

WELCOME



POLAND

Dr SUBBA REDDY B

Chief Research Scientist: High Voltage Lab, Dept of Electrical Engg

Faculty: Interdisciplinary Center for Energy Research

Convener: HAL-IISc Skill Development Center

INDIAN INSTITUTE OF SCIENCE,

BANGALORE-560012, Karnataka, INDIA, Tele: 91-080-22932550/2800

E mail: sreddy@iisc.ac.in, hvereddy@gmail.com

EDUCATION

Degree	University/Institution	Year of obtaining degree	Awards/ Recognition
B.E. (Electrical Engg)	Karnataka University Dharwad	1990	--
M B A (HR & Op Mgmt)	IGNOU, New Delhi	1999	--
M Sc (Engg) (High Voltage Engg)	Indian Institute of Science, Bangalore, India	2003	ISTE - L&T National Award (First prize) for best thesis
Ph D (Engg) (High Voltage Engg)	Indian Institute of Science, Bangalore, India	2011	Innovative Project Award, for best PhD Thesis, Indian National Academy of Engg, (INAE) New-DELHI.

PROFESSIONAL CAREER at IISc

Year		Designation
From	To	
01.08.2022	Till date	Chief Research Scientist
26.07.2012	31.07.2022	Principal Research Scientist
26.07.2006	25.07.2012	Senior Scientific Officer
26.07.2003	25.07.2006	Scientific Officer Gr-I
16.03.1998	25.07.2003	Technical Officer Gr-I
16.03.1992	15.03.1998	Scientific Assistant

** during 1990-91, worked as a Trainee Electrical Engineer at 110kV Substation for a Chemical Industry

MEMBERSHIP OF NATIONAL & INTERNATIONAL COMMITTEES

- Member, CIGRE National Study Committee on B4: "HVDC System & Power Electronics".
- Member, CIGRE National Study Committee on B2: "Overhead Transmission Lines".
- Member, National committee to formulate safety standards for Electric Vehicles: Ministry of Road Transport & Highways, Government of India.
- Member, Governing Council, Board of studies, Advisory board for Several Engineering Institutes.
- Member, Governing Council, Skill Development unit, HAL Management Academy, Bangalore
- Distinguished Member, Engineers welfare forum, West-Bengal Power Development Corpn limited.
- Fellow, Society of Power Engineers, CBIP, New-Delhi
- Fellow, Institution of Engineers (India)
- Senior Member, IEEE and Member IEEE Eta-Kappa Nu, USA

AWARDS, HONORS, AND RECOGNITIONS





SI No	Details of Awards/ Recognitions	Month/Year
1	IEEE-IAS “ Global Research Excellence Award ” for outstanding contribution to the Research and Society, presented at the IEEE-IAS global conference on Renewable Energy & Hydrogen technologies, held at the Maldives National University, MALE	Mar 2023
2	Erasmus Teaching Mobility Fellowship by European Union, Lublin University of Technology, Poland.	June 2022
3	Best paper award at the ICEEE-2022 Intl conference, sponsored by Springer Nature and University of Malaya, Malaysia, authored by G Nithin Reddy, Subba Reddy B, ..	Jan 2022
4	Best paper award at the ICEEE-2022 Intl conference, sponsored by Springer Nature and University of Malaya, Malaysia, authored by Anchal Thakur, L Umanand, Subba Reddy B,	Jan 2022
5	POWERGRID – IEEE India Council Award for Excellence in Senior-Engineer Category for significant recognition acknowledging notable contributions to the Indian Power Sector (Cash Prize Rs.0.75L and Citation)	Dec 2021
6	Best paper award, at the IEEE-IAS GUCON 2021, Kaulalumpur, Malaysia, authored by Deep Prakash, Gautam Raiker, Shubham Agarwal & Subba Reddy B,	Sept 2021
7	“Urjit Bharat” semifinalists, Toycathon, 2021, by Ministry of Education, Info & Broadcasting, MSME, Women & Child welfare, Textiles Govt of India	Nov 2021
8	Appreciation certificate for fostering an ecosystem bridging Government, Industry and Academia, by TEXAS INSTRUMENTS (Semi-finalist team: India Innovation challenge Design contest-2018)	Mar 2019
9	Best poster paper presentation award, at IEEE-ICIIS 2018 Intl. Conference, held at IIT Ropar, Dec 2018, authored by Gautam Raikar, Subba Reddy B & Umanand L	Dec-2018
10	Best paper presentation award, at the IEEE-UPCON-2017 Intl. Conference, held at Mathura, India, authored by Alok R Verma & Subba Reddy B	Oct-2017
11	Best paper award (3 rd prize) at IEEE-IAS Intl. conference, held at PURDUE University, 13 th – 17 th June 2016 (Alok R Verma & Subba Reddy B)	June-2016
12	Best paper award (3 rd prize) at IEEE-IAS Intl. conference, held at PURDUE University, 13 th – 17 th June 2016 (Shakthi Prasad D & Subba Reddy B)	June-2016
13	Best paper award (2 nd prize) at IEEE-IAS Intl. conference, held at PURDUE University, 13 th – 17 th June 2016 (Rahul Chakraborty & Subba Reddy B)	June-2016
14	Outstanding Service to Indian Insulator Industry award by Aditya Birla Insulators, Kolkata-India.	Dec - 2013
15	NRDC - Meritorious Societal Invention Award, awarded by National Research Development Corporation (NRDC-DSIR), Ministry of Science & Technology, Govt. of India, (cash prize: Rs.3.0 lakhs + citation)	Feb - 2013
16	Distinguished Alumnus Award by K L E Society's College of Engineering & Technology, Belgaum, Karnataka, India.	Jan - 2013
17	INAE - Innovative Project Award, for best PhD Thesis awarded by Indian National Academy of Engineering (INAE), NEW-DELHI.	Dec - 2011
18	Appreciation Certificate and Cash award at 8th International conference, INSULEC -2009, held at Bangalore.	Feb - 2009
19	Best Paper Presentation Award at 32nd National Systems Conference held at IIT, Roorkee.	Dec - 2008
20	Best Paper Presentation Award & Diploma Prize sponsored by GE-Energy- Czech Republic, at Intl Conference held at Czech Technical University, Prague, Czech Republic	May - 2007
21	ISTE - L&T National Award (First prize) for best Master's Thesis in Electrical /Electronic Engg., by Indian Society for Technical Education (ISTE), New-Delhi	Dec - 2003
22	Appreciation Certificate by Bangalore Association for Science Education (BASE), Jawaharlal Nehru Planetarium, Bangalore.	Nov - 1993

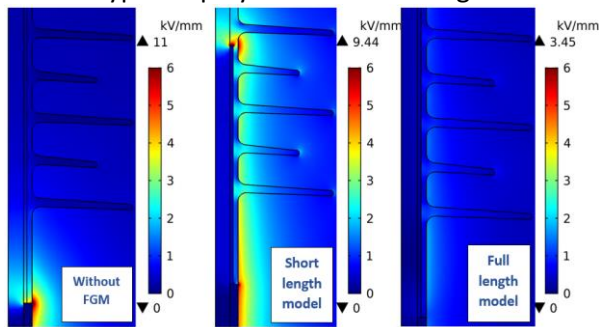
RESEARCH CONTRIBUTIONS & LABORATORIES ESTABLISHED

(1) Application of Field grading materials for HVAC /DC Polymeric Insulators/Polymeric housed Surge Arresters

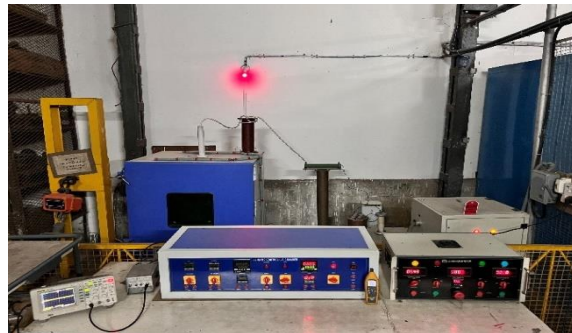
Strong electric field enhancements near end-fittings of the high voltage polymeric outdoor insulator /Surge arresters contribute to premature degradation and aging. Nonlinear resistive field grading composites offer a promising possibility to stress control and more competitive products, especially with the increasing power density and voltage levels. Recently, nonlinear resistive field grading materials (FGMs) based on zinc oxide micro varistors are being adopted for high voltage systems.

Presently simulation and developmental work on FGMs is in progress towards the usage of for stress control for AC, DC, and overvoltage conditions [1]. Further Polymeric housed Surge arresters with zinc oxide varistor blocks are being extensively used to protect the equipment against various electrical stresses.

In HVDC transmission there is a need to reverse the power flow, subsequently the DC voltage polarity of the line is reversed. These transient overvoltage's and voltage polarity reversals, along with the temperature distribution, play an essential role in the power system protection. To understand the performance of HVDC polymer arresters, Experimental investigations are in progress on the electro-thermal aging on polymer housed surge arresters for long term electro-thermal aging studies with voltage polarity reversals as per the international standards are being evaluated on various types of polymeric housed surge arresters.



The electric field distribution near the HV terminal

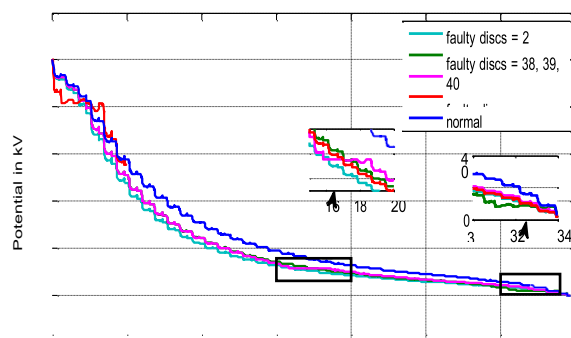
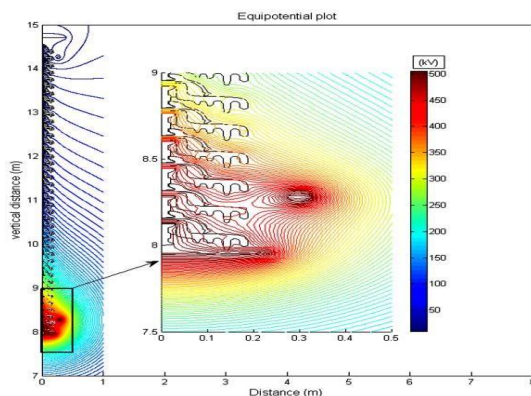


Electro-thermal aging on surge arrester samples

(2) Pollution-induced flashover studies on HVAC/DC Ceramic / polymeric insulators.

In recent years there has been a considerable increase in the demand for electrical power requirement. In our country the transmission voltages have increased to 765 kV ac, 800kV dc and experimentation for 1200kV ac is in progress. HVDC transmission is becoming increasingly viable as it is more economical for long distance transmission to transmit large amount of power compared to same voltage levels as of HVAC. One of the major problems is the failure of overhead transmission line insulators due to pollution /contaminated conditions. The failure rate is observed to be higher as compared to insulators used in the AC transmission.

To study an attempt is made to compute the surface potential, electric field across the string of ceramic disc insulators used for 1200kV ac and 800kV dc systems for different conditions such as normal, string containing faulty discs at arbitrary locations and for different polluted conditions.



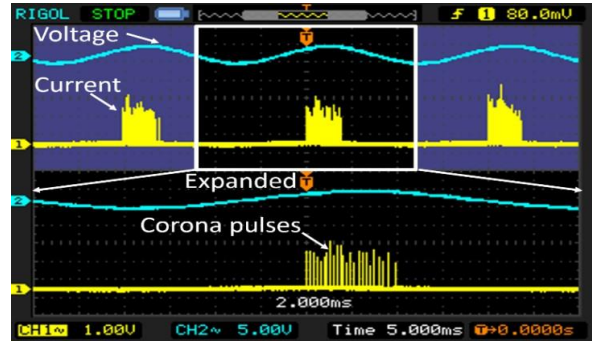
(3) Studies on Corona induced degradation on Polymeric insulator samples.

The investigation focuses on two important aspects:

- (1) Investigations on the corona induced degradation on different polymeric samples under normal and effect of different fog conditions.
- (2) Application of digital imaging techniques for the detection of corona discharges and its analysis.



Studies on Corona induced degradation on



On Polymeric Insulator samples

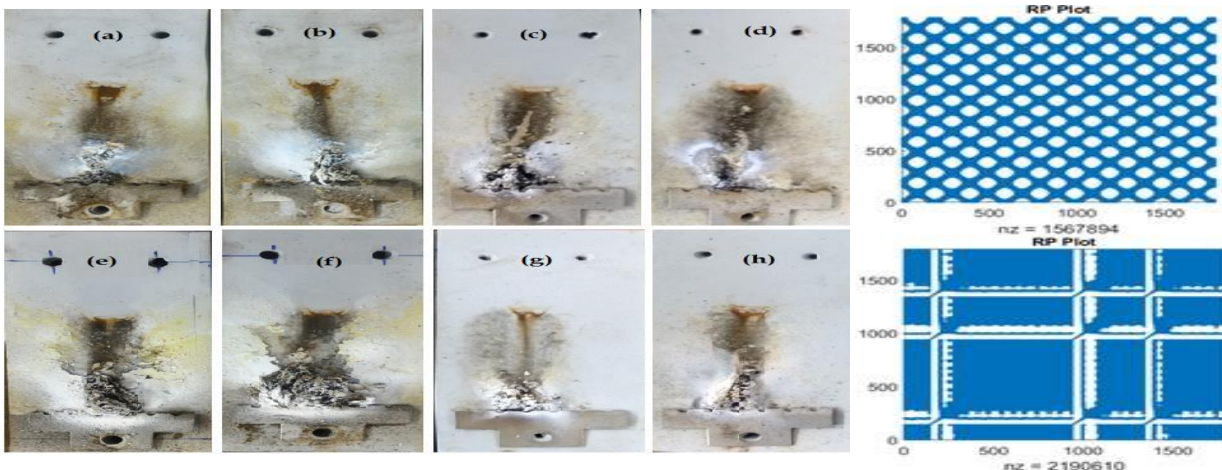
(4) Tracking and Surface Erosion studies on Composite insulators.

Assessment of the material degradation properties in the laboratory like the field conditions is still a challenge. In the present work an attempt is made to study the effect of environment conditions in service life of polymeric insulators on the tracking and erosion resistance. The evaluation of tracking and erosion resistance of Silicone Rubber insulating samples of high temperature vulcanized (HTV) rubber and liquid silicone rubber (LSR) is carried out under AC and DC voltages, the samples are treated under the normal contaminants as per IEC 60587 and acidic contaminant solution simulating acid rain data available from literature. The conditions of pollution/ contamination severity level are taken into consideration during the study. Tracking and Erosion of polymeric samples due to AC (a-d) and DC(f-h) stress Patterns obtained from RP matrix

(5) Long term Multi stress Aging studies on Composite insulators & Polymer housed surge arresters

(a) Multiple stress ageing studies

The available literature on the long-term field performance of composite insulators for different



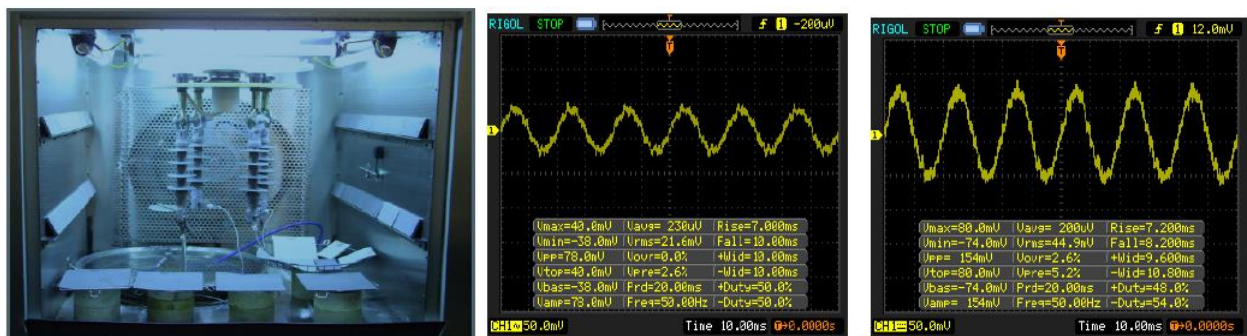
climatic conditions particularly related to multiple environmental stresses for both the HTV SIR and Liquid Silicone Rubber (LSR) is scant. Also, there is no reference standard or test methods for evaluation of these insulators for pollution/contamination in the laboratory. However currently,

CIGRE Work Group is focused on the standardization of the test methods for artificial pollution tests for polymeric insulators.

With this in view, a simple methodology to achieve uniform contamination layer on inherently hydrophobic HTV SIR Insulator samples to be evaluated for laboratory pollution performance is achieved. A special arrangement for assessment of Wettability Class (WC) is fabricated as per IEC stds for the hydrophobicity studies. The study on the effect of long-term thermal aging experimentation is conducted on HTV SIR with different degrees of pollution (medium, heavy), the effect of arid desert climate on polymeric insulators is studied.

A unique climatic aging experimental facility is established to evaluate the long-term reliability of SIR under environmental stresses like UV, Humidity, temperature and applied electric stress both for AC and DC applications.

