Aswad Adib

# Qualifications Summary:

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* Experienced in modeling large-scale grid-connected power electronics converter systems.
* Proficient in power electronics systems simulation across various computational platforms.
* Skilled in advanced control techniques for power electronics converters.

# Educational Background:

**Ph.D. in Electrical Engineering,** Kansas State University (Dec. 2018)

**Dissertation:** Control and stability enhancement of grid-interactive voltage source inverters under grid abnormalities. Major Professor: Dr. Behrooz Mirafzal.

B.Sc. in Electrical and Electronic Engineering, Bangladesh Univ. of Engineering and Technology, (Apr. 2012)

# Professional Experience:

**R&D Associate Staff, Oak Ridge National Laboratory** (Aug. 2022 – Present)

* Developing resiliency techniques for Megawatt-scale EV charging stations.
* Developing distribution feeder level power converter models and controls for controller hardware-in-the-loop environment.
* Developed AI-based optimization schemes for distribution grids with high penetration of DERs.

**Postdoctoral Research Associate, Oak Ridge National Laboratory** (Dec. 2019 – Jul. 2022)

* Developed control schemes for multi-stage power electronics systems, e.g., extreme fast charging stations and medium voltage grid-connected energy storage interfaces.
* Developed multi-stage power electronics systems models valid across various computational platforms.

**Research Fellow, Kansas State University** (Jan. 2019 – Dec. 2019)

* Collaborated on an industry project modeling a microgrid, consisting of power electronic converter interfaced microturbines, a battery energy storage system, three-phase PVs, and single-phase PVs, capable of operating in both grid-connected and standalone modes.

**Graduate Research Assistant**, **Kansas State University** (Aug. 2014 – Dec. 2018)

* Developed a novel current feedforward based adaptive virtual inductance control scheme for stable operation of voltage source inverters in weak grids.

**Software Engineer**, **Samsung R&D Institute Bangladesh** (Nov. 2012 - Jul. 2014)

* Programmed test cases in C++ for TIZEN operating system API.

# Software Expertise:

* Simulation Platforms: MATLAB/Simulink, PSCAD, OpenDSS, and PLECS
* HIL Platforms: OPAL-RT and dSPACE
* Computing Experience: DSP and FPGA

# Publication Record:

* 7 journals and 16 conference papers published in peer-reviewed IEEE journals and conferences.
* Received 2020 3rd prize paper award from the Renewable Energy Committee of IEEE Industrial Applications Society.