

# **Prof. ERDAL BEKİROĞLU**

## **Personal Information**

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## **Education Information**

Doctorate, Gazi University, Fen Bilimleri Enstitüsü, Elektrik Eğitimi, Turkey 1998 - 2003

Postgraduate, Gazi University, Fen Bilimleri Enstitüsü, Elektrik Eğitimi, Turkey 1995 - 1998

Undergraduate, Gazi University, Teknik Eğitim Fakültesi, Elektrik Eğitimi, Turkey 1990 - 1994

## **Foreign Languages**

English, C2 Mastery

## **Certificates, Courses and Trainings**

Foreign Language, Yabancı Dil Hazırlık Eğitimi (İngilizce), Middle East Technical University, 1997

## **Dissertations**

Doctorate, Yürüyen dalga ultrasonik motorun hız ve konum denetiminin bulanık mantık denetleyici kullanarak gerçekleştirilmesi, Gazi University, Fen Bilimleri Enstitüsü, 2002

Postgraduate, Bilgisayar kontrollü bir dış fırçası hareket mekanizmasının tasarıması, Gazi University, Fen Bilimleri Enstitüsü, 1998

## **Research Areas**

Industrial automation, Communication Control Systems, Artificial Intelligence, Computer Learning and Pattern Recognition, Renewable energy, Electrical Machine Theory and Design, Electric Motor Drivers, Power Quality

## **Academic Titles / Tasks**

Professor, Gazi University, Mühendislik Fakültesi, Software Engineering, 2024 - Continues

Professor, Bolu Abant İzzet Baysal University, Mühendislik Fakültesi, Electrical&Electronics Engineering, 2016 - 2024

Associate Professor, Bolu Abant İzzet Baysal University, Faculty of Engineering, Electrical&Electronics Engineering, 2011 - 2016

Assistant Professor, Bolu Abant İzzet Baysal University, Faculty of Engineering, Electrical&Electronics Engineering, 2004 - 2011

Research Assistant, Gazi University, Teknik Eğitim Fakültesi, Elektrik Eğitimi, 1996 - 2003

## **Academic and Administrative Experience**

Head of Department, Gazi University, Mühendislik Fakültesi, Software Engineering, 2024 - Continues

Head of Department, Bolu Abant İzzet Baysal University, Faculty of Engineering, Electrical&Electronics Engineering, 2013 - 2024

Head of Department, Bolu Abant İzzet Baysal University, Faculty of Engineering, Electrical&Electronics Engineering, 2005 - 2024

Secretary General, Bolu Abant İzzet Baysal University, 2010 - 2016

Head of Department, Bolu Abant İzzet Baysal University, Faculty of Engineering, Electrical&Electronics Engineering, 2005 - 2011