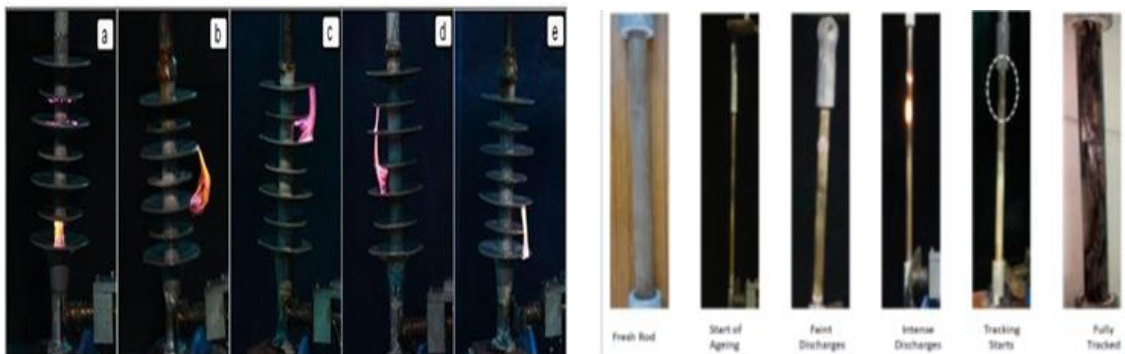
Further studies on the performance of polymer insulator with varying ambient temperature with presence of pollution and environmental stresses are studied at low temperature ($0\pm 2^{\circ}\text{C}$), with effect of thermal fluctuation. Also studies on the performance of polymer insulator at subzero temperature (-20°C) are conducted for normal and polluted conditions.



Multistress experimentation- typical leakage current measurement at the beginning and end of 1000 hours

(b) Aging Studies using Rotating wheel and dip facility

Surface degradation studies are performed on silicone rubber based polymeric insulators using a newly developed rotating wheel and dip test arrangement both for AC and DC voltage application. Provision is made in the experimental set up to apply two different contaminants simultaneously. In one tank standard contaminant NH_4Cl as per IEC 62217/ IEC TR 62730 is used and in other tank acidic contaminant is used to simulate normal and acidic rain conditions.

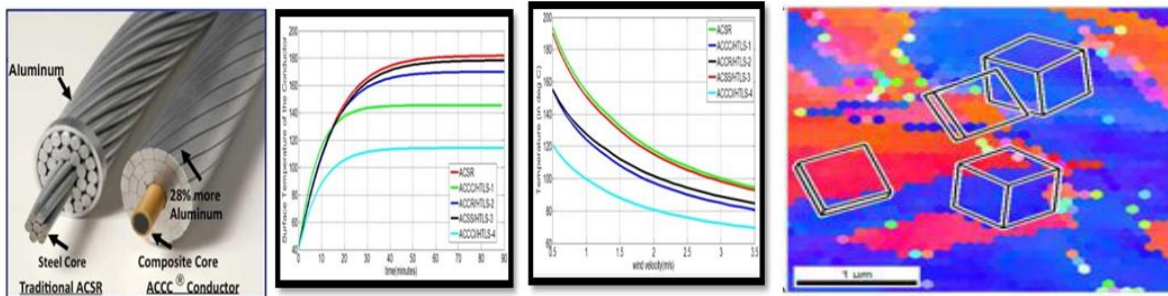


Performance study on Polymeric Insulators/ FRP Rods using Rotating wheel and dip facility

(6) Studies on High Temperature low Sag (HTLS) Conductors

Since a decade, rapid increase in electric power consumption is witnessed, the available transmission lines are reaching critical limits of ampacity and sag; hence there exists an intricacy in finding corridors particularly in densely populated cities to construct new overhead lines in many industrialized

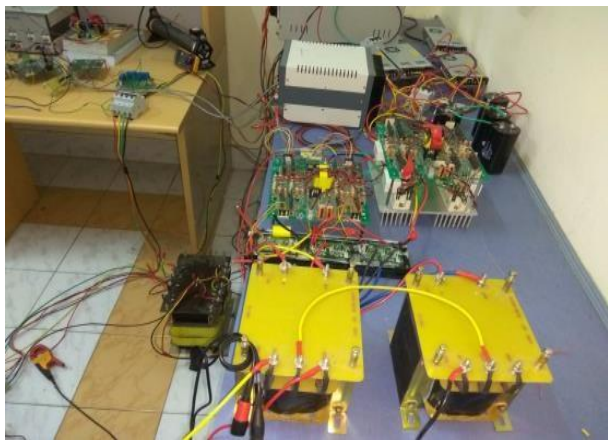
countries including India. Increasing the transmission capacity of overhead lines using high temperature low sag (HTLS) conductors, replacing original ACSR conductors with approximately the same diameter is one of the techniques. HTLS conductors are capable of withstanding high-temperature, continuous operation above 200°C without loss of tensile strength or increase in sag. In the research work initially Computer code using Matlab is written considering IEEE Std.738 to estimate the current and temperature distribution for various HTLS conductors and a graphical user interface has also been developed to optimize in selection of various hardware accessories to be used for HTLS conductors. Later an experimental facility has been built for the current study and investigations on various types of imported HTLS conductors were undertaken.



(7) Application of Power Electronics to Solar PV systems.

(This work is conducted jointly with Prof L Umanand, at ICER-IISc)

Grid integration of photovoltaic (PV) energy sources has been mostly governed by conventional two-level voltage source inverters. These topologies have significant switching power losses, dV/dt stress and THD level at lower switching frequencies. These issues can be solved by introducing more voltage levels through multilevel converters. Conventional multilevel converters have many issues like neutral point voltage drift in neutral point clamped (NPC) topology, floating capacitor charge balance in flying capacitor (FC) topology and large number of isolated DC sources in cascaded half bridge (CHB) topology when scaling them for higher number of voltage levels. Additionally, active power devices and its associated gate drivers, clamping diodes, flying capacitors and DC link capacitors also increase with levels.



Prototype of 5-level Grid Tied Inverter for Solar PV



Prototype of developed hybrid-thermal Desalination unit

(8) Studies on Pre-Cracked Metallic conductors under combined Electric & Mechanical Loading

(This study was conducted jointly with Prof Praveen Kumar, Materials Engg, IISc)

Surges of high current densities often pass-through components having micro-cracks such as large-scale integrated circuits, defects in microelectronic chips, electromagnetic devices like rail-guns etc, this may lead to failure of these components, e.g., by crack extension, partial or complete melting of the crack tips. The investigations focused on the effect of simultaneous application of electric current and mechanical loading on the failure of an edge-cracked conductor.

Laboratory and Experimental facilities Established.

- (A) Establishment of Unique Artificial Rain / Pollution test facility (HVAC & HVDC) ref to IEC Std: (5m X 5m X 5m)



Fig. 1. 150kV AC-300kVA, 250kV/100mA HVDC Artificial pollution facility

- (B) Experimental Facility for studies on HPC/HTLS Conductors & accessories.

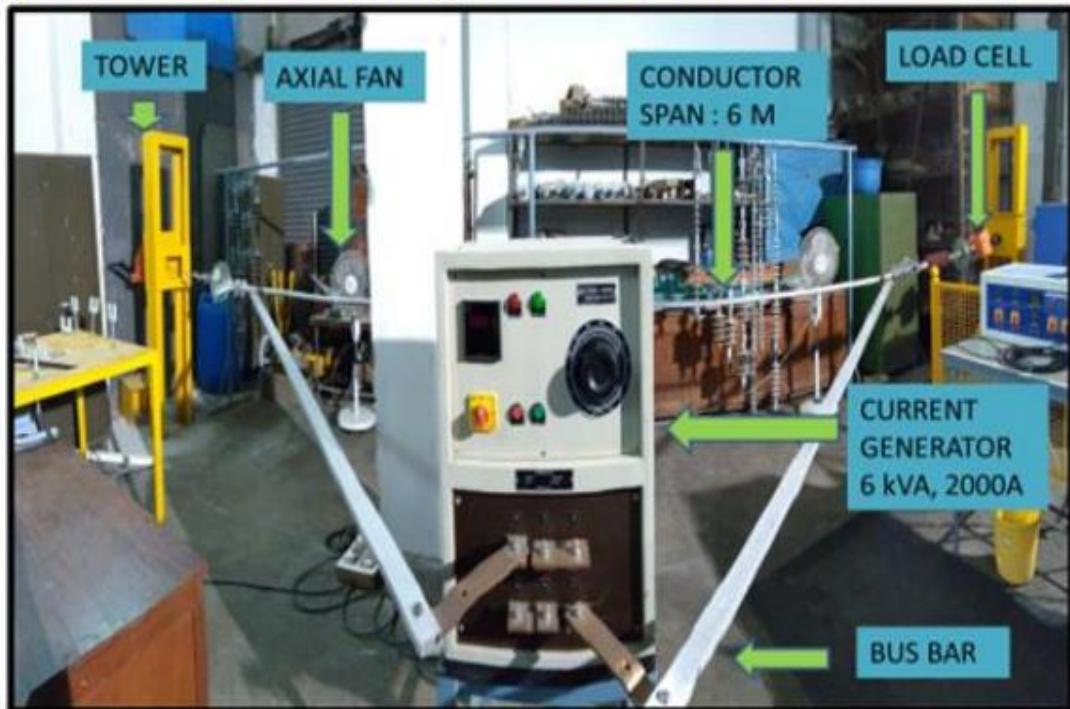


Fig.2. Experimental arrangement for HTLS conductors/accessories. (2000A, 6kVA source)

(C) Facility for studying Corona induced degradation/ Corona pooling on samples (HVAC/DC).

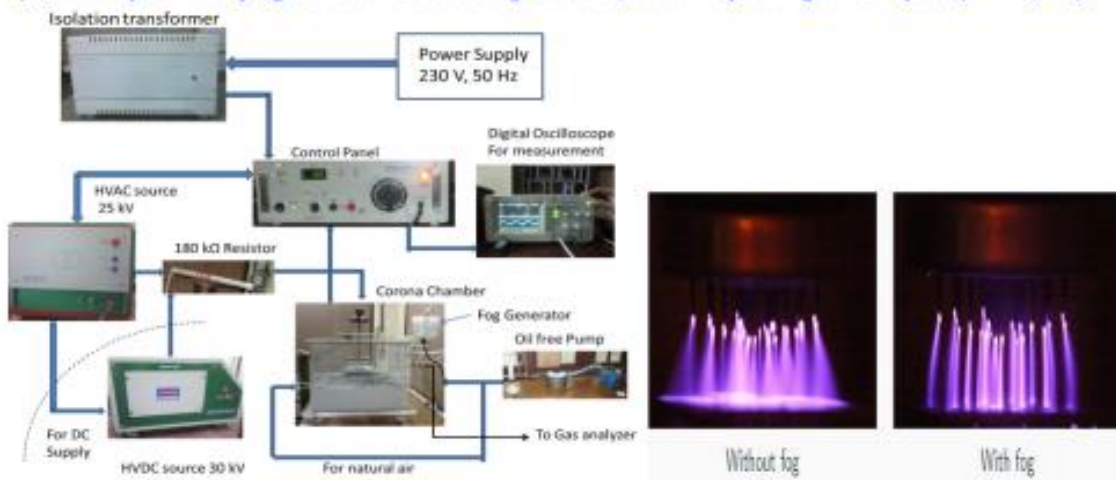


Fig.3 Facility for studying Corona ageing studies on Insulator samples (25kV HVAC/DC source)

(D) Facility for conducting Surface degradation studies on Polymer/Composite Insulation as per IEC stds



Fig.4. Experimental arrangement for AC/DC Inclined plane (10kV HVAC/DC)

(E) Rotating wheel and dip facility (HVAC & HVDC) established in accordance with IEC-62217

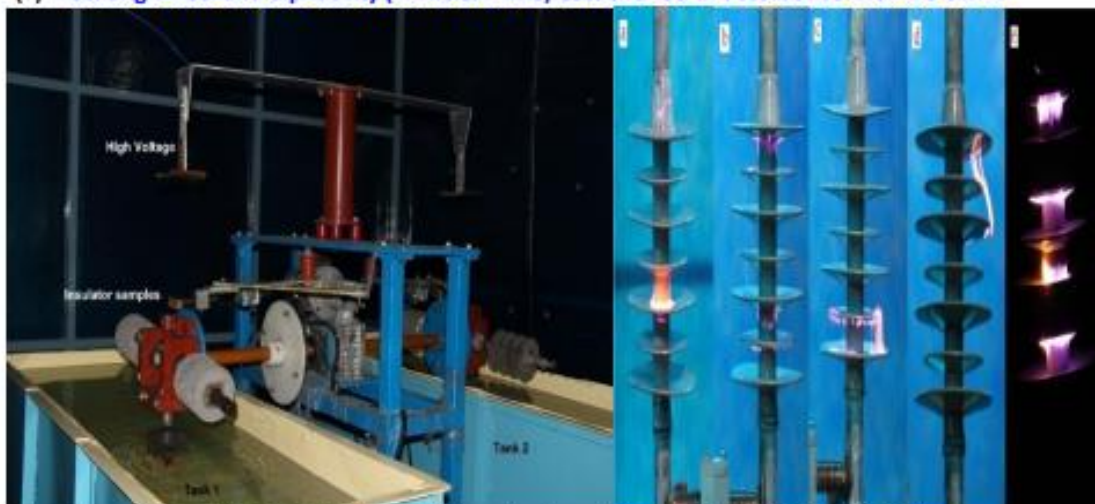


Fig.5. Established Rotating wheel and dip test facility (8ft X 8ft X 8ft)

(F) Multi Stresses aging facility (HVAC and DC) established in accordance with IEC Stds



Fig.6 Developed Multi stress aging facility (30kV HVAC and DC)



Fig.7 Control arrangement and Input panel (developed HMI system for Multistress)

(G) Surge Testing Laboratory (for Avionic/ telecom modules, power electronic & Surge protection devices) (developed in accordance with IEEE & Telecom standards)

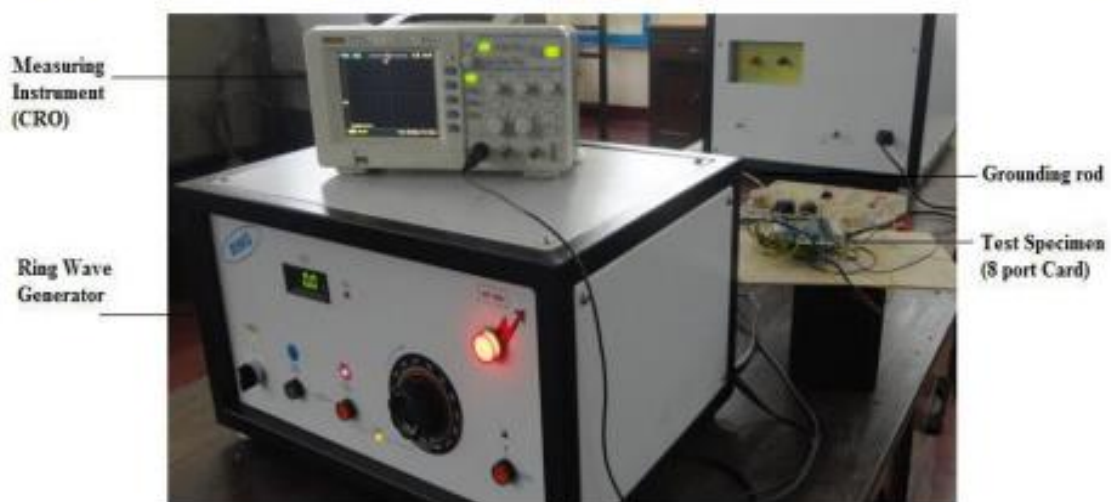


Fig. 8 Ring wave generator

Measuring
Instrument
(CRO)



Grounding Rod
Test Specimen
(24 port Card)
Combination
Wave Generator

Fig. 9 Combination/hybrid wave generator (1.2/50 & 8/20 μ S)

(H) Photo Voltaic Systems Laboratory at ICER-IISc (Established jointly with Prof L Umanand at ICER)



Fig.10. Photo-Voltaic Systems Lab, at Interdisciplinary center for Energy Research (ICER) IISc

(I) Micro-grid Monitoring Facility at ICER-IISc (Established jointly with Prof L Umanand at ICER)



Fig.11. Development of Micro-grid Monitoring Facility @ ICER-IISc

(J) Development of Standalone PV Thermal system for Heating, Cooling and Desalination
(Established jointly with Prof L Umanand at HV Lab)



Fig.12 Establishment of Standalone PV thermal system (7ft x 7ft x 7ft chamber) with Desalination system



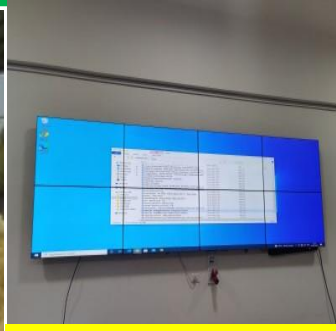
HAL-IISc Skill Development Center, Challakere, IISc



Launch of first training plan under HAL-IISc Skill Development Center



Training on Electric Vehicles



Training on IOT/Embedded systems



Training on Battery Mgmt



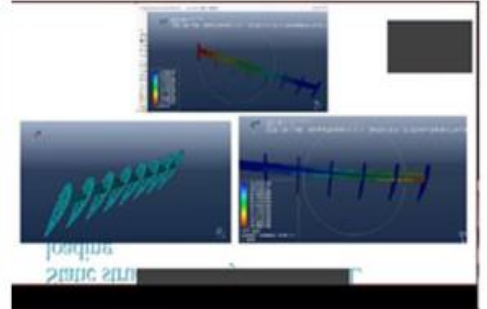
Training on Renewable Energy



Renewable & IoT-Embedded systems labs



Training on Drones



Augmented and Virtual Reality

PUBLICATIONS

JOURNALS	BOOK CHAPTERS	PATENT GRANTED	CONFERENCES/ SYMPOSIA	TECHNICAL REPORTS	OTHER PUBLICATIONS	TOTAL
64	13	01	157	32	06	273

JOURNALS:

