INDEPENDENT INSULATION GROUP

CURRICULUM VITAE

AMUTHAVALLI JOTHIRAM

Electrical engineer with an M.Sc. in Sustainable Electric Power Engineering and Electromobility from Chalmers University. Experienced in renewable energy integration, wind farm connection studies, and grid code compliance testing (RfG guidelines EU 2016/631 and EIFS 2018:2) using PowerFactory. Skilled in reactive power assessment, cable dimensioning, and system stability analysis for inverter-based generation. Previous experience includes hardware design for automated test equipment and FPGA.

MAIN FIELDS OF COMPETENCE

- Integration of renewable power and power system analysis
  - Grid code compliance processes as per EU 2016/631 "RfG" and EIFS 2018:2
  - Design studies

WORK EXPERIENCE

2025 – Present **Independent Insulation Group Sweden AB,** Ludvika, Sweden
Engineer
Connection study for Renewable resources
Compliance testing as per RfG guidelines and EIFS 2018:2

2014-2017 **HCL Technologies Ltd,** Chennai, India
ATE Engineer
Hardware design and implementation for Automated Test Equipment (ATE) for aero-auto applications.

2013-2014 **VI Microsystems Pvt Ltd**, Chennai, India
Student Intern
Conducted a bachelor's thesis on developing a Maximum Power Point Tracking (MPPT) algorithm for a wind energy conversion system using FPGA

EDUCATIONAL DEGREES

2023 – 2025 **Master of Science in Sustainable Electric Power Engineering and Electromobility**
Chalmers University, Gothenburg, Sweden.
Thesis: Voltage stability assessment in Nordic power system with high share of Inverter Based Generation (IBG)

2009 – 2013 **Bachelor of Engineering in Electrical and Electronics**
Alagappa Chettiar College of Engineering and Technology, Karaikudi, India.
Thesis: Implementation of Maximum Power Point Tracking (MPPT) Algorithm for Wind Energy Conversion System using FPGA technology.

LANGUAGES

Swedish (Working proficiency), English (professional level)

LIST OF PROJECTS

2026 – Present	***Grid code compliance testing – RfG and EIFS 2018:2 for wind farms*** Grid code compliance simulations as per RfG and EIFS 2018:2 for wind farms. The studies were performed in PowerFactory.
2025 – 2026	***Connection studies for wind farms*** Connection studies for wind farms were conducted in PowerFactory, including assessments of reactive power capability, cable dimensioning under normal and fault conditions, and evaluation of different turbine types.
2014 – 2017	**Automate Test Equipment Design for Brake control unit** ATE hardware design for unit under test using PCI/PXI cards and programmable instruments. Delivered comprehensive documentation including BoM, wiring diagrams, and assembly instructions. Designed power panels and cable harnesses, ensuring seamless integration with devices under test.
2013 – 2014	**Implementation of Maximum Power Point Tracking (MPPT) Algorithm for Wind Energy Conversion System using FPGA technology** Developed and implemented a Maximum Power Point Tracking (MPPT) algorithm for a Wind Energy Conversion System using FPGA technology. Modeled a wind profile simulator utilizing BLDC/PMSM motors and performed PWM control. Conducted system simulations in MATLAB/Simulink and Psim, validating results with ModelSim. Gained hands-on experience in real-time I/O interfaces.