## **Published journal articles indexed by SCI, SSCI, and AHCI**

- I. **Investigating the Effectiveness of Wind Turbine and Salp Swarm Optimization in Alleviating Transmission Congestion of Power System**  
Gautam A., Nasiruddin I., Sharma G., Ahmer M. F., Celik E., Bekiroglu E.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, 2024 (SCI-Expanded)
- II. **Improving speed control characteristics of PMDC motor drives using nonlinear PI control**  
Çelik E., Bal G., ÖZTÜRK N., BEKİROĞLU E., Houssein E. H., OCAK C., Sharma G.  
Neural Computing and Applications, 2024 (SCI-Expanded)
- III. **Near Real-Time Load Forecasting of Power System Using Fuzzy Time Series, Artificial Neural Networks, and Wavelet Transform Models**  
Khatoon S., Ibraheem M., Shahid M., Sharma G., Celik E., Bekiroglu E., Ahmer M. F., Priti P.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.52, no.5, pp.796-810, 2024 (SCI-Expanded)
- IV. **Improved Energy Management System for Wind Power-Based Microgrid with EV Charge Station**  
Bekiroglu E., Esmer S.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.52, no.10, pp.1808-1820, 2024 (SCI-Expanded)
- V. **Design and Implementation of Drive and Control System for Ultrasonic Motor over Power Line Communication**  
Daldal N., Aytar O., Bekiroglu E., Bal G.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.52, pp.1082-1093, 2024 (SCI-Expanded)
- VI. **Power Loss Minimization through Reconfiguration Using BPSO-Based Technique**  
Kirithikaa S., Narayanan K., Sharma G., Bokoro P. N., Celik E., Bekiroglu E.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.51, no.18, pp.2148-2158, 2023 (SCI-Expanded)
- VII. **Design and Double-Stage Optimization of Synchronous Reluctance Motor for Electric Vehicles**  
Bekiroglu E., Esmer S.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.51, no.20, pp.2557-2572, 2023 (SCI-Expanded)
- VIII. **Reliability Assessment of Demand Response Strategies for Profit Maximization**  
Sivasankari G. S., Narayanan K., Sharma G., Celik E., Bekiroglu E.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.51, no.18, pp.2135-2147, 2023 (SCI-Expanded)
- IX. **Fault-Ride through Improvement of DFIG under Symmetrical/Asymmetrical Voltage Dips**  
Bekiroglu E., Yazar M. D.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, vol.51, pp.510-523, 2023 (SCI-Expanded)
- X. **MPPT Control of Grid Connected DFIG at Variable Wind Speed**  
Bekiroglu E., Yazar M. D.  
ENERGIES, vol.15, no.9, 2022 (SCI-Expanded)
- XI. **Design of highly effective multilayer feedforward neural network by using genetic algorithm**  
Ustun O., Bekiroglu E., Onder M.  
EXPERT SYSTEMS, vol.37, no.4, 2020 (SCI-Expanded)
- XII. **Role of preparation conditions of Bi-2223 ceramic materials and optimization of Bi-2223 phase in bulk materials with experimental and statistical approaches**