1. M-Ramez Halloum, Subba Reddy B and G. Nithin Reddy, "Failure Analysis of Field-Aged Polymeric Outdoor Insulators and Electric Stress Control Using Nonlinear Field Grading Composites for Better Performance, Journal: [Electrical Engineering, Springer Nature](#) (provisionally accepted)
2. M-Ramez Halloum and Subba Reddy B, "Interpretation of Fracture of a Failed in-service 400 kV Composite Insulator and probable Remedy Using Nonlinear Resistive Field Grading Materials", [CIGRE-India Journal](#), accepted, to be published in July 2023.
3. M-Ramez Halloum; Subba Reddy B. and G. Nithin Reddy, "Stress Control for Polymeric Outdoor Insulators Using Nonlinear Resistive Field Grading Materials Operating Under Different Conditions, paper Number: TDEI-0015-2022, [IEEE Transactions on Dielectrics & Electrical Insulation](#). <https://ieeexplore.ieee.org/document/9750932>, VOL. 29, NO. 3, JUNE 2022, pp 1175-1182
4. Atmanandmaya, Umanand Loganathan, Subba Reddy B, "Sustainable Solution to Mitigate Carbon Emission for the Cumulative Electrical and Thermal Energy Demand in Silk Reeling Process in Southern India" ICAE2022, in Energy Proceedings ISSN 2004-2965 2022, 6 pages, Nov 2022
5. Sounak Nandi and Subba Reddy B, "Chaotic Analysis as a Tool for Sensing Long-Term Degradation of High Voltage Fibre Reinforced Plastic Core used in Composite Insulators", Paper TPWRD-00438-2021, [IEEE Transactions on Power Delivery](#), DOI: 10.1109/TPWRD.2022.3144503, Jan 2022
6. Sounak Nandi and Subba Reddy B, "Understanding Failure analysis using Harmonic Analysis and Empirical Mode Decomposition Techniques", Manuscript Number: EFA-D-21-02093, Journal: [Engineering Failure Analysis, Elsevier](#). 139 (2022) 106442, Sept 2022.
7. M-Ramez Halloum and Subba Reddy B, G Nithin Reddy "Performance Evaluation of 33 kV Polymeric Outdoor Insulators Equipped with Non-Linear Field Grading Composites", Energy Proceedings, Vol. 18, 2021, ISSN 2004-2965, 6 pages, 2021
8. Gautam A. Raiker, Subba Reddy B, L. Umanand "Energy Disaggregation with Reserve Power Estimation and Non-Intrusive Load Monitoring in Standalone Solar Photovoltaic based Microgrid", Energy Proceedings, Vol. 22, 2021, ISSN 2004-2965, 2021
9. Atmanandmaya, Umanand Loganathan, Subba Reddy B, "Development of Hybrid Source Thermal Desalination System using Thermoelectric module as a powerful heat pump", Energy Proceedings, Vol. 22, 2021, ISSN 2004-2965, 6 pages, 2021
10. Gautam A. Raiker, L. Umanand and Subba Reddy B, "Current Control of Boost Converter for PV interface with Momentum based Perturb and Observe MPPT", [IEEE Transactions on Industry Applications](#), Vol: 57, Issue: 4 pp 4071-4079, Digital Object Identifier: 10.1109/TIA.2021.3081519, JULY/AUGUST 2021.
11. Sounak Nandi and Subba Reddy B, "Transient Electric Field Analysis for Polluted Composite Insulators under HVDC Stress", [IEEE Transactions on Power Delivery](#), Vol: 36, No. 2, APRIL 2021, pp-607-617, DOI: [10.1109/TPWRD.2020.2987143](https://doi.org/10.1109/TPWRD.2020.2987143)
12. Gautam A. Raiker, Subba Reddy B., L. Umanand, Shubham Agrawal, Anchal S. Thakur, Ashwin K., John P. Barton, Murray Thomson, "Energy Disaggregation using Energy Demand Model and IoT based Control" [IEEE Transactions on Industry Applications](#), online: 10.1109/TIA.2020.3047016, VOL. 57, NO. 2, MARCH/APRIL 2021

13. Shakthi Prasad D and Subba Reddy B, "Image Saturation as a Tool to Understand the Corona Induced Degradation of Polymeric Insulators", [IEEE Transactions on Dielectrics & Electrical Insulation](#) Vol. 27, No. 6; December 2020, pp 1837-1844.
14. Sanchita Banerjee, Prosenjit Ghosh, Chirantan Pramanik, Subba Reddy B, The cover image based on the Research Article Fractionation of stable oxygen and clumped isotopes during acid digestion of calcite in the presence of an external direct current electric field, [Rapid Communications in Mass Spectrometry](#) 34(22), DOI: [10.1002/rcm.8968](https://doi.org/10.1002/rcm.8968) November 2020, <https://doi.org/10.1002/rcm.8921>.
15. Sanchita Banerjee, Prosenjit Ghosh, Chirantan Pramanik, Subba Reddy B, "Fractionation of stable oxygen and clumped isotope during acid digestion of calcite in the presence of an external DC electric field", Journal: [Rapid Communications in Mass Spectrometry, John Wiley & Sons](#), Article ID: RCM8921, Article DOI: 10.1002/rcm.8921, available on line 7th Aug 2020, 8 pages.
16. Sounak Nandi and Subba Reddy B, "Understanding Field Failures of Composite Transmission Insulators", Journal: [Engineering Failure Analysis](#), Elsevier, 116 (2020) 104758, July 2020, 10 pages.
17. Sounak Nandi, Subba Reddy B and Dinesh Sharma, "Understanding Performance of Transmission and Distribution Insulators at very Low Temperature Conditions", Manuscript: ELEN-D-19-00860, Journal: [Electrical Engineering, \(Archiv für Elektrotechnik\) Springer](#), Vol.102, pages 2255–2268 (2020) published June 2020, (<https://doi.org/10.1007/s00202-020-01019-1>)
18. Subba Reddy B and Praveen Ramamurthy, "Analysis of In-Service Composite Insulators used in overhead Railway Traction", Journal: [Engineering Failure Analysis, Elsevier](#), 108 (2020) 104227, January 2020, 13 pages
19. Subba Reddy B and Gaurav Mitra, "Investigations on High Temperature Low Sag (HTLS) Conductors", [IEEE Transactions on Power Delivery](#), available online Nov 2019, Vol.: 35, Issue: 4, Page(s): 1716-1724, Aug- 2020 Digital Object Identifier: [10.1109/TPWRD.2019.2950992](https://doi.org/10.1109/TPWRD.2019.2950992), 9 pages
20. Sounak Nandi, Subba Reddy B and Dinesh Sharma, "Performance of composite Insulators used for Electric transmission under extreme climatic conditions", [Journal of Materials Engineering and Performance, Springer Nature](#), ASM International, Vol. 28(10), pp. 5959-5969, Oct- 2019, 11 pages
21. Subba Reddy B, "Failure Analysis of BMC Insulators used for Third Rail Traction system", Journal: [Engineering Failure Analysis, Elsevier](#), Vol. 101, July 2019, 8 Pages
22. Alok Ranjan Verma and Subba Reddy B, "Interpretation of Surface Degradation on Polymeric Insulators", Journal: [Engineering Failure Analysis, Elsevier](#), Vol 95, pp. 214-225, Sept 2018, 12 pages
23. Deepak Sharma, Subba Reddy B, Praveen Kumar; "Fracture of Pre-Cracked Thin Metallic Conductors due to Electric Current Induced Electromagnetic Force", [International Journal of Fracture, Springer Nature](#), 212 (2), pp. 183-204, July 2018, 22 pages
24. Deepak Sharma, Subba Reddy B, Praveen Kumar; "Fracture of Pre-Cracked Metallic Conductors under Combined Electric Current and Mechanical loading", [International Journal of Fracture, Springer Nature](#), Vol. 212 Issue 2, pp.167-182, Aug-2018, 16 pages
25. Alok Ranjan Verma, Subba Reddy B and Rahul Chakraborty, "Multistress aging studies on Polymeric Insulators", [IEEE Trans on Dielectrics & Electrical Insulation](#), Vol. 25, No. 2; pp 524-532, April 2018.
26. Alok Ranjan Verma and Subba Reddy B, "Aging Studies on Polymeric Insulators under DC Stress with Controlled Climatic Conditions", Journal: [Polymer Testing, Elsevier](#), 68 (2018) pp.185-192, 2018
27. Satish Naik B, L. Umanand, K. Gopakumar and Subba Reddy B, "A New Two Phase Five-Level Converter for Three Phase Isolated Grid-Tied Systems with Inherent Capacitor Balancing and Reduced Component Count" [IEEE Journal of Emerging & Selected Topics in Power Electronics](#), Vol.6, issue 3, pp 1325-1335, 9, 2018, 11 pages

28. Satish Naik B, L. Umanand, K. Gopakumar and Subba Reddy B, "A Two Phase Five Level Converter with Least Number of Power Switches Requiring only a Single DC Source" [IEEE Journal of Emerging & Selected Topics in Power Electronics](#), Vol. 6, Issue 4, pp 1942-1952, 12, 2018, 11 pages
29. Alok Ranjan Verma and Subba Reddy B, "Understanding surface degradation on polymeric insulators using rotating wheel and dip test under DC stress", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol. 25, No. 5; pp- 2029-2037, October 2018.
30. Alok Ranjan Verma and Subba Reddy B, Tracking and Erosion Resistance of LSR and HTV Silicone Rubber Samples under Acid Rain Conditions", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol.25, No.1, Feb 2018, pp. 46-52.
31. Satish Naik B, L. Umanand, S Shan and Subba Reddy B, "A Novel Wide Duty Cycle Range Wide Band High Frequency Isolated Gate Driver for Power Converters", [IEEE Transactions on Industry Applications](#), Vol.54, issue 1, Jan/Feb 2018, pp 437-446.
32. Alok Ranjan Verma and Subba Reddy B; "Evaluation of Ceramic Insulators used for UHVDC Transmission", [IEEE Trans on Dielectrics and Electrical Insulation](#), Vol.25, No.1, Feb 2018, pp.38-45.
33. Subba Reddy B and Arup Kumar Goswami, "Voltage Sag due to Pollution Induced Flashover across Ceramic Insulator Strings" [International Journal of Emerging Electric Power Systems](#), DE GRUYTER, Vol. 18, Issue 6, pp.1-6, 2017, published online 24.11.2017. DOI: <https://doi.org/10.1515/ijeeps-2016-0160>
34. Alok Ranjan Verma and Subba Reddy B, "Accelerated Aging Studies of Silicon-Rubber based Polymeric Insulators used for HV Transmission Lines", Journal: [Polymer Testing, Elsevier](#), Vol. 62, pp124-131, 2017
35. Shakthi Prasad and Subba Reddy B, "Study on corona activity using image processing approach" [IEEE Transactions on Industry Applications](#), Vol.53, No.4, July/Aug. 2017, pp: 4008 to 4014.
36. Rahul Chakraborty and Subba Reddy B, Performance of Silicone Rubber Insulators under Thermal and Electrical Stress, [IEEE Transactions on Industry Applications](#), Vol. 53, No.3, pp. 2446-2454, May/June 2017
37. Shakthi Prasad and Subba Reddy B, "Study of corona induced degradation on polymeric samples using high dynamic range imaging technique", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol.24, Issue No.2, pp. 1169-1177, April 2017.
38. Rahul Chakraborty and Subba Reddy B, Studies on High Temperature Vulcanized Silicone Rubber Insulators, under Arid Climatic Aging, [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol. 24, Issue 3, pp. 1751-1760, June 2017.
39. Shakthi Prasad D and Subba Reddy B, "Digital Image Processing techniques for estimating power released from the corona discharges", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol. 24, Issue 1, pp. 75-82, February 2017.
40. Subba Reddy B and Alok Ranjan Verma, "Novel Technique for Electric Stress Reduction across Ceramic disc Insulators used in UHV AC and DC Transmission Systems" Journal: [APPLIED ENERGY, Elsevier](#), Vol: 185 (2017) pp 1724-1731, 2017.
41. Subba Reddy B and Diptendu Chatterjee, "Analysis of High Temperature Low Sag Conductors used for High Voltage Transmission", [Energy Procedia, ELSEVIER](#), Vol: 90, pp 179-184, Dec 2016.
42. Subba Reddy B and Rajalingam M, "Recurrence plot analysis to estimate the surface erosion on polymeric insulating materials", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol. 23, No. 3; pp.1620-1626, June 2016.

43. Subba Reddy B and Diptendu Chatterjee, "Performance Evaluation of High Temperature High Current Conductors", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol. 23, Issue 3, pp. 1570-1579, June 2016.
44. Shakthi Prasad D and Subba Reddy B, "Impact of Mist and Acidic fog on Polymer Insulator Samples Exposed to Corona Discharges", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol. 23, Issue 3, pp. 1546-1554, June 2016.
45. Subba Reddy B, Alok Ranjan Verma & Shakthi Prasad D, "Surface Erosion Studies on Polymer Insulators used for High Voltage Transmission", [International Journal of Plasma Environmental Science & Technology \(IJPEST\)](#), Japan, Vol. 10, no. 2, pp. 121-124, Sept 2016.
46. Subba Reddy B and Shakthi Prasad D, "Corona degradation of polymeric insulator samples under different fog conditions", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol. 23, No. 1, pp. 359-367, Feb 2016.
47. Subba Reddy B and Alok Ranjan Verma, "Protection of Digital Telecom Exchanges against Lightning surges and Earth Faults", [IEEE Transactions on Industry Applications](#), Vol. No. 51, No.6, pp. 5305-5311, Nov/ Dec 2015.
48. Subba Reddy B and Shakthi Prasad D, "Effect of cold fog on the corona induced degradation of silicone rubber samples", [IEEE Transactions on Dielectrics and Electrical Insulation](#), Vol. 22, Issue 3, pp. 1711-1718, June 2015.
49. Subba Reddy B and Shakthi Prasad D, "Computation of power released during corona treatment on polymeric insulators under ac and dc excitation", [Energy Procedia, ELSEVIER](#), Volume.75, pp 2205-2210, August 2015
50. Subba Reddy B, Alok Ranjan Verma and Satish Naik B, "Performance analysis of 1200 kV ceramic disc insulator string under normal and faulted conditions" [Energy Procedia, ELSEVIER](#), Volume 75, pp 1114-1119, August 2015
51. Subba Reddy B, "Development of a 250kV DC Generator for Artificial Pollution Studies", [Journal of Instrument Society of India](#), IISc, Vol.44, No.2, pp.79-81, June 2014
52. Subba Reddy B and Satish Naik B, "Simulation of Potential and Electric Field across Faulty Ceramic Disc Insulator String" [Intl Journal of Computing Science & Communication Technologies](#), Vol.5, Issue 2, pp-771-777, Jan 2013.
53. Subba Reddy Band Satish Naik B, "Measurement of Potential and Leakage Current of an Insulator String containing Faulty discs", [Journal of Instrument Society of India](#), IISc, Vol. 42, No.3, pp. 153-155, Sept. 2012.
54. Subba Reddy B and Udaya Kumar, "Modeling & Simulation of surface, volume stress for high voltage Porcelain insulators", [International Journal of Computers & Applications, ACTA press](#), Calgary, Canada, Vol. 34, No.1, pp 29-36, 2012.
55. Subba Reddy B and Udaya Kumar, "A Hybrid Impulse Generator", [Journal of Instrument Society of India](#), IISc, Vol.41, No:3, pp 155-157, Sept 2011.
56. Subba Reddy B and Udaya Kumar, "Enhancement of Surface Flashover Performance of High Voltage Ceramic Disc Insulators", [Journal of Materials Engineering and Performance, ASM International, Springer](#), Volume 20(1) pp 24-30, February 2011.
57. Subba Reddy B and Udaya Kumar, "Radio Interference Measurements on a Ceramic disc Insulator String with Field Reduction Electrode", [Journal of Instrumentation, IOP Science](#) publication, Vol.5, pp-1-7, July 2010

58. Subba Reddy B and Udaya Kumar, "Simulation of Potential and Electric Field Profiles for transmission line Insulators", *International Journal of Modeling and Simulation, ACTA Press*, Calgary, Canada, Vol. 30, Issue 4, December 2010.
59. Subba Reddy B and Udaya Kumar, "Modeling and Fabrication of a Portable Surge Generator", *Journal of Instrument society of India*, IISc, Vol. 40, No.2, pp 111-114, June 2010.
60. Subba Reddy B and Udaya Kumar, "A Unique Artificial Pollution Laboratory at IISc" *Journal of Instrument Society of India*, IISc, Vol. 40, No.1, pp 47-49, March 2010.
61. Subba Reddy B and Nagabhushana G.R, "Resistance Measurements and Interpretations Relating to Flashover of Contaminated Ceramic Insulator Strings", *Journal of Plasma Science and Technology, IOP Science*, Vol.5, No.6, pp. 2093-2100- December 2003.
62. M. Jayaraju, P.S.C Nair, B.R. Prabhakar and B Subba Reddy, "Oscillatory switching impulse flashover characteristics of insulator strings under normal weather conditions" *Journal of Electrical Power Components & Systems, Taylor & Francis*, Vol. 31, No: 2, pp 171-188, 2003.
63. Subba Reddy B and Nagabhushana G R, "Study of leakage current behavior on artificially polluted ceramic insulator surface", *Journal of Plasma Science and Technology, IOP Science*, Vol. 5, No. 4 pp. 1921-1926 – August 2003.
64. Subba Reddy B and Nagabhushana G. R, "Study of Temperature Distribution along an Artificially Polluted Insulator String", *Journal of Plasma Science and Technology, IOP Science*, Vol. 5 No: 2 pp 1715-1720 – April 2003.

