### Contact

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## Top Skills

**Simulations** 

Algorithms

**Smart Grid** 

## Languages

Telugu (Native or Bilingual) Hindi (Full Professional) English (Full Professional)

### Certifications

Certified ScrumMaster (CSM)

### Honors-Awards

Massachusetts Institute of Technology Young Indian Innovator DST-Lockheed Martin Gold Medalist

Prestigious Young Engineer Award (Electrical Engineering)

Gandhian Strategic Innovation Award

### **Publications**

An Effective Model for Demand Response Management Systems of Residential Electricity Consumers

Review of demand response under smart grid paradigm

Smart Grid initiatives and power market in India

Everything's Talking to Each Other: Smart Meters Generate Big Data for Utilities and Customers

# VSK Murthy Balijepalli (Krish)

Smart Energy Grids; Certified ScrumMaster (CSM); Innovator under 35 | MIT Technology Review; Renewable Energy; Research Commercialisation; Energy IoT; Visionary; Consultancy Singapore

# Summary

- Diversified experience and expertise in different domains of power systems (energy networks), TE, IoT, SCADA-ICT enabled real-time energy management systems and operations of electricity grids.
- Commendable front-end design and field experience in the deployment of electricity infrastructure with informative analytics, which includes research and new product development, identification and development of key solution differentiation, proof-of-concept development, engineering concept feasibility, and testing.
- Actively contributed towards the delivery of energy management solutions plus design, optimization and efficient operation of centralized & distributed Microgrid systems (including energy storage, PV, and other renewable resources) compliance to various grid codes.
- Handled projects of both balanced and unbalanced power systems considering planning, steady-state, transient and reliability aspects.
- Involved in commercialization processes, R&D initiatives through Grant calls and direct collaborations with both national and international stakeholders.
- Expertise in various IEEE/IEC standards (CIM, IEC61850 etc) governing the smart grid functionality testing, data, and information models.
- Lead development activities in the early stages of grid connectivity and modernization projects involving national and international stakeholders.
- Successfully dealt with cross-functional teams involving engineering, third-party vendors, consultants, and financial personnel.
- Successfully interacted and influenced clients, senior management and stakeholders to achieve the set goals; led and was involved in R&D projects both as a subject matter expert and project lead.

Modeling and Real-Time Scheduling of DC Platform Supply Vessel for Fuel Efficient Operation

#### **Patents**

A system and method for electricity price forecasting

Angle determination for a generator

A SYSTEM AND METHOD FOR ELECTRICITY PRICE FORECASTING

Angle determination for a generator

\*SPECIALTIES\*: Smart Grid Technology, Renewable Energy, Electricity Markets, Optimization, Control of Electricity Grids and related policy aspects, Interoperability, System Engineering, System Architecture, Requirements Definition, SCADA, STANDARDS, Team Building and Project Management.

# Experience

### ETH Zürich

Researcher, Project Manager and Lead Principal Investigator November 2019 - Present (1 year 3 months)

Singapore

Successfully secured a seed grant of around quarter-million-dollar from the National Research Foundation (NRF), Singapore, to carry out projects in the area of Buildings to Grid (BtG), EV resilience. The Berkeley Education Alliance for Research in Singapore (BEARS) center, University of California, Berkeley, is my lead project collaborator.

NTU - Singapore ETH Center Researcher - Project Lead August 2017 - October 2019 (2 years 3 months) Singapore

I am working with a group of researchers from the Future Resilient Systems in the areas of Electricity Grids (Smart Grid/ Micro Grid Resilience Assessment), co-simulations, HLA and digital twins.

Employer: Contract Via ICRM, Singapore

United Nations Economic Commission for Europe Expert Member, Committee on Sustainable Energy September 2015 - September 2019 (4 years 1 month) Geneva Area, Switzerland

Member, Committee on Sustainable Energy, United Nations (UN) Economic Commission for Europe, Geneva, Switzerland.

>Committee agenda features a reality check on the energy transition, energy efficiency, renewable energy and fossil fuels in the context of the energy-related Sustainable Development Goals.

>>Role involves providing expert inputs to the committee documents on regular basis as and when sought and attending session meetings on a regular basis

>>Currently, only one from the Singapore to receive such a privileged honor.

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PS: This is a nominated/Invited and voluntary position. UNECE is not an EMPLOYER!

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Rolls-Royce@NTU Corporate Lab Subject Matter Expert/Research Fellow January 2016 - July 2017 (1 year 7 months) Singapore

Directly engaged in the R&D and project management of electricity grid compliance of distributed energy resources in the various topologies of power distribution networks; Resiliency in the power grids- further supervision of Research Engineers;

Employer: Contract Via Nanyang Technological University, Singapore

National Smart Grid Mission (hosted at POWERGRID), Ministry of Power

Engineering Executive August 2014 - January 2016 (1 year 6 months) New Delhi Area, India

Employer: POWERGRID CORPORATION OF INDIA (An Indian state-owned electric utilities company)

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Directly engaged in the scope, planning, design, and implementation of Indian smart grid pilot projects through National Smart Grid Mission (Ministry of Power, India), which mainly involves technology assessment, project execution and techno-commercial aspects; worked closely with the power distribution utilities in India to formulate technical specifications and carry out various technical evaluations; preparing RfP, tender documents and CBM specifications.

Indian Institute of Technology, Bombay 6 years 2 months

Researcher (R&D and Project Management)
July 2008 - August 2014 (6 years 2 months)
Mumbai

Founder, Student Companion Programme
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May 2010 - April 2011 (1 year)

General Secretary Academic Affairs, Post-Graduate Programmes April 2010 - March 2011 (1 year)

Mumbai

Highest student office; elected representative of more than 5000 students

- Headed the council of 2 Institute representatives, 4 Executive members, 3 Institute Student Companion Coordinators, 46 Academic unit representatives, and 120 student companions
- Served as student representative in the Senate, PG Programmes Committee, Disciplinary Action Committee, Gymkhana Executive Committee, Student Affairs Council, etc., of IIT Bombay

Grid Fortune Technologies Co-Founder June 2012 - July 2014 (2 years 2 months) Mumbai Area, India

Smart Grid startup on energy analytics

DesiSmartGrid - www.smartgridinindia.com Founder 2009 - 2012 (3 years)

## Education

Indian Institute of Technology, Bombay Doctor of Philosophy (Ph.D.) (2008 - 2014)

Rama Krishna Public School Secondary School · (2000 - 2001)