- Pakdil M., Bekiroglu E., Oz M., Saritekin N. K., Yildirim G.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.673, pp.205-214, 2016 (SCI-Expanded)
- XIII. **Degeneration of mechanical characteristics and performances with Zr nanoparticles inserted in Bi-2223 superconducting matrix and increment in dislocation movement and cracks propagation**  
Akdemir E., Pakdil M., Bilge H., Kahraman M. F., Bekiroglu E., Yildirim G., Zalaoglu Y., Doruk E., Oz M.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.27, no.3, pp.2276-2287, 2016 (SCI-Expanded)
- XIV. **Examination of effective nucleation centers for flux pinning of vortices and optimum diffusion annealing temperature for Au-diffusion-doped Bi-2212 polycrystalline compound**  
Saritekin N. K., Pakdil M., Bekiroglu E., Yildirim G.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.688, pp.637-646, 2016 (SCI-Expanded)
- XV. **Comparative study on mechanical properties of undoped and Ce-doped Bi-2212 superconductors**  
Zalaoglu Y., Bekiroglu E., Dogruer M., Yildirim G., Ozturk O., Terzioglu C.  
JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS, vol.24, no.7, pp.2339-2345, 2013 (SCI-Expanded)
- XVI. **On-Line Educational Tool for the Parallel Operation of the Synchronous Generators**  
Bekiroglu E., Bayrak A.  
COMPUTER APPLICATIONS IN ENGINEERING EDUCATION, vol.19, no.4, pp.669-677, 2011 (SCI-Expanded)
- XVII. **VIRTUAL ELECTRICAL MACHINERY LABORATORY: EXPERIMENTS OF SYNCHRONOUS GENERATOR**  
Bekiroğlu E., Bayrak A.  
Gazi Mühendislik Bilimleri Dergisi, vol.25, no.2, pp.405-413, 2010 (SCI-Expanded)
- XVIII. **The influence of Gd addition on microstructure and transport properties of Bi-2223**  
Terzioglu C., Aydin H., Ozturk O., Bekiroglu E., Belenli I.  
PHYSICA B-CONDENSED MATTER, vol.403, no.19-20, pp.3354-3359, 2008 (SCI-Expanded)
- XIX. **Ultrasonic motors: Their models, drives, controls and applications**  
Bekiroglu E.  
JOURNAL OF ELECTROCERAMICS, vol.20, no.3-4, pp.277-286, 2008 (SCI-Expanded)
- XX. **Microcontroller-based full control of ultrasonic motor with frequency and voltage adjusting**  
Bekiroglu E.  
SENSORS AND ACTUATORS A-PHYSICAL, vol.141, no.1, pp.151-159, 2008 (SCI-Expanded)
- XXI. **A highly effective load adaptive servo drive system for speed control of travelling-wave ultrasonic motor**  
Bal G., Bekiroglu E.  
IEEE TRANSACTIONS ON POWER ELECTRONICS, no.5, pp.1143-1149, 2005 (SCI-Expanded)
- XXII. **Remote control of an ultrasonic motor by using a GSM mobile phone**  
Bekiroglu E., Daldal N.  
SENSORS AND ACTUATORS A-PHYSICAL, vol.120, no.2, pp.536-542, 2005 (SCI-Expanded)
- XXIII. **A PWM technique for DSP controlled ultrasonic motor drive system**  
Bal G., Bekiroglu E.  
ELECTRIC POWER COMPONENTS AND SYSTEMS, no.1, pp.21-38, 2005 (SCI-Expanded)
- XXIV. **Fuzzy logic based DSP controlled servo position control for ultrasonic motor**  
Bal G., Bekiroglu E., DEMİRBAŞ Ş., Colak I.  
ENERGY CONVERSION AND MANAGEMENT, no.20, pp.3139-3153, 2004 (SCI-Expanded)
- XXV. **Servo speed control of travelling-wave ultrasonic motor using digital signal processor**  
Bal G., Bekiroglu E.  
SENSORS AND ACTUATORS A-PHYSICAL, no.3, pp.212-219, 2004 (SCI-Expanded)
- XXVI. **PC controlled toothbrush/dentifrice abrasion machine**  
BAL G., Üctaşlı S., Bekiroğlu E.  
Journal of Medical Systems, vol.23, no.1, pp.27-33, 1999 (SCI-Expanded)

## **Articles Published in Other Journals**

- I. **Design of PMaSynRM for Flywheel Energy Storage System in Smart Grids**  
ESMER S., BEKİROĞLU E.  
International Journal of Smart Grid, vol.6, no.4, pp.84-91, 2022 (Peer-Reviewed Journal)
- II. **Bionic hand: A brief review**  
BAYRAK A., BEKİROĞLU E.  
Journal of Bionic Memory, vol.2, no.2, pp.37-43, 2022 (Peer-Reviewed Journal)
- III. **Comparison of Trapezoidal and Sinusoidal PWM Techniques for Speed and Position Control of PMSM**  
BEKİROĞLU E., DALIKIN A.  
ADVANCES IN ELECTRICAL AND ELECTRONIC ENGINEERING, vol.18, no.4, pp.207-216, 2020 (ESCI)
- IV. **Experimental Analysis of Energy Quality at Campus Network-Case Study: Bolu Abant Izzet Baysal University (Engineering Building)**  
BEKİROĞLU E., Yıldız H.  
Düzce Üniversitesi Bilim ve Teknoloji Dergisi, vol.8, no.2, pp.1307-1318, 2020 (Peer-Reviewed Journal)
- V. **Transformatör Merkezlerinin Güvenlik Amaçlı Uzaktan İzlenmesi ve Otomasyonu**  
BEKİROĞLU E., DALDAL N.  
e-Journal of New World Sciences Academy, vol.4, no.4, pp.459-470, 2009 (Peer-Reviewed Journal)

## **Metrics**

Publication: 31  
Citation (WoS): 311  
Citation (Scopus): 369  
H-Index (WoS): 10  
H-Index (Scopus): 12