BOOK CHAPTERS

1. Sounak Nandi., Subba Reddy B. (2020) Multi-stress Accelerated Ageing Studies on Polymer Insulators Used for HVDC Transmission. Editor: Németh B. (eds) Proceedings of the 21st International Symposium on High Voltage Engineering. ISH 2019. Lecture Notes in Electrical Engineering, vol 599. Springer, Cham. https://doi.org/10.1007/978-3-030-31680-8_137, Vol.2, Chapter No:137, pp 1440-1452 ©2020
2. Sounak Nandi, Subba Reddy B. (2020) Simulation of Electrostatic Field Across HVDC Composite Insulators. Editor: Németh B. (eds) Proceedings of the 21st International Symposium on High Voltage Engineering. ISH 2019. Lecture Notes in Electrical Engineering, vol 599. Springer, Cham. https://doi.org/10.1007/978-3-030-31680-8_138, Vol.2, Chapter: 138, pp.1453-1466 ©2020.
3. Shubam Agrawal, Umanand L., Subba Reddy B. (2021) Bidirectional Current-Fed Converter for High Gain DC–DC and DC–AC Applications. Editors: Mohapatro S., Kimball J. (eds) Proceedings of Symposium on Power Electronic and Renewable Energy Systems Control. Lecture Notes in Electrical Engineering, Springer, Singapore. https://doi.org/10.1007/978-981-16-1978-6_9, Vol. 616, chapter:9, pp 101-111, July 2021
4. Thakur A.S., Umanand L., Reddy B.S. (2021) Multi-mode Operation of Converter for Power Quality Improvement. Editors: Mohapatro S., Kimball J. (eds) Proceedings of Symposium on Power Electronic and Renewable Energy Systems Control. Lecture Notes in Electrical Engineering, Springer, Singapore. https://doi.org/10.1007/978-981-16-1978-6_38, Vol. 616, chapter:38, pp 439-449, July 2021
5. Negi M., Subba Reddy B. (2021) Experimental Study on the Failures of FRP Rods Used in Composite Insulators. Editors: Mohapatro S., Kimball J. (eds) Proceedings of Symposium on Power Electronic and Renewable Energy Systems Control. Lecture Notes in Electrical Engineering, Springer, Singapore. https://doi.org/10.1007/978-981-16-1978-6_42, Vol. 616, chapter:42, pp 489-499, July 2021
6. Subba Reddy B., Ramamurthy P., Saravanan S. (2021) Investigations on the Aging of Traction Conductors Using Morphological and Textural Analysis. Editors: Mohapatro S., Kimball J. (eds) Proceedings of Symposium on Power Electronic and Renewable Energy Systems Control. Lecture Notes in Electrical Engineering, Springer, Singapore. https://doi.org/10.1007/978-981-16-1978-6_43, Vol. 616, chapter:43, pp 501-510, July 2021.

7. Subba Reddy B., Ramamurthy P.C., Saravanan S. (2021) Deterioration of Overhead Rail Traction Conductors Due to Corrosion-A Laboratory Study. Editors: Mohapatro S., Kimball J. (eds) Proceedings of Symposium on Power Electronic and Renewable Energy Systems Control. Lecture Notes in Electrical Engineering, Springer, Singapore. https://doi.org/10.1007/978-981-16-1978-6_44, Vol. 616, chapter:44, pp 511-524, July 2021
8. Shubham Agrawal, L. Umanand, Subba Reddy B, "AC Analysis on the Modified Johnson Converter", Paper ID 105, Vol.2, Proc of ICEEE-Vol-2, Editors: Saad Mekhilef, Rabindra Nath Shaw, and Pierluigi Siano, "Lecture Notes in Electrical Engineering", Springer Publication Series, Vol-893, 2022
9. Shubham Agrawal, L. Umanand, Subba Reddy B, Atmanand Maya, "Heating and Cooling of Thermoelectric Module using Modified Johnson Converter "Paper ID 106, Vol.2, Editors: Saad Mekhilef, Rabindra Nath Shaw, and Pierluigi Siano, Proc of ICEEE-Vol-2, "Lecture Notes in Electrical Engineering", Springer Publication Series, Vol-893, 2022.
10. Gautam Raiker, Subba Reddy B, L Umanand, "Bond Graph Modelling and Simulation of Active Heating /Cooling using Thermoelectric Energy Conversion Systems", Paper ID 113, Vol 2, Editors: Saad Mekhilef, Rabindra Nath Shaw, and Pierluigi Siano, Proc of ICEEE-Vol-1, "Lecture Notes in Electrical Engineering", Springer Publication Series, Vol-893, 2022
11. Anchal Thakur, Loganathan Umanand, Subba Reddy B, "Design of 1kVA Shunt Compensator test bench", Paper ID 124, Vol.1, Editors: Saad Mekhilef, Rabindra Nath Shaw, and Pierluigi Siano, Proc of ICEEE-Vol-1, "Lecture Notes in Electrical Engineering", Springer Publication Series, Vol-893, 2022
12. G Nithin Reddy, Subba Reddy B, M Ramez Halloum, Jangamreddy Rajasekhar Reddy, Febin Francis, Kiran Kumar Reddy B, "Performance Evaluation of Field Aged Polymer Insulators", Paper ID 135, Vol.1, Editors: Saad Mekhilef, Rabindra Nath Shaw, and Pierluigi Siano, Proc of ICEEE-Vol-1, "Lecture Notes in Electrical Engineering", Springer Publication Series, Vol-893, 2022, pp-237-247
13. Subba Reddy B, Febin Francis, Umanand L , "Smart Energy Management for a Campus Network ", Paper ID 179, Vol.2, Editors: Saad Mekhilef, Rabindra Nath Shaw, and Pierluigi Siano, Proc of ICEEE, "Lecture Notes in Electrical Engineering", Springer Publication Series, Vol-893, 2022,

CONFERENCES / Seminars/Symposia/etc

1. Ashwin K., Nakul Narayanan K., L. Umanand, Subba Reddy B, "A Novel Switched Capacitor DC-AC Converter with Hysteresis Control" paper ID: 590 accepted for oral presentation, at IEEE 2nd International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME 2023) will take place in the TENERIFE-CANARY ISLANDS, SPAIN, on 19-20 July 2023.
2. G Nithin Reddy, Shubham Agrawal & Subba Reddy B, "A Complex Waveform Generator for Surge Arrester Evaluation used in HVDC Converter Stations", Paper No: 289. presented at IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), held at The Maldives National University, Male City (Maldives) during 11th - 12th March 2023.
3. Atmanandamaya, Umanand L & Subba Reddy B, "Derivation and Analysis of Dynamic Model of Peltier Module using Small Signal Approach for Heat Pump Application", paper No: 318. Paper presented at the IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT), held at The Maldives National University, Male City (Maldives) during 11th - 12th March 2023.
4. Shubham Agrawal, Insha Andrabi, Subba Reddy B and L. Umanand" A Gate Driver Circuit with Variable Gate to Source/Emitter Voltage Applicable on Si-MOSFETs, SiC MOSFETs and IGBTs" paper presented at IEEE Industrial Electronics Society Annual On-Line Conference (ONCON)! ONCON-2022 held during December 9-11, 2022. Paper Ref: ONCON22-000080.
5. Shubham Agrawal, Subba Reddy B. and L. Umanand "A Novel Hybrid DC Circuit Breaker Topology with Extended Operating Time Suitable for Mechanical Switches, paper presented at IEEE Industrial Electronics Society Annual On-Line Conference (ONCON)! ONCON-2022 held during December 9-11, 2022, Paper Ref: ONCON22-000085.

6. M-Ramez Halloum, Subba Reddy B, and Youssef Razouk, "Optimization of Corona Ring Design for 400 kV Polymeric Outdoor Insulator", presented at the 2022 IEEE 6th INTERNATIONAL CONFERENCE ON CONDITION ASSESSMENT TECHNIQUES IN ELECTRICAL SYSTEMS (IEEE CATCON 2022) held during 17th - 19th Dec 2022 at National Institute of Technology, Durgapur, INDIA
7. Ashwin K, Nakul Narayanan K, L. Umanand and Subba Reddy B, "A Novel Resonant-Based Soft Switched Capacitor DC-DC Converter Topology for High Voltage and High Gain Application", paper No: #1570845383 presented at the 2022 IEEE 10th Power India International Conference (PIICON) held at NIT Delhi from 25-27 November 2022.
8. Shubham Agarwal, Umanand L & Subba Reddy B, "Integration of Photovoltaic with Series/Parallel Connection of Batteries using Modified Johnson Converter", Paper Id: 573, presented at the 2022 5th IEEE INTERNATIONAL CONFERENCE ON COMPUTING, POWER AND COMMUNICATION TECHNOLOGIES (GUCON) organized on September 23-25, 2022, New Delhi,
9. Nithin Reddy, Siddarth Iyer, Shubham Agarwal, & Subba Reddy B. "Linear Voltage Amplifier for High Voltage Applications, ID: 595, presented at the 2022 5th IEEE INTERNATIONAL CONFERENCE ON COMPUTING, POWER AND COMMUNICATION TECHNOLOGIES (GUCON) organized on September 23-25, 2022, New Delhi,
10. Atmanandamaya, Umanand L & Subba Reddy B, "Sustainable Solution to Mitigate Carbon Emission for the Cumulative Electrical and Thermal Energy Demand in Silk Reeling Process in Southern India", Paper No: 409, presented at the 14th International Conference on Applied Energy (ICAE2022) held during Aug 8-11, 2022, at Bochum, Germany.
11. G Nithin Reddy, M-Ramez Halloum and Subba Reddy B, "Electro-Thermal Aging Studies on Polymer Housed ZnO Surge Arresters subjected to Voltage Polarity Reversals", paper presented at the 2022 IEEE Joint Conference on Electrostatics, June 12 – June 15, 2022, Charlotte, NC, USA. (Received best paper presentation award- 3rd Prize)
12. Shubham Agrawal, L. Umanand, Subba Reddy B, "AC Analysis on the Modified Johnson Converter", Paper ID 105, Session SD6 presented at 3rd International Conference on Electrical and Electronics Engineering (ICEEE 2022), organized by Springer Nature and The University of Malaya, Kuala Lumpur, Malaysia during Jan 8-9, 2022
13. Shubham Agrawal, L. Umanand, Subba Reddy B, Atmanand Maya, "Heating and Cooling of Thermoelectric Module using Modified Johnson Converter ", Paper ID 106, Session: SD6, presented at 3rd International Conference on Electrical and Electronics Engineering (ICEEE 2022), organized by Springer Nature and The University of Malaya, Kuala Lumpur, Malaysia during Jan 8-9, 2022
14. Gautam Raiker, Subba Reddy B, L Umanand, "Bond Graph Modelling and Simulation of Active Heating/Cooling using Thermoelectric Energy Conversion Systems", Paper ID 113, session: SD6 presented at 3rd International Conference on Electrical and Electronics Engineering (ICEEE 2022), organized by Springer Nature and University of Malaya, Kuala Lumpur, Malaysia during Jan 8-9, 2022.
15. Anchal Thakur, Loganathan Umanand, Subba Reddy B, "Design of 1kVA Shunt Compensator test bench", Paper ID 124, Session: FD5, presented at 3rd International Conference on Electrical and Electronics Engineering (ICEEE 2022), organized by Springer Nature and The University of Malaya, Kuala Lumpur, Malaysia during Jan 8-9, 2022 (Received best paper presentation award)
16. G Nithin Reddy, Subba Reddy B, M Ramez Halloum, Jangamreddy Rajasekhar Reddy, Febin Francis, Kiran Kumar Reddy B, "Performance Evaluation of Field Aged Polymer Insulators", Paper ID 135, Session: FD5, presented at 3rd International Conference on Electrical and Electronics Engineering (ICEEE 2022), organized by Springer Nature and The University of Malaya, Kuala Lumpur, Malaysia during Jan 8-9, 2022 (Received best paper presentation award)

17. Subba Reddy B, Febin Francis, Umanand L, " Smart Energy Management for a Campus Network ", Paper ID 179, Session FD6, presented at 3rd International Conference on Electrical and Electronics Engineering (ICEEE 2022), organized by Springer Nature and The University of Malaya, Kuala Lumpur, Malaysia during Jan 8-9, 2022.
18. Ashwin K, Nakul Narayanan, L. Umanand and Subba Reddy B, "A Novel Switched Capacitor DC-DC Converter Topology for High Voltage and High Gain Application", Paper ID: 92 presented at the 2022 IEEE International conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE2022), during Jan 2-5, 2022.
19. Shubham Agrawal, Atmanandmaya, L. Umanand and Subba Reddy B, Toshali Mohapatra and Abhishek, "A Novel DC-DC Converter with Extended Range of Gain for Buck-Boost Applications", Paper ID: 124, presented at the 2022 IEEE International conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE2022), during Jan 2-5, 2022.
20. Sounak Nandi & Subba Reddy B, "Estimation of Space Charge Accumulation in the bulk of Silicone Rubber Insulator Used in Outdoor Insulators under DC Field", Paper ID 75, presented at the 2021 IEEE 5th International Conference on Condition Assessment Techniques in Electrical Systems, (IEEE CATCON 2021) National Institute of Technology Calicut, India, 3rd to 5th December 2021
21. Pranjal Gupta, Nithin Reddy G & Subba Reddy B, "Multi-stress Aging Studies on Polymeric Surge Arresters for HVDC Transmission", Paper ID 48, presented at the 2021 IEEE 5th International Conference on Condition Assessment Techniques in Electrical Systems, (IEEE CATCON 2021) National Institute of Technology Calicut, India, 3rd to 5th December 2021
22. Nithin Reddy G & Subba Reddy B, "A Review on the Condition Monitoring of HVDC Polymeric housed Surge Arresters", Paper ID 111, presented at the 2021 IEEE 5th International Conference on Condition Assessment Techniques in Electrical Systems, (IEEE CATCON 2021) National Institute of Technology Calicut, India, 3rd to 5th December 2021
23. M-RAMEZ HALLOUM, Subba Reddy B & Youssef Razouk, "Optimization of Electric Field Distribution for 33kV Polymeric Insulator Using Non-linear Field Grading Composites", Paper ID 112, presented at the 2021 IEEE 5th International Conference on Condition Assessment Techniques in Electrical Systems, (IEEE CATCON 2021) National Institute of Technology Calicut, India, 3rd to 5th December 2021
24. M-Ramez Halloum and Subba Reddy B., "Performance Evaluation of 33 kV Polymeric Outdoor Insulators Equipped with Non-Linear Field Grading Composites", paper ID: 112, presented at the International Conference on Applied Energy 2021 (ICAE-2021) Nov. 29 - Dec. 2, 2021, Bangkok, Thailand
25. Gautam A. Raiker, Subba Reddy B, L. Umanand, "Energy Disaggregation with Reserve Power Estimation and Non-Intrusive Load Monitoring in Direct Coupled Solar Photovoltaic Systems", Paper ID: 354, presented at the International Conference on Applied Energy 2021 (ICAE-2021) Nov. 29 - Dec. 2, 2021, in Bangkok, Thailand
26. Atmanandmaya, Umanand Loganathan, Subba Reddy B, "Development of Hybrid Source Thermal Desalination System using Thermoelectric module as a powerful heat pump", Paper ID: 532, presented at the International Conference on Applied Energy 2021 (ICAE-2021) Nov. 29 - Dec. 2, 2021, Bangkok, Thailand
27. Shubham Agrawal, L. Umanand and Subba Reddy B, "Enhancement of Power Rating for a Bidirectional DC Circuit Breaker using Modular Commutation Circuits," IECON 2021 – 47th Annual Conference of the IEEE Industrial Electronics Society, pp. 1-6, doi: 10.1109/IECON48115.2021.9589284, Oct 13-16, 2021
28. Deep Prakash, Gautam A. Raiker, Shubham Agarwal and Subba Reddy B, "Solar PV Charge Controller with Battery Management System Using Voltage Reference Control", presented at the IEEE INTERNATIONAL CONFERENCE ON COMPUTING, POWER, AND COMMUNICATION TECHNOLOGIES (IEEE-IAS GUCON 2021), to be held during 24-26th Sept, 2021, Kaulalampur, Malaysia. Paper No: 878 (Received best paper award).

29. Shubham Agrawal, L Umanand and Subba Reddy B, "Novel Bidirectional Hybrid DC Circuit breaker Topology using Current Fed Converter", paper ID: OR-16-0500, presented at the IEEE 2021 Energy conversion congress & Exposition Asia (ECCE Asia 2021) 24-27 May 2021, Singapore.
30. Subba Reddy B, Umanand L & T V Prabhakar, "Energy Internet Based Next Generation Smart Grid", presented at Joint online workshop: Theme 2, IISc-Univ of Wollongong, Australia, March 29, 2021
31. Sanchita Banerjee, Prosenjit Ghosh, Chirantan Pramanik, Subba Reddy B, "Fractionation of stable oxygen and clumped isotope during acid digestion of calcite in the presence of an external DC electric field", Poster No: PP046-0006, AGU Fall Meeting 16th Dec 2020.
32. Manoj Negi and Subba Reddy B, "Experimental Study on the Failure of FRP Rods used in Composite Insulators", paper No. 59 presented at the Symposium on Power Electronic and Renewable Energy Systems Control-2020 (PERESC 2020) Indian Institute of Technology, Bhubaneswar, 04-05 Dec 2020
33. Subba Reddy B and Praveen Ramamurthy and S Saravanan, "Investigations on the Aging of Traction Conductors using Morphological and Textural Analysis", Paper No. 60, presented at the Symposium on Power Electronic and Renewable Energy Systems Control-2020 (PERESC 2020), Indian Institute of Technology, Bhubaneswar, 04-05 Dec 2020.
34. Subba Reddy B and Praveen Ramamurthy and S Saravanan, "Deterioration of Overhead Rail Traction Conductors due to Corrosion – A laboratory study", Paper No.61, presented at the Symposium on Power Electronic and Renewable Energy Systems Control-2020 (PERESC 2020), Indian Institute of Technology, Bhubaneswar, 04-05 Dec 2020.
35. Shubham Agrawal, L Umanand and Subba Reddy B, "Bidirectional Current Fed Converter for High Gain DC-DC and DC-AC Applications", Paper No. 88, presented at the Symposium on Power Electronic and Renewable Energy Systems Control-2020 (PERESC 2020), Indian Institute of Technology, Bhubaneswar, 04-05 Dec 2020.
36. Anchal Singh Thakur, Loganathan Umanand and Subba Reddy B, "Multi-mode operation of Converter for Power Quality Improvement", Paper No. 109, presented at the Symposium on Power Electronic and Renewable Energy Systems Control-2020 (PERESC 2020), Indian Institute of Technology, Bhubaneswar, 04-05 Dec 2020.
37. Wei He, Gautam Raiker, Atmanandmaya, Subba Reddy B, Umanand L and Jihong Wang, "Preliminary Analysis of Photovoltaic-Powered Electrodialysis for In-Home Water Desalination in Rural India", Conf Proc Paper No: 169, pp 156-161, 1st IEEE Bangalore-Humanitarian Technology Conference (B-HTC 2020), October 8-10, 2020.
38. Ashutosh Kumar, Alok Ranjan Verma and Subba Reddy B, "Leakage Current Analysis on Outdoor Composite Insulators", paper No.: 465, presented at 2020 IEEE International Conference on Computing, Power and Communication Technologies (GUCON), October 2-4, 2020, New Delhi, India (978-1-7281-5070-3/20/\$31.00 ©2020 IEEE) pp. 682-686.
39. Subba Reddy B, Umanand L, Andrew Urquhart & Murray Thompson, "Compensating for current unbalance in microgrids using sequence compensators", UK-India Joint Virtual clean energy center online conference, Sept 2020.
40. Subba Reddy B, Umanand L, Murray Thompson & John Barton, "Grid frequency control provided by flexible demand and Energy storage", UK-India Joint Virtual clean energy center Conf, Sept 2020.
41. Subba Reddy B and Gaurav Mitra, "Estimation of Magnetic Fields near to High Temperature Low Sag Conductors", Paper No: 450, presented at International Conference on Electronics, Computing and Communication Technologies, IEEE-CONECCT 2020, IEEE Bangalore Section, JULY 2-4, 2020.

