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## Dr. Md. Shafiul Alam (IEEE)

### Postdoctoral Fellow/ Assistant Professor

K.A.KARE Energy Research & Innovation Center (ERIC)  
King Fahd University of Petroleum & Minerals, Saudi Arabia

#### Executive Summary

Power System engineer with more than 10 years of experience as an adviser, expert, faculty member, and trainer. Has a strong background in:

- ✓ **Power System Stability Analysis:** work in FACTS devices integration for Bangladesh Power System
- ✓ **HVDC, AC/DC Microgrid:** work in HVDC and microgrid during PhD study through funded project
- ✓ **Energy Storage System, Renewable energy, and Protection:** work in energy storage system, renewable energy, optimization and control through funded project
- ✓ **Artificial Intelligence, Machine Learning, and Optimization, Data Analysis :** work in ML and AI

#### Education

- ❑ PhD Electrical Engineering (KFUPM, 2018 )
- ❑ MSc in EEE (BUET, Dhaka, 2012 )
- ❑ BSc in EEE (DUET, Gazipur, 2007)

#### Distinguished Projects

- Deanship of Scientific Research (DSR), KFUPM: “Adaptive and Robust Virtual Inertia Control for Efficient Power Management Scheme of DC Microgrids” Funded By DSR of KFUPM (Project Number: DF201022, Project Duration: 24 months, Project Value: 283885 SAR). Position: Co-Principle Investigator (Co-PI). Contribution: Conceptualization, Modeling, Controller design, Practical Implementation, Status: Project Ongoing
- Deanship of Scientific Research (DSR), KFUPM: “Quantifying the capacity credit as a reliability-based index for a large-scale wind power generation planning using Stochastic Programming” Funded By DSR of KFUPM (Project Number: DF181035, Project Duration: 24 months, Project Value: 207720 SAR), Position: Postdoctoral Research Fellow. Contribution: Model Analysis, Conceptual design. Status: Project Ongoing.
- Deanship of Scientific Research (DSR), KFUPM: “Controller Design and Implementation of DFIG wind Integrated VSC-HVDC System with Bridge Type Fault Current Limiters” Funded By DSR of KFUPM (Project Number: RG17002, Project Duration: 30 months, Project Value: 299730 Saudi Riyals). Position: Research Assistant. Contribution: Mathematical Modeling, Controller Design, Real Time Digital Simulation and Control Hardware-in-Loop Test, and Report Writing. Status: Awarded and Completed.
- Deanship of Scientific Research (DSR), KFUPM: “New Robust Controller Design for Voltage Source Inverters in Microgrids” Funded By DSR of KFUPM (Project Number: RG1420-1&2, Project Duration: 30 months, Project Value: 375230 Saudi Riyals). Position: Research Assistant. Contribution: Model Analysis, Development and Simulations, Hardware Prototype Development, and Report Writing. Status: Awarded and Completed.

#### Research Summary

- Number of Published Papers: 52
- Citations: 372
- H-Index : 11

#### Award and Recognitions

- IEEE conference best paper awards in CAIDA, 6-7 April 2021, Riyadh, Kingdom of Saudi Arabia (KSA) and in ICEEICT 2014, 10-12 April 2014, Dhaka Bangladesh

#### Skills and Expertise

- Power system stability analysis and control considering high-level renewable energy integration
- HVDC system design, AC/DC Microgrid control and optimization
- Integration of energy storage system with Power System and AC/DC microgrid
- Renewable Energy and Climate Modeling
- Writing of reports, work papers, briefings