

## Res. Asst. BERKE AKGÜL

### Personal Information

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### Education Information

Postgraduate, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, Turkey 2021 - 2024

Undergraduate, Istanbul Technical University, Elektrik-Elektronik, Elektronik Ve Haberleşme Mühendisliği, Turkey 2017 - 2021

### Research Areas

Electrical and Electronics Engineering, Electronic, Engineering and Technology

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

- I. **Using graph neural networks to reconstruct charged pion showers in the CMS High Granularity Calorimeter**  
Aamir M., Adamov G., Adams T., Adloff C., Afanasiev S., Agrawal C., Agrawal C., Ahmad A., Ahmed H., Akbar S., et al.  
Journal of Instrumentation, vol.19, no.11, 2024 (SCI-Expanded)
- II. **An Energy Consumption Model for SRAM-Based In-Memory-Computing Architectures**  
AKGÜL B., Karalar T. C.  
Electronics (Switzerland), vol.13, no.6, 2024 (SCI-Expanded)

### Refereed Congress / Symposium Publications in Proceedings

- I.  **$\text{PI}\lambda\text{D}\mu$  Approach for High-Efficiency BLDC Motor Control**  
ERSOY H., AKGÜL B., AKPINAR E., ÖZAKIN A., AYTEN U. E.  
2024 15th National Conference on Electrical and Electronics Engineering (ELECO), Turkey, 28 - 30 November 2024
- II. **Digital Realization of  $\text{PI}^{\lambda}\text{D}^{\mu}$  Controllers: Performance Evaluation on MCUs and FPGAs**  
Akgül B., Ersoy H., Akpınar E., Kartcı A., Ayten U. E.  
2024 31st IEEE International Conference on Electronics, Circuits and Systems (ICECS), Nancy, France, 18 - 20 November 2024, pp.1-4
- III. **Digital Realization of  $\text{PI}\lambda\text{D}\mu$  Controllers: Performance Evaluation on MCUs and FPGAs**  
AKGÜL B., ERSOY H., AKPINAR E., ÖZAKIN A., AYTEN U. E.  
IEEE International Conference on Electronics Circuits & Systems (ICECS), Nancy, France, 18 - 20 November 2024

**IV. A Robust Speed Controller Design for PMSM Using PI $\lambda$ D $\mu$  Controllers**

ERSOY H., AKGÜL B., AKPINAR E., ÖZAKIN A., AYTEN U. E.

47th International Conference on Telecommunications and Signal Processing, TSP 2024, Virtual, Online, Czech Republic, 10 - 12 July 2024, pp.289-293

**V. An Activity Factor List for Energy Consumption of SRAM-based CIM Architectures**

Akgül B., Karalar T. C.

30th IEEE International Conference on Electronics, Circuits and Systems, ICECS 2023, İstanbul, Turkey, 4 - 07 December 2023

## Supported Projects

TURAL POLAT S. N., SAKARYA U., ERKMEN B., YETKİN T., TAYŞI Z. C., AKGÜL B., YÜKSEL O., FEDAR Y. E., Project Supported by Higher Education Institutions, CERN CMS HGCALin Arka Uç Kısmı için NZS Tasarımı, 2024 - Continues

Yetkin T., Tural Polat S. N., Erkmen B., Tayşi Z. C., Sakarya U., Akgül B., Other International Funding Programs, Jet Physics Analyses and R&D Studies of HCAL-HGCAL Detectors in the CMS Experiment at CERN, 2023 - 2026

ERKMEN B., Elkatmış M. E., ACAR VURAL R., BATUR O. Z., ELKATMIŞ N., AKGÜL B., AKGÜL B., Yüksel O., Project Supported by Higher Education Institutions, Nöromorfik İşlemci Tabanlı Enerji Etkin Görüntü Sınıflandırma Sistemi, 2021 - 2025

## Metrics

Publication: 7

Citation (Scopus): 1

H-Index (Scopus): 1