42. Shreyas Shroff and Subba Reddy B, "Multistress Ageing Studies on Polymeric Housed Surge Arresters", Paper No: 494, presented at International Conference on Electronics, Computing and Communication Technologies, IEEE-CONECCT 2020, IEEE Bangalore Section, JULY 2-4, 2020.
43. Shubham Agrawal, Atmanandmaya, Subba Reddy B and L Umanand, "Integration of Photovoltaic Panels with DC Grid Using High Gain DC DC Converter", Paper No: 495, presented at International Conference on Electronics, Computing and Communication Technologies, IEEE-CONECCT 2020 organized by IEEE Bangalore Section, JULY 2-4, 2020.
44. Gautam Raiker, L Umanand and Subba Reddy B, "Bond Graph Approach for Modelling Solar PV-Thermal and Thermoelectric Devices", Paper No: 646, presented at International Conference on Electronics, Computing and Communication Technologies, IEEE-CONECCT 2020 organized by IEEE Bangalore Section, JULY 2-4, 2020.
45. Ashwin K, Umanand L and Subba Reddy B, "Simulation and Analysis of Virtual Oscillator Control for Parallel Connected Single phase Inverters", Paper No: 438, presented at International Conference on Electronics, Computing and Communication Technologies, IEEE-CONECCT 2020 organized by IEEE Bangalore Section, JULY 2-4, 2020.
46. Mahesh Nair, Sampath Shetty, Gautam Raiker, Subba Reddy B. and L. Umanand, "Three-Phase Five-Level Grid Synchronized PV Inverter with MPPT for Micro-Grid Application", presented at IEEE International conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE 2020) Cochin, Kerala, India from 2-4 January 2020.
47. Gautam A. Raiker, Subba Reddy B, L. Umanand, Shubham Agrawal, Anchal S. Thakur, Ashwin K., John P. Barton, Murray Thomson, "Internet of Things based Demand Side Energy Management System using Non-Intrusive Load Monitoring", presented at IEEE International conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE 2020) Cochin, India from 2-4 Jan 2020.
48. Subba Reddy B, "Conditioning Monitoring of Composite Transmission Insulators - Application of digital techniques", 2nd Annual technical conference on 4th Industrial Revolution in Power Sector held at Dubai, during 19th& 20th Sept 2019. (Invited keynote speaker)
49. Subba Reddy B, Umanand L & Gautam Raiker, "Smart Energy Management for Microgrids", UK India Joint Virtual Clean Energy Centre (JVCEC) Conference, 12-14 Sept 2019, MNIT-Jaipur, India
50. Sounak Nandi and Subba Reddy B, "Simulation of Electrostatic field Distribution across HVDC Composite Insulators", Paper ID: 473, presented at 21st International Symposium on High Voltage Engineering, ISH-2019, held at Budapest-Hungary, during 26th – 30th Aug 2019.
51. Sounak Nandi and Subba Reddy B "Multistress Accelerated Ageing studies on Polymer Insulators used for HVDC Transmission", Paper ID: 219, presented at 21st International Symposium on High Voltage Engineering, ISH-2019, held at Budapest-Hungary, during 26th – 30th Aug 2019
52. Subba Reddy B and Sounak Nandi, "Accelerated Aging Studies on Polymeric Insulators used for EHV and UHV Transmission", Invited presentation 10th International Conference on Insulating Materials & Systems (INSULEC-2019) 21–22, August 2019, Organized by IEEMA at Mumbai.
53. Subba Reddy B and Gaurav Mitra, "Performance Analysis on High Temperature Low Sag (HTLS) and Conductors used for Rail Traction", 20th International Scientific Conference on Electric Power Engineering organized by Technical University of Ostrava, Czech Republic, 15th 17th May 2019.
54. Manoj Negi and Subba Reddy B, "Corona Induced Degradation Studies on Fibre Reinforced Plastic (FRP) Rod used for High Voltage Composite Insulators", 20th International Scientific Conference on Electric Power Engineering, Technical University of Ostrava, Czech Republic, 15th 17th May 2019.

55. Subba Reddy B and Umanand L, "Development of Energy Monitoring System for a Typical Micro-grid", presented at MIT Applied Energy International Symposium organized by Journal of Applied Energy and Massachusetts Institute of Technology, Cambridge USA during 22nd to 24th May 2019.
56. Gautam A. Raiker, B. Subba Reddy and L. Umanand, "Development of Peltier Cooling and Thermoelectric generation-based Storage system", presented at MIT Applied Energy Intl Symposium organized by Journal of Applied Energy and Massachusetts Institute of Technology, Cambridge USA during 22nd to 24th May 2019.
57. G. A. Raiker, L. Umanand, B. Subba Reddy, "Modelling of Photovoltaic based Peltier Air-Conditioners for Remote Shelter Bases", presented at 5th International Conference on Polygeneration (ICP 2019) May 15–17, 2019, I2CNER, Kyushu University, Fukuoka, Japan
58. Rohith, L. Umanand and Subba Reddy B, "Pole Changing Wide Speed Range Induction Motor Drive for Electric Vehicles", presented at IEEE Power Electronics, Drives and Energy Systems Conference (PEDES), 18-21 Dec-2018 at Indian Institute of Technology Madras in Chennai, India Paper ID 1031
59. Gautam A Raiker, L. Umanand and Subba Reddy B, "Perturb and Observe with Momentum Term applied to Current Referenced Boost Converter for PV Interface", presented at IEEE Intl Conf on Power Electronics, Drives and Energy Systems (PEDES-2018), IIT Madras, India, 18th to 21st Dec 2018, Paper ID: 80 (Student received Prof Subhasis student travel award)
60. Rohith, L Umanand and Subba Reddy B, "Pole Changing Wide Speed Range Induction Motor Drive for Electric Vehicles", Joint Intl Symposium on Energy Science (Kyoto Univ Japan & ICER-IISc), 3rd-5th Dec 2018 at IISc, Bangalore, India
61. Subba Reddy B and Sounak Nandi, "Development of HMI based Multi-stresses Aging Facility for Polymeric Insulators", presented at 13th IEEE International conference on Industrial and Information systems (ICIIS-2018), Indian Institute of Technology, Ropar-India, 1st & 2nd Dec 2018.
62. Alok Ranjan Verma, Subba Reddy B and Suparno Bandyopadhyay", Tracking and Erosion Resistance of Artificially Aged Silicone Rubber Samples", 13th IEEE Intl conference on Industrial and Information systems (ICIIS-2018), Indian Institute of Technology, Ropar-India, 1st & 2nd Dec 2018.
63. Gautam A. Raiker, Subba Reddy B, Umanand L, Praveen C. Ramamurthy, Abines S. G. Shama G. Vasisth, "Model of PV interface to Grid-Tie Inverter with Current Referenced Boost Converter", 13th IEEE International conference on Industrial and Information systems (ICIIS-2018), Indian Institute of Technology, Ropar-India, 1st & 2nd Dec 2018.
64. Gautam A. Raiker, Subba Reddy B, Umanand L, Aman Yadav and Mujeeba M. Shaikh, "Approach to Non-Intrusive Load Monitoring using Factorial Hidden Markov Model", 13th IEEE International conference on Industrial and Information systems (ICIIS-2018), Indian Institute of Technology, Ropar-India, 1st & 2nd Dec 2018. (Received Best paper presentation award)
65. Rohith, L. Umanand and Subba Reddy B, "Pole Changing Wide Speed Range Induction Motor Drive for Electric Vehicles", presented at IEEE Power Electronics, Drives and Energy Systems Conference (PEDES), Indian Institute of Technology Madras, India, Paper ID 1031, 18 -21 Dec-2018.
66. Gautam A Raiker, L. Umanand and Subba Reddy B, "Perturb and Observe with Momentum Term applied to Current Referenced Boost Converter for PV Interface", IEEE Intl Conf on Power Electronics, Drives & Energy Systems (PEDES-2018), IIT Madras, India, 18-21 Dec 2018, Paper ID: 80
67. "Smart Grids and Domestic Demand Modeling", Subba Reddy B, Umanand L, IISc, and John Barton, Murray Thompson, Loughborough University, UK, Joint presentation at the Joint Virtual Clean Energy Centre (JVCEC) Conference, 18-20 September 2018 Loughborough University, UK

68. "Smart Energy Management System and data sharing at IISc (India) and Warwick (UK)", Subba Reddy. B, Umanand L, IISc, and Jihong Wang, Oleh Kiselychnyk, Mark Dooner, Warwick University, UK, Joint presentation at the Joint Virtual Clean Energy Centre (JVCEC) Conference, 18-20 Sept 2018 Loughborough University, UK
69. Subba Reddy B, L. Umanand, Satish Naik B and Rohith, "Development of a Two Phase Five-Level Converter for Three phase Isolated Grid-Tied Systems", presented at the Joint Virtual Clean Energy Centre (JVCEC) Conference, Loughborough University, UK, 18-20 September 2018.
70. Subba Reddy B, L. Umanand and Gautam Raikar, "Energy Management for IISc Microgrid", presented at the Joint Virtual Clean Energy Centre (JVCEC) Conference, Loughborough University, UK, 18-20 September 2018
71. Subba Reddy B and L Umanand, "Scalable Solar PV grid interactive systems", presented at the Indo-UK (UKICERI)Project Meeting cum Industry Conclave 2018, IIT Kharagpur, 12th& 13th July 2018
72. Satish Naik B, Ravi Prakash Reddy, Umanand L, Subba Reddy B and Gopakumar K, "A Novel Least Component Count Single DC-link Fed Generalized Multilevel Inverter Configuration for Three-phase High Power Isolated Grid Connected Systems", presented at 2018 IEEE Energy Conversion Congress and Exposition held in Portland, OR, Sept 23-27, 2018, Paper ID: 18073.
73. Alok R Verma and Subba Reddy B, "Degradation Studies on Polymeric Insulator Used for High Voltage Transmission", EECS Research Students Symposium-2018, Paper No: 29, Indian Institute of Science, Bangalore, April 12 - 13, 2018
74. Subba Reddy B and Umanand L, "Energy Monitoring and Control for distribution network using Smart Metering", presented at the 2018 IEEE International conference of High Voltage Engg (ICHVE 2018) held in Athens, Greece, 10th -13th Sept 2018. Paper code: 71401-14613670-6966.
75. Dinesh Sharma and Subba Reddy B, "Studies on High Voltage Composite Insulators under very low temperatures", presented at the 2018 IEEE International conference of High Voltage Engg (ICHVE 2018) held in Athens, Greece, 10th -13th Sept 2018. Paper code: 71401-14613653-1501
76. Alok R Verma and Subba Reddy B, "Leakage current analysis on the Polymeric Insulators subjected to rotating wheel and dip test", presented at the 2018 IEEE International conference of High Voltage Engg (ICHVE 2018) held in Athens, Greece, 10th -13th Sept 2018. Paper code: 71401-14613352-5563
77. Shakthi Prasad and Subba Reddy B, "Understanding Digital Imaging of Corona Discharges", presented at the 2018 IEEE International conference of High Voltage Engg (ICHVE 2018) held in Athens, Greece, 10th -13th Sept 2018, Paper code: 71401-14601446-7938
78. Alok R Verma and Subba Reddy B, "Aging of Composite Insulators under AC & DC Voltage using Rotating Wheel and Dip Test Method", paper No: HVE015, presented at 2nd National power Engg Research Scholars conference, 24th& 25th Feb 2018, IIT Madras, India.
79. Dinesh Sharma and Subba Reddy B, "Performance of Overhead Composite Insulators under very low Temperatures" paper No: HVE006, presented at the 2nd National power Engg Research Scholars conference, 24th& 25th Feb 2018, IIT Madras, India.
80. Subba Reddy B & L Umanand, "Scalable solar PV grid interactive system", presented at Indo-UK (UKICERI) symposia, IIT Bombay, 16th Dec 2017 (also chaired a session).
81. Alok Ranjan Verma, and Subba Reddy B, "Influence of Scintillations on the Surface Degradation of Polymeric Insulators", presented at IEEE International Conference on Industrial and Information Systems, session 05, track A, Srilanka, 15th-16th Dec 2017 (Student received travel fellowship award)

82. Subba Reddy B, "Insulators for UHVAC and DC transmission", 3rd IEEE Intl. conf on Condition Assessment techniques in Electrical Systems (CATCON-2017), 16th to 18th NOV 2017, at IIT Ropar, Punjab, India, Session XIV, IL11 (Invited talk).
83. Alok Ranjan Verma and Subba Reddy B, "Multistress Aging Studies on HTV Silicone Rubber Insulators" paper presented at 3rd IEEE Intl. conf on Condition Assessment techniques in Electrical Systems (CATCON-2017), 16th to 18th NOV 2017, at IIT Ropar, Punjab, conf. proc. pp, 151-155.
84. Alok Ranjan Verma and Subba Reddy B, "Tracking and Erosion Resistance of Liquid Silicone Rubber under Normal and Acidic Environment", paper No:197, 4th IEEE Uttar Pradesh Section Intl Conference on Electrical, Computer and electronics, 26-28 Oct- 2017, GLA University Mathura (India) Page(s):223–227, 2017 (Received best paper award)
85. Subba Reddy B, "Condition Assessment of Insulators used for EHV/UHV transmission", 9th IEEE PES Asia-Pacific Power & Energy Engineering conference 2017, 8-10 Oct 2017, Bangalore. (Invited talk)
86. Rahul Chakraborty and Subba Reddy B, "Thermal Aging Studies on High Temperature Vulcanized Silicone Rubber Insulators", EECS Research Students Symposium, Indian Institute of Science, Bangalore, 7th & 8th April, 2017. (Received best MSc.Engg poster presentation award)
87. Subba Reddy B and Maitreyee M, "Corona Studies on Polymeric Insulator Samples used in High Voltage Transmission", paper presented at IEEE WIECON 2016 conference. Paper ID: 2204, 19th to 21st Dec 2016, at Pune-India.
88. Subba Reddy B, "Technical and Economic challenges for adopting Ultra High Voltage Transmission Systems", 5th National Seminar on Competitive Economics of Indian Thermal Power Generation" Conf: West Bengal Power Development Corpn Ltd, Kolkata, India, 25th Sept 2016 (invited paper)
89. Satish Naik B, Shan S, Umanand L and Subba Reddy B, "A Wide Duty Cycle Range Wide Band High Frequency Isolated Gate Driver for Power Converters", paper No: 1570300536, IEEE Industrial Electronics & Applications Conference, IEACon 2016, Kota-Kinabalu, Malaysia, 20-22 Nov-2016.
90. Shakthi Prasad D, Subba Reddy B, Maitreyee M and Anusha Betta B, "Corona treated polymeric insulating samples subjected to mechanical and electrical stresses", 18th ICED 2016, IIT Madras, 8th to 10th Dec 2016, Session 2-1, paper ID: ACED-028, 9th Dec 2016.
91. Subba Reddy B, "Recent advances in UHV AC and DC Power transmission", 4th National conference on Power & Energy systems (NPES16) held at Kalasalingam university campus, TN, during 01-02 April 2016 (invited paper)
92. Shakthi Prasad D and Subba Reddy B, "Analysis of Corona Discharges Using High Dynamic Range Imaging Technique", 2016 Intl. SPE conference, held at University of Poitiers, France, held during 29th to 31st Aug 2016.
93. Alok Ranjan Verma and Subba Reddy B, "Studies on Full Scale Polymer Insulators Subjected to Corona under different Environmental Conditions", 2016 Intl. SPE conference, University of Poitiers, France, 29th to 31st Aug 2016.
94. Rahul Chakraborty and Subba Reddy B, "Investigation on the Pollution Performance of HTV Silicone Rubber Insulators", Intl. SPE conference, University of Poitiers, France, 29- 31 Aug 2016.
95. Rahul Chakraborty and Subba Reddy B, "Performance of Silicone Rubber Insulators under Thermal and Electrical Stress", IEEE 2016 Electrostatics Joint Conference, Purdue University, Indiana, USA, 14th to 16th June 2016., Session E, paper E4, (Received best paper/cash award: 2nd prize)

