journal of Intelligent & Fuzzy Systems, Journal of Internet Technology, Journal of Manufacturing Systems, Journal of Marine Science, Journal of Mobile Multimedia, Journal of Open Innovation, Technology, Market and Complexity, Journal of Petroleum Science and Engineering, Journal of Sensors, Journal of the Franklin Institute, Journal of the Operational Research Society, Karbala International Journal of Modern Science, Knowledge and Information Systems, Knowledge-Based Systems, Machine Learning and Applications, Machines, Mathematical Biosciences and Engineering, Mathematical Problems in Engineering, Measurement, Measurement and Control, Mechanical Systems and Signal Processing, Microchemical Journal, Micromachines, Microprocessors and Microsystems
- Neural Networks, Neurocomputing, Open Medicine, Open Public Health Journal, PLOS One, Production & Manufacturing Research, Progress in Artificial Intelligence, Qeios, Recent Advances in Computer Science and Communications, Results in Physics, Scientific Programming, Sensors, Signal Processing, SLAS Technology, Sustainable Energy Technologies and Assessments, Swarm and Evolutionary Computation, Technical Gazette, Technological Forecasting and Social Change, The Engineering Economist, The International Journal for Computation and Mathematics in Electrical and Electronic Engineering, The Journal of International Scientific Researches, The Open Biomedical Engineering Journal, The Open Public Health Journal, Transactions of the Institute of Measurement and Control, Turkish Journal of Electrical Engineering and Computer Sciences, Turkish Journal of Science and Technology

National Journal Refereeing

- Acta Infologica, Afyon Kocatepe Üniversitesi Fen Ve Mühendislik Bilimleri Dergisi, Avrupa Bilim ve Teknoloji Dergisi, Bilişim Teknolojileri Dergisi, Canakkale Onsekiz Mart Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Düzce Üniversitesi Bilim ve Teknoloji Dergisi, Ekonomik Yaklaşım, Erzincan Üniversitesi Fen Bilimleri Enstitüsü Dergisi, Gazi Üniversitesi Fen Bilimleri Dergisi Part C: Tasarım ve Teknoloji, Gazi University Journal of Science, Gazi University Journal of Science Part A: Engineering and Innovation, IBAD Sosyal Bilimler Dergisi, İstanbul Business Research, Konya Journal of Engineering Sciences, Muğla Sıtkı Koçman Üniversitesi Eğitim Fakültesi Dergisi, Politeknik, Uluslararası Bilimsel Araştırmalar Dergisi (IBAD)

Conference Refereeing

- Artificial Neural Networks in Engineering, Complex Adaptive Systems, Complexis (International Conference on Complex Information Systems), ELECO - Uluslararası Elektrik-Elektronik Mühendisliği Konferansı, International Conference on Intelligent Control Systems and Signal Processing, International Conference on Neural Information Processing (ICONIP), IEEE International Conference on Big Data, IEEE International Conference on Mechatronics and Robotics Engineering, ICMRE, IEEE International Workshop on Semantic Computing for Social Networks and Organization Sciences (SCSN), IEEE Semantic Computing for Social Networks Workshop (SCNC), IEEE SİU Sinyal İşleme Uygulamaları, IEEE Wireless Communications and Networking Conference (WCNC), International Conference on Frontiers of Artificial Intelligence (FAIEMA), Turkish Computing Society (TBD) Workshop, TOK - Turkish Automated Control Conference, UBMK - Uluslararası Bilgisayar Mühendisliği Konferansı, UMTİK - Uluslararası Makina Tasarım ve İmalat Konferansı

Service Activities

Scientific Committees

- The Scientific and Technological Council of Turkey, TÜBİTAK R & D (ARDEB) Project Evaluation Committee

- The Scientific and Technological Council of Turkey, TUBITAK Industrial R & D Committee for Small Enterprises
- Ministry of Science, Industry and Technology, TEKNOGİRİŞİM Startup Business Grant Selection Committee
- Ministry of Science, Industry and Technology, SANTEZ Industrial R & D Committee

Industrial Project Refereeing / Monitoring

- The Scientific and Technological Council of Turkey, TUBITAK TEYDEB Industrial R & D Project Refereeing
- The Scientific and Technological Council of Turkey, TUBITAK TEYDEB Industrial R & D Project Monitoring
- The Scientific and Technological Council of Turkey, TUBITAK Industrial R & D Center Monitoring
- Turkish Computing Society (TBD) Artificial Intelligence Applications Committee Leader
- Turkish Computing Academics Society (Akademik Bilişim Vakfı - ABV) Founding Member
- UNESCO Turkey Branch Artificial Intelligence Advisory Board Member

University Activities

- 2009 – 2013 **Department Vice Chairman**, *TOBB University of Economics and Technology*, Department of Computer Engineering.
- 2010 – **Institutional Graduate Erasmus Coordinator**, *TOBB University of Economics and Technology*.
- 2010 – 2012 **Faculty Management Committee Member**, *TOBB University of Economics and Technology*, Faculty of Engineering.
- 2010 – 2012 **Web Committee Member**, *TOBB University of Economics and Technology*.
- 2011 – 2012 **ABET Committee Member**, *TOBB University of Economics and Technology*.
- 2009 – 2011 **Undergraduate Program Evaluation Committee Member**, *TOBB University of Economics and Technology*.
- 2009 – 2010 **Undergraduate Registration Committee Member**, *TOBB University of Economics and Technology*.
- 2006 – **Departmental Erasmus Coordinator**, *TOBB University of Economics and Technology*, Department of Computer Engineering.

Memberships to Professional Societies

- ACM (Association for Computing Machinery) Member
- IEEE (Institute of Electrical and Electronics Engineers) Member
- IEEE Computational Intelligence Society Member

Certificates and Achievements

- Sun Java Programmer Certificate - 2002
- Published 2 books, 35 journal papers, over 100 conference publications and technical reports in applied machine learning
- Google Scholar Citation Count = 4414 (last 2 years count > 2000), h-index=29
- Scopus Citation Count = 2497 with 98 publications, h-index=23
- Web of Science Citation Count = 1801 with 83 publications, h-index=19

- Applied Soft Computing (Q1, IF: 8.5) 2022 Best Paper Award
- Top %0.1 in National Centralized University Entrance Examination in Turkey - 1987
- 3. place in TUBITAK Mathematics Competition for Middle School Students in Central Turkey Region - 1984
- 2. place in TUBITAK Chemistry Competition for High School Students in Central Turkey Region - 1987
- Licensed DJ in 89.7 FM KMNR-Rolla, MO, USA 1994-1996

References

- Available upon request