

OBJECTIVE

Graduate student looking for summer research internships on Power System State & Parameter Estimation research fields.

SUMMARY

I am a master's student studying under the supervision of Dr. Murat Gol at Middle East Technical University with a major in Electrical Engineering. I am also a Research and Teaching Assistant at the same department. My main research area is Power System State & Parameter Estimation. I have experience in Kalman Filters and other estimators on MATLAB and Python. I have been the teaching assistant for Power System Analysis courses. I have worked on industrial projects where I implemented well-known state estimation tools.

RESEARCH INTERESTS

Power System Static State Estimation, Power System Dynamic State Estimation, Parameter Estimation

EDUCATION

Middle East Technical University

MSc. Electrical and Electronics Engineering, Power Systems
Supervisor: Dr. Murat Gol

GPA: 3.90/4

Ankara, Turkey
2019 September – Present

Middle East Technical University

BSc. Electrical and Electronics Engineering, Power Systems

GPA: 3.35/4

Ankara, Turkey
2015 September – 2019 June

WORK EXPERIENCE

Middle East Technical University

Research and Teaching Assistant, Department of Electrical and Electronics Engineering

Ankara, Turkey
2020 February – Present

- Power System Analysis I
- Power System Analysis II
- High Voltage Techniques I & II

Middle East Technical University

Project Assistant, Power System Analysis Laboratory

Ankara, Turkey
2019 June – Present

- Participated in projects mentioned in Projects section.

Ulusoy Electric

Intern, Production and Quality Control

Ankara, Turkey
2018 September – 2018 October

- Observed the production line of MV equipment.

AF-Mercados EMI

Intern, Distribution Network Planning

Ankara, Turkey
2018 June – 2018 September

- Worked at Master Plan of Firat DISCO.
- Modeled distribution networks of four cities on DigSilent Power Factory

PROJECTS

Implementation of State Estimation Algorithm ASELSAN

2020 January – 2021 April (Expected)

- Implemented traditional WLS-SE, Transformer Tap Estimator, Observability Analysis, and Bad Data Analysis tools on MATLAB.
- Implemented a Load Forecast Aided WLS Hybrid-SE.
- Wrote technical reports of Topology Processor and Hybrid-SE.

Power Plant Parameter Calibration Tool a Private Company

2020 October – Present

- Implemented Ensemble Kalman Filter based Power Plant Parameter Calibration Algorithm using PSS/E API on Python.
- Presented algorithms on technical meetings.

ALGORITHMS & TOOLS

- Weighted Least Squares, Kalman Filter, Extended Kalman Filter, Unscented Kalman Filter, Ensemble Kalman Filter, Newton-Raphson Method, Depth-First Search and experience on general optimization algorithms such as Genetic Algorithms, Bisection Search, Golden Section Search.

SKILLS

Programming Language: Python, MATLAB

Simulation and Analysis Software: PSS/E (including psspy), DigSilent PowerFactory

COURSES

- Power System Stability and Dynamics
- Power Systems Real-Time Monitoring and Control
- System Identification
- Optimization
- Power System Analysis I & II
- Distribution Systems
- Electrical Power Quality Monitoring and Improvement
- Nonlinear Control Systems
- Feedback Systems
- Economic Operation of Power System
- Linear Systems Theory

HONORS

National Academic Personnel and Postgraduate Education Entrance Exam (GRE Equivalent Exam in Turkey)

Ranked 313rd among 119000 participants

Dean's Honor Roll *Achieved High Honor Roll 5 Times in 8 terms*

National University Entrance Exam *Ranked 1665th among 2 million participants*

LANGUAGES

English *Professional working proficiency*

Turkish *Native*