96. Shakthi Prasad D and Subba Reddy B, "Study on Corona Activity using Image Processing Approach", IEEE 2016 Electrostatics Joint Conference, Purdue University, Indiana, USA, 14th to 16th June 2016, Session R paper R3, (Received best paper & cash award: 3rd prize).
97. Alok Ranjan Verma and Subba Reddy B, "Tracking and Erosion Resistance of Silicon Rubber Samples Subjected to Environmental Conditions", IEEE 2016 Electrostatics Joint Conference, Purdue University, Indiana, USA, 14th to 16th June 2016. Session E, paper E3, (Received best paper & cash award: 3rd prize)
98. M Krishna Paramathma, D Devaraj & Subba Reddy B, "Artificial Neural Network based Static Security assessment Module using PMU Measurements for Smart Grid Application", IEEE Intl Conf on Emerging Trends in Engineering, Technology & Science, Tanjur, India, 24-26 Feb 2016.
99. Subba Reddy B, "Protection of digital telecom equipments and avionic modules against lightning surges", 2nd National Conference on Power Electronics, KLE College of Engg & Tech, Belgaum, Karnataka, India, 29th-30th Jan 2016. (Invited talk, 29th Jan16)
100. Subba Reddy B, "Recent Advances in EHV & UHV Power Transmission", National level training program on "Recent advances in High Voltage Engg", at College of Engg, Trivandrum, Kerala (4th to 8th Jan 2016). (Invited talk, 4th Jan 2016)
101. Subba Reddy B and Diptendu Chatterjee, "Analysis of High Temperature Low Sag Conductors used for High Voltage Transmission", 5th Intl Conference on Advances in Energy Research, Indian Institute of Technology Bombay, 15th – 17th Dec 2015, Paper No:105, pp 488-492.
102. Satish Naik B, Umanand L, and Subba Reddy B, "A Novel Grid Tied Multilevel Inverter for Photovoltaic Systems", 5th International Conf on Advances in Energy Research, Indian Institute of Technology Bombay, 15th – 17th Dec 2015. Conf. proc: Paper No: 352, pp-1423-1428.
103. Subba Reddy B and Rajalingam M, "Recurrence Plot Analysis for Evaluation of polymeric Insulators", 2nd IEEE Intl. Conf. on Condition Assessment Techniques in Electrical Systems (IEEE Catcon-2015), CPRI, Bangalore, Paper No: 68, pp. 217-221, 10th – 12th Dec-2015.
104. Shakthi Prasad D, Subba Reddy B, Alok R Verma, Desik Rengarajan & Veeresh Patil, "Influence of Corona Intensity on the Hydropobicity Recovery of Polymeric Insulating Samples", 2nd IEEE Intl. Conf. on Condition Assessment Techniques in Electrical Systems (IEEE Catcon-2015), CPRI, Bangalore, 10th – 12th Dec 2015, Paper No: 22, pp. 61-65,
105. Shakthi Prasad D and Subba Reddy B, "Understanding Corona Induced Degradation on Polymeric Insulators using Image Processing Technique", Indo-Swedish colloquium on Electro-technology, IIT Madras, 2-4 Dec 2015
106. Alok Ranjan Verma and Subba Reddy B, "Degradation Studies on Outdoor Composite Insulators subjected to Different Environmental Conditions", Indo-Swedish Colloquium on Electro-Technology, held at IIT Madras, during 2-4 Dec 2015.
107. Subba Reddy B, Shakthi Prasad D & Alok Ranjan Verma, "Tracking and Erosion Studies on Polymer Insulators used for HVAC and DC Transmission" 3rd ISNPEADM-2015 held at Reunion Island (Indian Ocean) 26th-29th Oct 2015.
108. Subba Reddy B, "Recent Advances in UHV Power Transmission and Distribution Systems", 1st International Conference on Power, Circuit and Information Technologies (ICPCIT-2015), RajaRajeswari College of Engg, Bangalore, Springer, 27th-28th April 2015 (Invited PAPER)
109. Subba Reddy B and Shakthi Prasad D, "Corona Ageing Studies on Polymer Insulators used for High Voltage AC & DC Transmission", 9th International conference on electrical & electronics insulating materials & systems, INSULEC-2015, (INVITED PAPER) 22nd – 23rd Jan 2015, Mumbai. (organized by IEEMA, Mumbai)

110. Subba Reddy B and Shakti Prasad D, "Computation of power released during corona treatment on polymeric insulators under ac and dc excitation", 7th Intl Conference on Applied Energy (ICAE-2015), paper No: 146, March 28-31st Abu-Dhabi.
111. Subba Reddy B, Alok Ranjan Verma and Satish Naik B, "Performance analysis of 1200 kV ceramic disc insulator string under normal and faulted conditions" 7th Intl Conference on Applied Energy (ICAE-2015), Paper No: 530, March 28-31st Abu-Dhabi.
112. Subba Reddy B & Alok Verma, "Pollution Performance of HVDC Insulator Strings Under Normal and Faulted Conditions", 6th IEEE Power India International conference-(PIICONF-2014) paper No: (1569998413), Tech session-3 (PS-3), New-Delhi, 5th - 7th Dec 2014.
113. Subba Reddy B & Diptendu Chatterjee, "Computation of Current and Temperature Distribution for High Temperature Low Sag Conductors", 6th IEEE Power India International conference, paper No: (1569998623), Tech session-3 (PS-3), New-Delhi, 5th - 7th Dec 2014.
114. Subba Reddy B, Shakti Prasad & Rajalingam M, "Studies on Corona Degradation of Polymeric Insulators", 6th IEEE Power India International conference-(PIICONF-2014) paper No: (1569998911), Tech session-3 (PS-3), New-Delhi, 5th - 7th Dec 2014.
115. Subba Reddy B, Ziyauddin Khan, Kartik Bhat and Balachandra Hegde "Computation of Electric Field Distribution near EHV/UHV Transmission lines", 9th IEEE International Conference on Industrial and Information Systems, Atal Bihari Vajpayee Indian Institute of Information Techn & Management, Gwalior, India, paper No: 48, session: S5. 5-17, Dec- 2014
116. Subba Reddy B and B Satish Naik, "Simulation of Potential distribution across 765kV Insulator string with defective discs under normal and contaminated conditions", paper presented at the IEEE/IAS Annual Meeting, Orlando, FL, during 6-11 October 2013.
117. Subba Reddy B and Abhishek Gupta, "Computation of Electric Stress across Ceramic and Composite Traction Insulators", paper presented at the IEEE/IAS Annual Meeting, Orlando, FL, 6-11 October 2013
118. Subba Reddy B, Alok Ranjan Verma, Sanjeevan Palit and Anwasha Panda, "Performance of High Voltage Protection cards used in Digital Telephone Exchanges", Paper No: 48, 1st IEEE Intl. Conf. on Condition Assessment Techniques in Electrical Systems (IEEE CATCON), Dec 2013, Jadavpur University, Kolkata, India.
119. Subba Reddy B, "Issues with Transmission line Insulators", National Seminar/workshop on "High Voltage Engineering", Dept. of Electrical & Electronics Engg, SSIT Tumkur, 25th – 27th April 2013 (Invited talk)
120. Subba Reddy B, Udaya Kumar & Debasish Nath, "Correlation between corona current and radio interference due to high voltage insulator string", IEEE 2012 Electrostatics Joint conference, held at Cambridge, Ontario, Canada, June 12-14, 2012.
121. Subba Reddy B, Satish Naik, Udaya Kumar and L Satish, " Potential and Electric Field distribution in a Ceramic disc Insulator String with faulty insulators", presented at 10th IEEE-ICPADM, CPRI, Bangalore. Paper ID:128, 24th - 28th July 2012,
122. Subba Reddy B and Udaya Kumar, "Performance of Telecommunication modules to 0.5 μ s-100kHz Ring Wave Surges", presented: 10th IEEE-ICPADM, CPRI, Bangalore. Paper ID: 194, 24th- 28th July 2012.
123. Subba Reddy B and Satish Naik B, "Simulation and Electric field across faulty Ceramic Disc Insulator String", 6th IEEE Intl. Conference on Adv Computing & Communication Technologies, ICACCT-2012, Panipat, Haryana. Conf. Proc. Vol. No. 2, pp 289-294, 03rd Nov. 2012

124. Subba Reddy B, Tanaya Chauduri and Monali Madhulita, "Study of Surface Potential and Electric Stress on Traction Insulators", 6th IEEE Intl. Conference on Adv Computing & Communication Technologies, ICACCT-2012, Haryana. Conf. Proc. Vol. No. 1, pp 311-316, 03rd Nov. 2012
125. Subba Reddy B, Monali Madhulita and Tanaya Chauduri, "Estimation of Electric Stress and Surface Potential for Traction Insulators", IEEE Fifth POWER INDIA International conference, session: 6, Conf. ID: PS-150, Paper ID :1569637719, 19-22nd Dec 2012, New-Delhi.
126. Subba Reddy B and Udaya Kumar, "A Hybrid Impulse Generator", National Symposium on Instrumentation (NSI-35), Visvesvaraya Technological University (VTU), Belgaum- Karnataka, January 7-9, 2011. Conf Proc: CE, Paper: 1, pp-40
127. Subba Reddy B and Udaya Kumar, "Investigations on the Corona performance of a Ceramic disc Insulators integrated with Field Reduction Electrodes", paper presented at the IEEE-IAS Annual meet held during Oct-2010 at Houston-USA
128. Subba Reddy B, Sultan, Monika, Pooja, Salma and Ravishankar, "Simulation of Potential and Electric Field for High Voltage Ceramic disc Insulators", paper presented at IEEE, 5th International Conference on Industrial & Information Systems (IEEE-ICIIS-2010), National Institute of Technology, Surathkal, Karnataka. pp. 526-531, July/Aug 2010
129. Subba Reddy B, A Kumar, Shasikala and Ravishankar, "Electric Field Modeling of Composite High Voltage Insulators," IEEE-INDICON- 2009, held at Dhirubhai Ambani Institute of Information & Communication Technology, Gandhinagar-Gujarat, 18th – 20th Dec 2009, (IEEE explorer: 10.1109/INDCON.2009.5409458, 8th Feb 2010).
130. Subba Reddy B and Udaya Kumar, "A Unique Artificial Pollution Laboratory at IISc" International Conference on Instrumentation, Organized by Instrument society of India at Cummins College of Engg, Pune-India, 21st -23rd Jan 2010, paper presented in Session:7, paper No:1.
131. Subba Reddy B and Udaya Kumar, "Modeling and Fabrication of a Portable Surge Generator", International Conference on Instrumentation, Organized by Instrument society of India at Cummins College of Engg, Pune-India, 21st – 23rd Jan 2010, presented in Session:7, paper No:6.
132. Subba Reddy B and Udaya Kumar, "Simulation of surface and volume stress for high voltage transmission insulators", 4th International Conference on Computer Applications in Electrical Engg Recent Advances, CERA-09, 19th - 21st Feb 2010, IIT- Roorkee, Session A3, Paper ID:539
133. Subba Reddy B and Udaya Kumar, "Field Reduction Electrodes for the possible improvement in the pollution flashover performance of Porcelain Insulators", IEEE, 9th International Conference on Properties & Applications of Dielectric Materials (ICPADM-2009), Harbin- China, 19th -23rd July 2009. Conf. Proc: Vol.2, pp-671-674
134. Subba Reddy B and Udaya Kumar, "A Novel Technique for Improving the Pollution Performance of High Voltage Ceramic Insulators", 8th International Seminar on Electrical & Electronic Insulating Materials & Systems INSULEC-2009, 18th – 20th February 2009, Bangalore. Session V, pp V-23 - V-30. [Received appreciation certificate and cash prize]
135. Subba Reddy B and Udaya Kumar, "Potential and Electric Field Profiles for Transmission line Insulators", Fourth IASTED Intl. Conference on Power and Energy Systems (Asia-PES 2008) Langkawi, Malaysia, April 2 - 4, 2008, paper No: 606-115.
136. Subba Reddy B and Udaya Kumar, "Electric Field Profiles for EHV Porcelain Insulators", paper presented at MCDES-2008, an IISc Centenary International Conference, held at IISc, Bangalore, 27th -31st May 2008. paper ID 151

137. Subba Reddy B and Udaya Kumar, "An innovative approach to improve pollution flashover performance of transmission line insulators", 32nd National Systems Conference held at IIT Roorkee, 17th-19th Dec 2008, paper No: 117, pp 219-224. [Received best paper presentation award]
138. Subba Reddy B, "Pollution Flashover Studies on High Voltage Ceramic Insulator Strings", Proc of 11th International Conference on Electrical Engineering, 17th May 2007, jointly organized by IEEE & Czech Technical University at Prague, Session: PE, paper: 1, pp 1-6. [best paper presentation /cash prize & Diploma]
139. Subba Reddy B, "Transmission Line Insulators – their Issues" Invited talk, National Level Symposia on "Emerging Trends in High Voltage Engineering", 9th –10th March 2007, UBTD College of Engg, Davangere, Kuvempu University- Karnataka.
140. Subba Reddy B, "Testing & Evaluation of Outdoor Ceramic Insulators" Invited talk, Three days National Level workshop on "Recent Advances in High Voltage Measurements and Testing Techniques", 22nd to 24th March 2007, Malnad College of Engineering, Hassan – Karnataka.
141. Subba Reddy B, "Power Outages", Proc of 2nd Annual Symposium on Trends in Electrical - electronics Communication and Information Technologies (TECIT –2004), pp133-138, 26th& 27th Feb 2004, CEDT, IISc, Bangalore.
142. B Subba Reddy, "Pollution induced flash-over phenomena across ceramic insulators", Trends in Electrical & electronics, Communication and Information Technologies, TECIT-2003, Dept. of Computer Science & Automation, IISc, Bangalore, April 9th 2003.
143. G R Nagabhushana and Subba Reddy B, "A Basic Approach To The Phenomena of Pollution-Induced Flashover of Cap and Pin Ceramic Insulator Strings", Paper No:P.12.11, presented at 13th International Symposium on High Voltage Engg, (ISH), 25th - 29th August 2003, Delft, Netherlands (Organized jointly by CIGRE & IEEE).
144. Subba Reddy B and Nagabhushana G R, "A Fundamental Study of Pollution Flashover Phenomena", Proc. of IEEE 6th International Power Engineering Conference (IPEC-2003), 27th to 29th Nov 2003, Nanyang Technological University, Singapore, Vol.1, pp 254-259.
145. Subba Reddy B and Nagabhushana G R, "A Study of Potential distribution on clean and polluted insulators", Proc. of IEEE 6th International Power Engineering Conference (IPEC-2003), 27th to 29th Nov 2003, NTU, Singapore, Vol.2, pp 880-885.
146. Subba Reddy B and Nagabhushana G.R, "A Portable Layer Conductivity Meter", National Symposium on Instrumentation (NSI-27), Paper No: CP-127, pp 89-90, 27th to 29th November 2002, Bharathiar University, Coimbatore (India).
147. Subba Reddy B, "A Study on Pollution Induced Flashover Phenomena", Eleventh IEEE Annual Symposium, pp-105-110, 22nd to 23rd November 2002. Bangalore (India).
148. M. Jayaraju, P.S.C. Nair, B.R. Prabhakar & B Subba Reddy, "Biological & environmental effects of high voltage power lines & shielding for live line maintenance.", 4th National Seminar on Modern Trends in Power Engg & Development, pp. 38-45 Trivandrum, 2000.
149. Subba Reddy B and Naidu M S, "Modeling of Impulse Current generator using Pspice", 24th National Symposium on Instrumentation, paper No: CP-002, pp 1-2, 2nd- 5th Feb 2000, Goa University, India.
150. M Jayaraju, PSC Nair, B R Prabhakar and B Subba Reddy, "Modeling of Impulse Voltage generator using SIMULINK", Proc of IEEE Winter meeting, Westin Hotel, Raffles City Convention Center 23rd to 27th January 2000, Singapore

151. M Jayaraju, PSC Nair, Subba Reddy B and B R Prabhakar, "Breakdown Characteristics of Insulating assembly under oscillatory switching impulse voltages", IEEE Intl Conference on Communication, Control signal processing CCSP-2000, pp 327-330, July 25th to 28th 2000, Bangalore India.
152. Subba Reddy B and Naidu M S, "A Laboratory Study of Radio noise and Corona on HVDC Insulators", Proc of 6th International Seminar on Electrical & Electronic Insulating Materials & Systems (IEEMA, INSULEC-2000), Session IV paper 3 pp 11-13, 23rd to 24th November 2000, Hyderabad, India.
153. M Jayaraju, PSC Nair, Subba Reddy B and B R Prabhakar, "Effect of Oscillatory Switching Impulses in the non-uniform Air insulation systems", Proc of Eleventh National Power Systems Conference, NPSC-2000, Vol 2, pp 457-462, Dec 2000, Indian Institute of Science, Bangalore-India
154. M. Jayaraju, P.S.C. Nair, B.R. Prabhakar and B. Subba Reddy, "Simulation of impulse generator using SPICE", Proc. of 15th National Convention of Electrical Engineers, pp 99-105, Trivandrum, 1999.
155. Subba Reddy and M S Naidu, "Experimental test setup for conducting visible discharge and radio noise measurements on 400kV power connectors/clamps, 22nd National Systems Conference, pp 465-467, 11th to 13th Dec 1998, NIT-Calicut, Kerala, India.
156. Subba Reddy B et al, "Power frequency voltage distribution on insulator strings up to 400kV", National Seminar on High Voltage Measurements, Testing and Calibration organized by Institute of design of electrical measuring instruments (IDEMI) 16th – 17th Oct 1997, pp 207-209, Mumbai, India.
157. Subba Reddy B, et. al, "Radio interference voltage and visible discharge measurements on insulator strings of 400kV and above systems", National Seminar on High Voltage Measurements, Testing and Calibration organized by Institute of design of electrical measuring instruments (IDEMI) 16th – 17th Oct 1997, pp 126-129 at Mumbai, India.

