


## Faculty Profile

<b>Name of Faculty</b>	Dr. S. Sudalai Shunmugam	
<b>Department</b>	Electrical and Electronics Engineering	
<b>Qualification</b>	Ph.D., M.E., B.E.	
<b>Designation</b>	Associate Professor	
<b>Area of specialization</b>	Outdoor Insulation, Liquid and Solid Dielectrics	
<b>Date of Joining BNMIT</b>	06.01.2018	
<b>Nature of Association (Regular/Contractual/Adjunct)</b>	Regular	
<b>e-mail</b>	<a href="mailto:ssudalaishunmugam@bnmit.in">ssudalaishunmugam@bnmit.in</a> , <a href="mailto:sudalai.shunmugam@gmail.com">sudalai.shunmugam@gmail.com</a>	
<b>No. of years of Experience</b>	Teaching: 1.9 years Research: 4.7 years	

### Academic Qualifications

- **Ph.D.**(2018), High Voltage Division, Central Power Research Institute, Bangalore.
- **M.E.** (2012), High Voltage Engineering, National Engineering College, Kovilpatti (I Class).
- **B.E.** (2009), Electrical and Electronics Engineering, Francis Xavier Engineering College, Tirunelveli (I Class).

### Working Experience Details

- Associate Professor, B.N.M. Institute of Technology, Bangalore (6<sup>th</sup> January 2018 – Till date).
- Senior Research Fellow, Central Power Research Institute, Bangalore (15<sup>th</sup> May 2013 – 30<sup>th</sup> November 2017).
- Assistant Professor, National Engineering College, Kovilpatti (1<sup>st</sup> June 2012 – 10<sup>th</sup> May 2013).

### Subjects Taught

High Voltage Engineering, Transmission and Distribution, Basic Electrical Engineering and Electromagnetic Field Computation and Modeling.

### Research Experience Details:

#### Ph.D.

**Thesis Title:** Assessment of Pollution Level and Design of External Insulation for High Voltage Transmission System

**Duration:** 2013 -2018

#### M.E.

**Thesis Title:** Investigations on Ester, Silicone & Mineral Dielectric Liquids for Optimized Functions of Power Transformers [Project was partly funded by Midel Corporation, United Kingdom].

**Duration:** 2010 -2012

### Research Projects / Consultancy Activities

1. **Title:** Assessment of Pollution Level and Design of External Insulation for High Voltage Transmission System

**Funding Agency:** Central Power Research Institute, Bangalore

**Team Members:** N Vasudev, S Sudalai Shunmugam, V Asai Thambi, Rafiq Mathersa

**Amount:** ₹ 11,50,000 /-

**Duration:** 02 years (March 2016 – March 2018)

2. **Title:** Pollution Mapping for Western Dedicated Freight Corridor (WDFC)

**Funding Agency:** L&T, India.

**Team Members:** N Vasudev, S Sudalai Shunmugam, V Asai Thambi, Rafiq Mathersa

**Amount:** ₹ 16,39,900 /-

**Duration:** 01 year (2016 – 2017)

3. **Title:** Flashover of Bushing at Bhopal Sub-Station (Bhopal Dhule Transmission Company Limited)

**Funding Agency:** BhopalDhule Transmission Company Limited, India.

**Team Members:** N Vasudev, S Sudalai Shunmugam

**Amount:** ₹ 1,03,050 /-

**Duration:** 01 Month (May 2016)

4. **Title:** Pollution Mapping with Reference to Transmission System in Northern Region

**Funding Agency:** Power Grid Corporation of India Limited (PGCIL), Gurgaon, India

**Amount:** ₹ 1,55,11,358 /-

**Team Members:** N Vasudev, S Sudalai Shunmugam

**Duration:** 03 years (2013 – 2015)

5. **Title:** Pollution Mapping of Delhi Metro Rail Corporation Limited Network

**Funding Agency:** Delhi Metro Rail Corporation Limited Network

**Amount:** ₹ 22,69,335 /-

**Team Members:** N Vasudev, S Sudalai Shunmugam

**Duration:** 1.5 years (2014 – 2015)

#### **Patents**

1. N Vasudev, **S Sudalai Shunmugam**, “Specially Designed Porcelain Long Rod Insulators for Highly Contaminated Environment”, **Indian Product Patent**, Patent Application No: 201641033690, filed during November 2016.
2. N Vasudev, **S Sudalai Shunmugam**, “Improved insulator for use in high voltage electrical equipments installed in severely contaminated wet atmospheric conditions”, **Indian Product Patent**. (Patent generation under process)

#### **Awards/ Achievements/Memberships:**

- Awarded **Senior Research Fellowship (SRF)** to pursue Ph.D. at Central Power Research Institute, Bangalore, provided by Ministry of Power, India (2013-2017).
- **Participated and co-authored** in the production of the report “**Pollution Mapping with Reference to Transmission System in Northern Region**”, one of the biggest pollution mapping project carried out in the Indian Power System.

### **Professional Memberships:**

- Member, IEEE (No. 620160325)
- Member, CIGRE (No. 92030600)

### **Workshops /Seminars Organized:**

- Co-Coordinator for the conduction of “Energy efficient artificial intelligent drives – recent drives and perspectives” held during September 14-15, 2012, National Engineering College, Kovilpatti.