TECHNICAL REPORTS

1. Investigations into the circumstances leading to the Smoke/Fire/Explosion related to Electric Scooter (2w), Ref: N0-RT-11036/44/2022-MVL dated 28th March & 13th April 2022, Technical Report submitted to Ministry of Road Transport and Highways (HVL Section), Government of India, Transport Bhawan, 1, Parliament Street, New-Delhi-110001, May 2022, 26 pages.
2. Report on Safety Standards for Battery and related Components of Electric Vehicles, Ref: F.No. RT.11036/60/2022-MVL dt. 05-5-2022), Technical Report No. SS-MoRTH/EV/2022, submitted to Ministry of Road Transport and Highways (HVL Section), Government of India, Transport Bhawan, 1, Parliament Street, New-Delhi-110001, July 2022, 12 pages.
3. Investigations into the circumstances leading to the Fire Accident in Tata Nexon EV (4W), Ref: F.No. RT-11036/44/2022-MVL dated 23rd June 2022, Technical Report submitted to Director (MVL), Ministry of Road Transport and Highways (HVL Section), Government of India, Transport Bhawan, 1, Parliament Street, New-Delhi-110001, August 2022, 25 pages..
4. Subba Reddy B, "Evaluation of Field Aged 110kV Silicon Rubber Insulators", Submitted to M/s Bana Engineering Pvt Ltd, Hyderabad, Rep. No: CP 9247/0403/2021, Dec 2021, 20 pages.
5. Subba Reddy B, "Failure Analysis of Field aged Composite Transmission Insulators", (132/400kV) submitted to M/s Adani Transmission Limited, Ahmedabad, Gujarat, CP 9303/0404/2021, Feb 2022, 22 pages.
6. Subba Reddy B, "Report on the Performance Evaluation of Solar Battery Fence Energizer Rep. No: SRB/HV-EE-IISc/2020/01M submitted to Sub Inspector of Police, Rural Police Station Kushalnagar, Karnataka, 8 pages.
7. [Subba Reddy B](#) & Umanand L, "Validation of Technical Proposal on the OHE 25kV AC Traction Interference with 750V DC Traction System", Report submitted to Rail Infrastructure Development Company (Karnataka) Ltd (K-RIDE) Bangalore-560010, Rep No: CP 9269/0403/2021, 10th Nov 2021, 15 pages.

8. [Subba Reddy B](#) & L Umanand, "Design and Engineering review of the smart infrastructure Development for Electrical works of Nadaprabhu Kempegowda Layout, developed by M/s L & T for Bangalore Development Authority, Report Ref: CP 8060/0403/ June 2020.
(Design and Engineering review & Approval of Electrical Single Line Diagrams, Cable Sizing Calculations & Layouts for (1) Sewage Treatment Plants, (2) Sewage Pumping Station, Electrical Power Distribution System: for 11kV RMU, Feeder Pillars, (3) HT & LT cable Routing Layouts, (4) Smart Street Lighting System, (5) Lightning protection for structures and HV Substation etc.)
9. [Subba Reddy B](#), Technical report: "Recommmendations for protection of Observatory, equipments and electronic gadgets against Direct/Indirect lightning strike at Vainu Bappu Observatory (VBO)", Indian Institute of Astrophysics at Kavalur, TN. Ref: IIA/Per Div/Conslt/2020/3033, IISc approval: R(IA)P.V.467(S)/202, March 2020, 06 pages.
10. Praveen Ramamurthy & [Subba Reddy B](#), "Assessment of effect of pollution and residual life evaluation on various components used for 25kV overhead Traction line", Rep. No: DMRC0001/IISc/2018-19, submitted to M/s Delhi Metro Rail Corporation, New Delhi, Jan 2020, 83 pages
11. [Subba Reddy B](#), "Power frequency flashover and withstand investigations on 28kV Composite Insulators M/s. Olectra Greentech Ltd, Hyderabad, CP 8205/0403/ March 2019, 08 pages
12. [Subba Reddy B](#), "Investigations on the Degradation and Root Cause Analysis on the 750VDC - GRP/BMC insulators used for Railway Traction", Rep: CP 7964/0403/18 submitted to Bangalore Metro Rail Corporation Ltd., Bangalore, India, June/July 2018, 12 pages
13. [Subba Reddy B](#), "Tracking and Erosion Investigations on 28kV longrod composite insulators", CP.8001/0403/18, submitted to M/s Goldstone Infratech Ltd, Secunderabad-India, July 2018. Report No: HVL/EE/SRB/GIL/CP.8001-1, 08 pages
14. [Subba Reddy B](#), "Tracking and Erosion Investigations on composite insulators", Rep: CP.7738/0403/17, submitted to M/s Goldstone Infratech Ltd, Secunderabad, 2017, 16 pages.
15. [Subba Reddy B](#), "Technical advice in the development of High Voltage Equipments", CP.7403/0403/15-269, submitted to M/s Rectifiers & Electronics, New-Delhi, August 2016.
16. [Subba Reddy B](#), "Technical advice on development of HTLS substation hardware", Rep: CP.7136/0403/14-510, submitted to M/s IAC Electricals Kolkata, March 2015.
17. Udaya Kumar & [Subba Reddy B](#), "Evaluation of PCB intended voltage sensors for HV ac/dc applications", Rep: CP.7107/0403/14-463/A, submitted to M/s Electrohms Pvt Limited, Bangalore, Sept 2014, 08 pages
18. [Subba Reddy B](#), "Technical advice and design investigations on HVDC disc insulators", Rep: CP.7142/0403/14-513 M/s Aditya Birla Insulators Kolkata, June 2014, 05 pages
19. [Subba Reddy B](#), "Technical advice on the performance of ceramic disc insulator strings", Rep: CP.6951/0403/2013/599, submitted to M/S BHEL-EPD, Bangalore, Mar 2013, 14 pages
20. [Subba Reddy B](#), "Technical advice on the performance of ceramic disc insulator strings", Rep: CP.6985/0403/2013/99, submitted to M/S BHEL-EPD, Bangalore, May 2013, 04 pages
21. U Ramamurthy & [Subba Reddy B](#), "Tech Advice on development of HTLS Transmission accessories", CP 6879/0509/12-369, submitted to M/s IAC Electricals Kolkatta, Sept 2013, 08 pages.
22. Subba Reddy B & Udaya Kumar, "Performance evaluation and technical advice on 400kV High Current/High temperature conductor accessories & Semi-Strain Assembly", submitted to M/s PREFORMED LINE PRODUCTS, THAILAND, Report No: HVL/EE/CP-6503/SRB-UK/PLP/2011/01-06, March 2011, 45 pages.

23. Subba Reddy B & Udaya Kumar, "Developmental tests on 765kV ACSR Zebra Conductor of Hexagonal bundle configuration", submitted to M/s Anam Electrical Manufacturing Co., Kadiyam-East Godavari Dist, AP-INDIA, Report No: HVL/EE/CP-6476/0403/2010-01, March 2011, 10 pages
24. Subba Reddy B & Udaya Kumar, "Technical advice on safety precautions for High Voltages for Di-electric Test bench" manufactured by M/s Bosch Ltd, Hosur Road, Bangalore, Report No: CP. 6569/0403/2011-180, May 2011, 6 pages.
25. Udaya Kumar & Subba Reddy B, "Performance evaluation (High Voltage Tests) on Conduit Assembly (fuel pipes) used for LCA", submitted to M/s Hindustan Aeronautics Ltd, Bangalore, Report No: HVL/EE/UK-SRB/ HAL/CP. 6349/2010, Oct 2010, 10 pages
26. Subba Reddy B & Udaya Kumar, "Performance of Ceramic Disc Insulators Integrated with Novel Field Control Electrodes/Elements", submitted to M/s Aditya Birla Insulators, Rishra-Kolkata, Report No: ABIO/EEE/SUBR/001- Dec 2010, 20 pages.
27. Subba Reddy B & T S Ramu, "Advice on Lightning Impulse Voltage performance for online traps as per IEC-60353", submitted to M/s Areva T & D Hosur. Report No: HVL/EE/SRB-TSR/AREVA/CP.6199/0403/2009, Oct 2009, 13 pages.
28. Udaya Kumar & Subba Reddy B, "Lightning compatibility tests on new generation avionic packages", submitted to M/s VSSC, ISRO, Veli, Trivandrum, Report No: CP: 6091/0403/2009/877, (ISRO Ref: MVIT-SEIG-VEID-199-09, Issue.1 April 2009) 65 pages
29. Subba Reddy B & Udaya Kumar, "Evaluation of Lightning & over voltage protection of C-Dot's High Voltage protection(HVP) cards used in RAX/MAX subscriber Lines in digital telephone exchanges", submitted to M/s Centre for Development of Telematics, CDOT-Bangalore, Rep No: HVL/EE/SRB-UK/CP. 6107/0403/C-DOT/2009, July 2009, 33 pages
30. Subba Reddy B & T S Ramu, "Technical advice, Evaluation of Online /Wave traps & data evaluation as per IEC-60353", submitted to M/s Areva T & D Hosur, Report No: HVL/EE/SRB-TSR/AREVA/CP.6126/0403/2009, July 2009, 17 pages
31. Udaya Kumar & Subba Reddy B, "Experimental Investigations on the Corona and RIV Performance of 800kV Composite Insulator Strings", submitted to M/s SIEMENS Ltd, Gurgaon, Report No: HVL/EE/UK-SRB/ SIEMENS/CP. 6198/2009, Dec 2009, 24 pages
32. Udaya Kumar & Subba Reddy B, "Evaluation of FRP Cylinder & laminated sheet for Impulse strengths used in LPS", submitted to M/s Satish Dhawan Space Center SHAR, Sriharikota. Report No: CP.5560/0403/2006/1088, Dec 2006, 08 pages.

OTHER PUBLICATIONS: Lecture notes/CDs and other Education material developed: **06**

PATENTS

[1] Subba Reddy B and Udaya Kumar, "An Insulator comprising field reduction electrodes to improve pollution flashover strength and methods thereof", Indian Patent Application No.: 923/CHE/2009, filing date: 21st April 2009, **granted** on: **8th March 2017**.

[2] Application Submitted in process.

RESEARCH GUIDANCE

PhD students

Name of the student	Date of joining	Date of submission/ Graduation	Present Position with affiliation (organization name, place, and country) after graduation
Shakthi Prasad D, PhD (EE)	Aug-2013	June-2017	Asst. Professor, Indian Institute of Technology, Goa, India
Satish Naik B, PhD (ICER-IISc) (Joint guidance)	Aug-2014	Sept-2017	Asst. Professor, Indian Institute of Technology, Dharwad, India
Alok R Verma, PhD (EE)	Aug-2014	Dec-2018	Asst. Professor, Indian Institute of Technology, Kanpur, India
Gautam A Raiker, PhD (ICER-IISc) (Joint guidance)	Aug-2017	May 2022	Hardware Engineer (Research) Steradian Semiconductors, USA. (In Bangalore).
Sounak Nandi (EE), PhD	Aug-2017	Jan-2023	Perusing Post-Doc
Rahul Chakraborty (EE) MSc.Engg	Aug-2015	June 2017	pursuing PhD at North Caroline State Univ, USA

ME/M.Tech Project Students -Graduated

Name of student	ME/M.Tech. project	Year of Graduation
1. Satish Naik B	ME	2012
2. Abhishek Gupta	ME	2013
3. Alok R Verma	ME	2014
4. Diptendu Chatterjee	ME	2015
5. Rajalingam M	ME	2015
6. Maj. Dinesh Sharma	MTech	2018
7. Lt Col Manoj Negi	MTech	2019
8. Maj Gaurav Mitra	MTech	2019
9. Sqd Ldr Shreyas S	MTech	2020
10. Pranjal Gupta	MTech	2021
11. Deep Prakash	MTech	2021
12. Jangam Reddy Rajasekhar	MTech	2022

PhD/MTech Students on Roll

SI No	Name of the Student	Program
1	Rohith (Interdisciplinary center for Energy Research (ICER-IISc)	PhD
2	Ashwin K (PMRF Scholar), ICER	PhD
3	Atmanandamaya, ICER	PhD
4	Anchal Singh Thakur (PMRF Scholar), ICER	PhD
5	Shubam Agarwal, ICER	PhD
6	Nithin Reddy G (H V lab , Dept of EE, IISc)	PhD
7	M-Ramez Halloum (H V Lab, Dept of EE, International student)	PhD
8	Siddanth Shekar (High Voltage lab , Dept of EE, IISc)	MTech

LIST OF AWARDS, HONORS, AND DISTINCTIONS SECURED BY STUDENTS

Name of student	Award/Honor/distinction secured by the student	Year
Nithin Reddy G, PhD	Best paper award at IEEE-IAS Joint Intl conf on Electrostatics held Univ of North Carolina, USA, 12-15 th June 2022	2022
Nithin Reddy G, PhD	Best paper award at the ICEEE-2022 Intl conference, sponsored by Springer Nature and University of Malaya, Malaysia,	2022
Anchal Singh Thakur PhD	Best paper award at the ICEEE-2022 Intl conference, sponsored by Springer Nature and University of Malaya, Malaysia,	2022
Pranjal Gupta, MTech	POSOCO National power system award for best Master's thesis in Electrical Engg.	2021
Maj. Gaurav Mitra (M.Tech)EE	POSOCO National power system award for best Master's thesis in Electrical Engg.	2020
Gautam Raikar*(PhD),	Best poster presentation award, at IEEE-ICIIS 2018, Conference held at IIT Ropar, Dec 2018.	2018
Gautam Raikar* (PhD)	Prof. Subhasis Nandi Student Travel Award for IEEE-PEDES conference held at IIT Madras during Dec 2018	2018
Rahul Chakraborty (MSc Engg)	"The Hay Medal" for Best Master's Thesis in Electrical Engg, awarded by Indian Institute of Science, Bangalore	2018
Alok Ranjan Verma (PhD)	Asian Development Bank fellowship for attending 12th IEEE ICIIS 2017 at Univ of Peridiyne, Srilanka,	2017
Alok Ranjan Verma (PhD)	Best paper presentation award, at the IEEE-UPCON Conference, held at Mathura, India.	2017.
Rahul Chakraborty (MSc Engg)	Best MSc Engg Poster award, at the EECS-IISc, annual Symposium.	2017
Alok Ranjan Verma (PhD)HV-EE	Best paper award (3 rd prize) at IEEE-IAS conference, held at PURDUE University, 13 th – 17 th June 2016	2016
Shakthi Prasad D (PhD)HV-EE	Best paper award (3 rd prize) at IEEE-IAS conference, held at PURDUE University, 13 th – 17 th June 2016	2016
Rahul Chakraborty (MSc Engg)	Best paper award (2 nd prize) at IEEE-IAS conference, held at PURDUE University, 13 th – 17 th June 2016	2016
Alok Ranjan Verma (M.E)	POSOCO National power system award for best Master's thesis in Electrical Engg.	2014

* Joint guidance with Prof Umanand at ICER-IISc.

Mentoring of Teachers/Students/research interns (Summer Research Fellows)

During the period under review (2012 till date)	No of Summer Research fellows mentored
UGC and IAS Summer Research fellows (SRF)# sponsored by Joint Academy of Sciences	
SRF-Teachers (completed)	04
SRF-Students (completed)	30
Summer internship (in Progress)	04

- UGC: Univ grants Commission, fellows, IAS-SRF: Indian (Joint) Academy of Sciences, summer Research fellows

Some Important RESEARCH PROJECTS (in progress/completed)

Sl. No	Title of the project	Funding Agency	Approx Value of project (Rs)	Duration	Investigator / Co-investigator
1	Novel multi-level inverter topology for grid integration of Solar Photovoltaic Cells	MNRE-GOI	94.60 Lakhs	2020-2022	Subba Reddy B & L Umanand
2	Development of Multiple stress aging facility for Polymeric Insulators for HVAC & DC transmission	DST-SERB	42.0 Lakhs	2017-2021	Subba Reddy B
3	Development of a Scalable & Modular grid interactive units for Solar PV applications	Indo-UK (UKICERI)	100.00 Lakhs	2017-2021	Subba Reddy B & L Umanand
4	Electrical Modelling of Light Combat Aircraft Mk-2	ADA, Bangalore	120.00 Lakhs	2016-2019	Udaya Kumar & Subba Reddy B
5	Assessment of pollution & Residual life for components of 25kV Traction line	Delhi Metro Rail Corpn, New-Delhi	26.00 Lakhs	2018-2019	Praveen Ramamurthy & Subba Reddy B

International FUNDED PROJECTS

Sl No	Title of the project	Funding Agency	Approx Value of project (Rs)	Duration	PI/Co-PI
1	Development of a Scalable & Modular grid interactive units for Solar PV applications	UK-India clean Energy Research Institute (UKICERI)	Approx 100.00 Lakhs (Total 325 lakhsto IISc)	2017-2021	Subba Reddy B (PI) Umanand L (Co-PI)
2	Switched Capacitor Converters for PV/battery Grid Interfaces & HVDC	Joint UK India Clean Energy Center (JUICE) Flexible Funding	Approx: 105.00 lakhs (£123,194)	2019-2021	Andrew Cross (PI) (Loughborough-UK) and Subba Reddy B (Co-PI) L Umanand (Co-PI)

CSR Funded Projects in progress/Completed

Sl No	Funding Agency	Project details	Project value
1	Hindustan Aeronautics Ltd.	Establishment of 1MW Solar Plane, EV & Renewable Training Facility	672 Lakhs (2021-2022)
2	Hindustan Aeronautics Ltd.	Establishment of Next generation smart grid facility	245 Lakhs (2022-2023)

Consultancy projects with the industry

Sl No.	Details/Company	PI/Co-PI
16	Wireless over wire/HV conductor Launcher project for M/s Intel Technology India, Bangalore	Subba Reddy B & Umanand L- DESE
15	Failure Analysis of Field aged Composite Transmission Insulators (132/400kV) for M/s Adani Transmission Limited, Ahmedabad, Gujarat (2022)	Subba Reddy B
14	Performance Evaluation of Field Aged Polymer Insulators for M/s Bana Engineering Services, Hyderabad (2021) for TATA Power	Subba Reddy B
13	Validation of Technical Proposal on OHE 25kV AC Traction interference with 750V DC traction system, for M/s Rail Infrastructure Development Company (Karnataka) Ltd (K-RIDE) (2021)	Subba Reddy B Umanand L
12	Power frequency Flashover and withstand investigations on 28kV Composite Insulators M/s. Olectra Greentech Ltd, Hyderabad, March 2019. (Completed March 2019)	Subba Reddy B
11	Design and Engineering review of the infrastructure Development for Electrical works of Nadaprabhu Kempegowda Layout, developed by M/s L & T for Bangalore Development Authority, (July 2018-June 2020)	Subba Reddy B & Umanand L-DESE
10	Tracking and Erosion Investigations on 28kV longrod Composite Insulators, M/s Goldstone Infratech Ltd, Secunderabad-AP, (May-July 2018)	Subba Reddy B
9	Investigations on the degradation and root cause analysis on the 750VDC GRP/BMC insulators used for traction, M/s Bangalore Metro Rail Corpn, (March - July 2018),	Subba Reddy B
8	Tracking and Erosion Investigations & Technical advice on composite insulators, M/s Goldstone Infratech Ltd, Secunderabad-AP, (April-Oct 2017)	Subba Reddy B
7	Technical advice on the development of HV equipments, M/s Rectifier & Electronics, New Delhi, (Sept 2015 to Aug 2016),	Subba Reddy B
6	Technical advice and experimental investigations on HVDC disc insulators, M/s Aditya Birla Insulators, Kolkatta, (April-June 2014)	Subba Reddy B
5	Technical advice on the development of HV conductor hardware/accessories, M/s IAC Electricals Pvt Ltd, Kolkatta, (April 2014 to March 2015).	Subba Reddy B
4	Technical advice on the development of High Temperature Low sag conductor accessories, M/s IAC Electricals Pvt Ltd, Kolkatta, (Oct 2012 to Sept 2013),	U Ramamurthy & Subba Reddy B
3	Evaluation of PCB intended voltage sensors for HV ac/dc applications, sponsored by M/s Electrohms Private Limited, Bangalore, India, (April-Sept 2014),	Udaya Kumar & Subba Reddy B
2	Technical advice on the performance of Ceramic Disc Insulator strings, BHEL EPD Bangalore, (May 2013),	Subba Reddy B
1	Technical advice on the performance of Ceramic Disc Insulator strings, BHEL EPD Bangalore, (March 2013),	Subba Reddy B

HIGHLIGHTS OF INDUSTRY INTERACTION

Since more than two decades have established excellent interactions with several Industries/ utilities, successfully completed more than **130** test /consultancy projects for various industries/utilities in India and abroad during 2006-2011, various type testing and certification on various High Voltage components as per International standards were conducted, some of Type tests on 800kV Insulator strings and some special tests on surge arresters, line hardware, bus-bar, power connectors on high voltage equipment's were conducted for the first time during this period.