### **Research Publications:**

#### **I. International Magazines**

1. **S Sudalai Shunmugam**, N Vasudev, K N Ravi, K A Venkatesh, “Influence of Profile on the Pollution Performance of Cap-and-Pin insulators: An Experimental Study”, *IEEE Electrical Insulation Magazine*, Vol. 32, No. 6, pp. 20-28, Nov/Dec 2016. (Impact Factor: 1.764)

#### **II. International Journals**

1. **S Sudalai Shunmugam**, N Vasudev, K N Ravi, K A Venkatesh, “Applicability of Dimensional Analysis for the Prediction of Pollution Performance of Insulators: An Experimental Study”, *IET Generation, Transmission and Distribution*, Vol. 11, No. 5, pp. 1319-1324, March 2017. (Impact Factor: 2.618)
2. R. Karthik, Sree Ranga Raja, **S Sudalai Shunmugam**, “Performance evaluation of Transformer oil using UV-Visible Spectrophotometer”, *Journal Acta Scientaria Technology*, Maringa, Vol.36, No. 2, pp. 245 – 250, April-June 2014. (Impact Factor: 0.35)
3. R. Karthik, Sree Ranga Raja, **S Sudalai Shunmugam**, T Sudhakar, “Performance Evaluation of Ester oil and Mixed insulating fluids”, *Journal of Institute of Engineers- India*, Springer Publishers, Series B, Vol. 93, No.3, pp. 173-178, Nov-Dec 2012.

#### **III. International Conferences**

1. **S Sudalai Shunmugam**, N Vasudev, M. Krishna Kumar, B N De Bhowmick, Sunkara B R Rao, “Insulator Pollution Mapping of the Northern Region of the Indian Power System”, *20th International Symposium on High Voltage Engineering (ISH)*, Buenos Aires, Argentina, paper no. 594, 2017.
2. **S Sudalai Shunmugam**, N Vasudev, K N Ravi, K A Venkatesh, “Pollution performance of HVAC Insulators: An Interpretation using Dimensional Analysis Technique”, *19th International Symposium on High Voltage Engineering (ISH)*, Pilsen, Czech Republic, paper no. 374, 2015.
3. **S Sudalai Shunmugam**, N Vasudev, K N Ravi, K A Venkatesh, “Applicability of Multiple Regression Analysis for the Prediction of Pollution Performance of HVAC Insulators”, *International Conference on High Voltage Engineering and Technology (ICHVET)*, Ultra High Voltage Laboratory, Hyderabad, India, pp. 67-70, 2015.
4. **S Sudalai Shunmugam**, N Vasudev, R S Shivakumara Aradhaya, “A Comparison of the Pollution Performance of Long rod and Disc type HVAC insulators – A Laboratorial Study”, *International Conference on High Voltage Engineering and Applications (ICHVE)*, Poznan, Poland, B-5-4, 2014.

5. M. Sunganya Bharathi, M. Willjuice Iruthayarajan, **S Sudalai Shunmugam**, L. Kalaivan, "Interpretation of Dissolved Gas Analysis using Fuzzy Logic System", *IEEE International Conference on Power, Energy and Control (ICPEC)*, pp.245 -249, Tamil Nadu, India, 2013.

### **III. National Conferences**

1. **S Sudalai Shunmugam**, N Vasudev, K N Ravi, K A Venkatesh, "Effect of Profiles on the Pollution Performance of HVAC Cap-and-Pin Porcelain Insulators", *Poster presentation made at National Power Engineering Research Scholars Meet*, 29-30 December, IIT Madras, 2015.
2. **S. SudalaiShunmugam**, N. Vasudev and R. S. Shivakumara Aradhaya, "Design of Outdoor Insulation for Polluted Environment – A Review", *National High Voltage Engineering Conference*, Ultra High Voltage Laboratory, CPRI, Hyderabad, India, pp. 132-137, 2014.
3. **S. SudalaiShunmugam**, R Karthik, M Willjuice Iruthayarajan, Presented a technical paper in National Level Conference titled "Application of Mixed Dielectric Fluids in Power Transformers- a Review" at Einstein College of Engineering, Tirunelveli. 2012.

### **Participation in Seminars/ Short Term Courses/ Workshops**

1. Attended "IEEE deep learning boot camp" at BMS College of Engineering, July 7, 2018.
2. Participated in two day Workshop on "A to Z of Transformer Design", Department of EEE, B.N.M. Institute of Technology, Bangalore, February 17-18, 2018.
3. Participated in 2<sup>nd</sup> National conference on high voltage engineering and technology, Central Power Research Institute, Bangalore, January 27-28, 2017.
4. Attended one day workshop on "Tracking and erosion protection mechanisms in inorganic fillers in polymer materials for outdoor insulation", Jadavpur University, Kolkata, November 08, 2016.
5. Participated in National conference on recent trends in power engineering (for research scholars) in IIT Madras, December 29-30, 2015.
6. Attended in 2<sup>nd</sup> International conference on condition assessment techniques in electrical system, Central Power Research Institute, Bangalore, December 10-12, 2015.
7. Participated in one day workshop on "RTV coating applications on insulators for high voltage transmission system", Central Power Research Institute, Bangalore, December 08, 2015.
8. Attended national conference on crisis and disaster management in power sector and associated management, Central Power Research Institute, Bangalore, October 14, 2015.
9. Attended IEEE authorship workshop titled "How to publish a technical paper with IEEE", IISc Bangalore, August 12, 2014.
10. Attended Electrostatic Precipitation (ESP) School, Bangalore, September 16-21, 2013.

### **Personal Details:**

- **Date of Birth:** 23.01.1988 **Sex:** Male. **Marital Status:** Married

17<sup>th</sup> July 2019

**Dr. S. Sudalai Shunmugam**