Further, ongoing research work on composite Insulators, surge arresters, conductors & research on solar PV is directly relevant to the industry, utilities and societal needs. Contribution towards industrial consultancy in providing technical advice on the product development, establishment of test facility etc, has immensely benefitted several manufacturing industries and utilities in the Country and abroad.

Entrepreneurship activities

INCUBATE Training – IIT Madras



Type of Entrepreneurship activity (e.g., incubating a company)	Details of the activity	Date and period	Collaborator(s) is any
ASHRITA ENERGY INTELLECS PRIVATE LIMITED is an incubated company, at SID, IISc incorporated under the Companies Act, 2013 by the Registrar of Companies, MINISTRY OF CORPORATE AFFAIRS, GOVERNMENT OF INDIA. Corporate Identification Number is (CIN) U31900KA2022PTC15779.	The company aims to manufacture novel IoT high voltage Insulator, hardware products for transmission, distribution and traction systems also develop IoT sensors for transmission, distribution and for renewable energy / EVs etc.	Since 10 th Feb 2022	Industry

TEACHING

Course No	Title of the course/ No. of Credits	Faculty
E5 – 201 (Aug-Dec)	Production, Measurement and Application of High Voltage (2:1) (Core)	B S Rajanikanth & Subba Reddy B
E5 - 232	Advances in Electric Power Transmission (2:1, May-June) (Elective)	Subba Reddy B
ER -203	Renewable Energy Sources, Grid Integration and Distribution (3:1) (Elective) (Interdisciplinary center for Energy Research)	Praveen Ramamurthy, Umanand and Subba Reddy B
CCE - 02:	Energy Sources, Power Transmission & Distribution (2:C, Aug-Dec) thro CCE-IISc,	Subba Reddy B
CCE - 09:	Introduction to High Voltage Engg. (2:C, Aug-Dec) offered thro CCE-IISc,	Subba Reddy B
Online course	Advances in UHV Transmission and distribution NPTEL / MOOC,	Subba Reddy B
Online course	Recent advances in Transmission Insulators NPTEL/MOOC	Subba Reddy B
Online course	Advances in UHV Transmission and distribution NPTEL / MOOC, (Re-Run)	Subba Reddy B
Online course	Recent advances in Transmission Insulators NPTEL/MOOC (Re-Run)	Subba Reddy B
Online course	Advances in UHV Transmission and distribution NPTEL / MOOC, (Re-Run)	Subba Reddy B
Online course	Recent advances in Transmission Insulators NPTEL/MOOC (Re-Run)	Subba Reddy B
Online course	Advances in UHV Transmission and distribution NPTEL / MOOC, (Re-Run)	Subba Reddy B
Online course	Recent advances in Transmission Insulators NPTEL/MOOC (Re-Run)	Subba Reddy B

NPTEL: National Programme on Technology Enhanced Learning, MOOC: Massive open online course

List of books and other education material developed

Education material developed	Authors	Date of publication	Mode of publication
Course material on Training program on "SOLAR ENERGY SYSTEMS"	Subba Reddy B	Jan 2021	online
Course material containing lectures on "SOLAR ENERGY SYSTEMS"	Subba Reddy B & Praveen Ramamurthy	Jan 2018	CD and online
Course material on "Condition Monitoring, Diagnostics & Testing of High Voltage Apparatus"	Subba Reddy B	July 2017	CD (CCE IISc)
Course material on "Recent Advances in UHV Transmission & Distribution"	Subba Reddy B	Dec 2016	CD (CCE IISc)
Course material on "Photovoltaic's & Applications to Smart Grid"	Subba Reddy B & Umanand L	Jan 2016	CD (CCE IISc)
NPTEL/MOOC – Video lectures: 20 Hours: Advances in UHV Transmission and distribution			
NPTEL/MOOC – Video lectures: 10 Hours: Recent advances in Transmission Insulators			

Skill Training Courses Conducted:

Sl No	Training programs	Program schedule	Participants	Course Co-ordinator's
1	IoT and embedded applications	7 th to 11 th Dec 2020	HAL: 08 Others:29 Total: 37	Prof Umanand L Dr. T V Prabhakar
2	Augmented and Virtual Reality	20 th to 26 th Dec 2020	HAL: 09 Others: 08 Total: 17	Dr. Pradipta Biswas
3	AI for UI/UX Design	30 th Dec 2020 to 5 th Jan 2021	HAL: 14 Others: 07 Total: 21	Dr. Pradipta Biswas
4	Solar Energy Systems	4 th Jan to 8 th Jan 2021	HAL : 03 Others: 21 Total: 24	Dr. Subba Reddy B
5	Multicopter Drones	22 nd Feb to 26 th Feb 2021	HAL: 14 Others: 20 Total: 34	Dr. S N Omkar
6	IoT Systems (OFF LINE MODE)	5 th March 2021	HAL: 22 Total: 22	Dr. T V Prabhakar Prof. Umanand L Dr. Subba Reddy B
7	Training Program on IoT & Electronics (INDIA@75 Mission)	17 th March 2021	HAL: 25 Others:20 Total: 45	Dr. Subba Reddy B Prof. Umanand L

In the first cohort **Seven Training Programs** were conducted during Sept 2020 till March 2021, a total of **200 participants** benefited from the training. During the second cohort (Sept 2021 to Dec 2021) **Eight training programs** were planned and conducted. A total of about **705 participants** benefitted from the training. The details of the training courses conducted during the second cohort as given below:

Sl No	Training Programs conducted	Schedule	Participants	Course Coordinators
1	Renewable Energy- Applications (focussing on Atmanirbhar Bharat under India@75)	1st September 2021	HAL: 200 Others: 18 Total: 218	Dr. Subba Reddy B Prof. Umanand L
2	Design and Practical Implementation of a Printed Circuit Board (PCB)	28 th – 30 th Sept 2021	HAL: 105 Others: 15 Total: 120	Prof. Umanand Dr Subba Reddy B Ashwin K
3	IoT and Embedded Applications	8 th -9 th Oct 2021	HAL: 96 Others: 15 Total: 111	Dr T V Prabhakar Prof. Umanand L
4	Design of Fixed Wing VTOL UAV	23 rd & 24 th Oct 2021-	HAL: 51 Others: 25 Total: 76	Dr. S N Omkar
5	Introduction to Advanced Polymer Composite Material	18 th -19 th Nov 2021	HAL: 45 Others: 05 Total: 50	Dr. M R Bhat Dr. G Narayan Naik
6	Solar Energy Systems	3 rd to 5 th Dec 2021	HAL: 50 Others: 05 Total: 55	Dr. Subba Reddy B
7	AI for UI/UX Design	6 th -12 th Dec 2021	HAL: 23 Others: 10 Total: 33	Dr. Pradipta Biswas
8	Augmented and Virtual Reality	13 th – 19 th Dec 2021	HAL: 33 Others: 10 Total: 43	Dr. Pradipta Biswas

Sl No	Training Programs conducted	Schedule	Participants (Approx)
1.	Basics of Lightning, Lightning Protection to tall structures & Electronic equipment's	20 th July 2022	Participants: 25 Engineers/Scientific Staff from Indian Institute of Astrophysics, Bangalore
2	Do Drones	16 th – 18 th Nov 2022	Participants: 100 Officials of Ministry of Electronics & IT, Govt of India, Faculty, students, Engineers, unemployed
3	Transportation, Electric Vehicles – Issues, Standardization	9 th to 13 th Jan 2023	Participants: 08 Senior Officials of Ministry of Road Transport & Highways, Govt of India
4	Technical Talk on Advanced Skill Training for Electrical Engineers	16 th Jan 2023	Participants: 200+ Electrical Engineers, BESCO @ KEB Engineers Association Auditorium Bangalore.
5	AI for UI/UX Design	13 th – 17 th Feb 2023	Participants: 25 Faculty, students, Engineers, unemployed
6	Augmented and Virtual Reality	20 th – 24 th Feb 2023	Participants: 25 Faculty, students, Engineers, unemployed
7	3-D Printing – Applications PCB Designing & Technical Content Writing	18 th - 19 th March 2023	Participants: 25 Faculty, students, Engineers,

List of Education/short term courses organized

Course	Sponsoring agency	Duration	Target group	Funding
SOLAR ENERGY SYSTEMS (Praveen R & Subba Reddy B)	CCE-IISc	1 st – 5 th July 2019	Faculty	AICTE-New Delhi
SOLAR ENERGY SYSTEMS (Subba Reddy B & Praveen R)	M/s Bharat Dynamics Ltd, Hyderabad.	19 th to 23 rd March 2018	Faculty, Industry, utilities, self unemployed /	CSR funding
SOLAR ENERGY SYSTEMS (Subba Reddy B & Praveen R)	M/s Bharat Dynamics Ltd, Hyderabad.	19 th to 23 rd Feb 2018	Faculty, Industry, utilities, unemployed	CSR funding
SOLAR PHOTO VOLTAIC SYSTEMS (Subba Reddy B & Praveen R)	M/s Bharat Dynamics Ltd, Hyderabad.	22 nd to 26 th Jan 2018	Faculty, Industry, utilities, unemployed	CSR funding
Condition Monitoring Diagnostics & Testing of HV Apparatus (Subba Reddy B)	CCE-IISc	3 rd -7 th July 2017	Faculty, Industry, utilities, unemployed	AICTE-New Delhi
Recent Advances in UHV Transmission & Distribution (Subba Reddy B)	CCE-IISc	19 th - 23 rd Dec 2016	Faculty, Industry, utilities, unemployed	AICTE-New Delhi
Photovoltaics & Applications to Smart Grid (Subba Reddy B & Umanand L)	CCE-IISc	18 th - 22 nd Jan 2016	Faculty, Industry, utilities, unemployed	AICTE-New Delhi

SERVICE Provided

Service in administrative positions within IISc

- Convener, HAL-IISc Skill Development center, since Sept 2020
- Chair, procurement of fire fighting & safety equipment's
- Chair, Purchase committee for procurement of electric equipment's
- Enquiry Officer:

Contribution as a Member of Institute (IISc) committees:

- Member, House Allotment committee (2012-13)
- Member, Power Committee (since April-2013.....)
- Member, Amenities Committee (Sept-2015-2020)
- Member, Campus Development & Maintenance Committee (since Jan-2015-)
- Member, Expert Committee for Solar PV installation at Challakere (2013-2018)
- Member, Selection committee for recruitment of contract Security Assts,.
- Member, Contract Management committee (since July 2016-)
- Member, Evaluation of technical bids of the tenders. (since 2016)
- Member, Evaluation of Registration of Contractors- IISc/Challakere campus (2018-21)
- Member, Central Evaluation committee, for Technical & Office staff (2018)
- Member, IISc Safety Committee (Since Jan 2019...)
- Member, IISc Interface Committee (Since June 2020...2022)
- Member, Power consumption committee (since Nov 2020...)
- Member selection/Recruitment for Proj Associates(Electrical Engineers) @estate office, IISc (2020)
- Member, Technical/Purchase committee for procurement at SCRC-IISc (2019.....)
- Member, Vidhyalaya management committee, Kendriya Vidyalaya IISc (Nov 2018–)
- Member Wellness committee, ICER (2020-)
- Member, Expert committee for selection of PMRF Scholars - Interdisciplinary program (2019-21)

- Member, stock verification of materials at central and chemical store,
- Member, Committee to select Architect for IISc UG Complex
- Member, Senate /Dept. nominee for Comprehensive exam at ISU, ICER, DESE depts.
- Member, Secretarial and Laboratory staff Evaluation Committees (2017)
- Member, Holiday committee (2013-14)

Conducting Entrance Exams

1. Regularly participating as a team leader/representative for conducting KVPY & GATE entrance exams at various places in the country (conducted about 20 entrance exams during the review period).
2. Supported in the scrutiny work of GATE applications during 2016 till 2022.

OTHER INFORMATION CONSIDERED PERTINENT:

[1] As a member of IISc power committee, extensively involved along with Prof Umanand, in several power projects initiated by IISc:

- Smart metering for entire IISc campus, (more than 260 smart meters are installed)
- Procurement of 12.5MVA transformer since tendering upto Installation
- Distribution SCADA at main 66kV substation,
- Ring mains and HT UG cabling works (ongoing)
- New 2 x 2MVA DG sets tendering to installation work
- Involved in the preparation of Single Line Diagram & Executing audit for IISc electrical network (HT)(MUSS to 25 Substations upto Dept) for which the data was not available earlier.
- Involved/supported in Rooftop solar PV Installations at IISc campus

[2] Browser based Video wall with high end server and redundant power supply are commissioned at ICER-IISc. Django based interface is being developed for viewing, monitoring and analysing the entire campus power data including the data from the Challekere solar field. This data will be helpful for academic and for proper planning for the future electrical networking in the campus.

Professional Service

Member, Technical Program/advisory Committee – Conference/Symposia

Sl No	Details of Conference	National/ International	Period/Year
1	20 th Intl Scientific conf on Electric power Engg, Tech Univ of Ostrava, Czech Republic.	International	May 2019.
2	IEEE International Conf. on “Intelligent Techniques in Control, Optimization and Signal Processing” (INCOS-‘19) Kalasalingam Univ, TN, India	International	April 2019.
3	Intl conf on High Voltage Engg & Tech, (ICHVET) CPRI, Hyderabad, India	International	Feb 2019
4	IEEE 3 rd Intl Conf,(CATCON-2017), IIT Ropar, India	International	Nov 2017
5	18 th Intl Scientific conf on Electric power Engg, Tech Univ of Ostrava, Czech Republic.	International	May 2017
6	IEEE Intl Conf. on “Intelligent Techniques in Control, Optimization & Signal Processing” Kalasalingam Univ, TN, India	International	March 2017
7	IEEE 2 nd Intl Conf,(CATCON-2015) CPRI, Bangalore, India	International	Dec 2015
8	Intl conf on High Voltage Engg & Tech, CPRI, Hyderabad, India	International	Jan 2015
9	10 th IEEE-ICPADM Intl conference, CPRI, Bangalore, India.	International	July 2012

10	Member of IEEE EXECOM, Bangalore section		2016-17
11	Co-Chaired a session at: Intl. SPE conference, held at University of Poitiers, France (b) 3 rd IEEE Intl. conf on Condition Assessment techniques in Electrical Systems (CATCON-2017) held at IIT Ropar. Indo-UK (UKICERI) annual Symposia,	France IIT-Ropar IIT-Bombay	Aug 2016 NOV 2017 Dec 2017

Invited and Extension lecture programs through Center for Continuing Education IISc

Sl No	Details of lectures delivered /place
1	Chief guest, Engineers day at Vijaya Vittala College of Engg, Bangalore 15 th Sept 2012
2	Technical talk at Sri Siddarath Inst of Tech, Tumkur, on 25 th April 2013
3	Chief guest- fresher's day /technical talk at KLE Engg College Belgaum, 31 st Aug 2013
4	Chief guest, Engineers day, Karnataka Electrical Inspectorate Engg Assn, Bangalore, 27 th Sept 2014
5	Talk on 'Awareness on Research Proposals', KLE Engg College, Belgaum, 6 th Feb 2015
6	Technical talk, (keynote)Rajarajeswari Engg College Bangalore, 27 th April 2015
7	Technical talk at Chennabasveswara Inst of Tech, Gubbi, Tumkur, 22 nd July 2015
8	Advances in HV Power Transmission",KLSGogte Inst of Tech Belgaum, 5 th Feb 2016
9	Talk at CPRI, National workshop on Smartgrids, 3 rd March 2016
10	Workshop on Photovoltaics & application to smartgrids", CCE, 18 th -22 nd Jan 2016
11	Technical talk at Kalasalingam university, TN, 1 st April 2016.
12	Chief guest/ technical talk at Malnad College of Engg Hassan 16 th April 2016
13	Technical talk at KLE College of Engg, Belgaum, 29 th Jan 2016
14	Talk at Three-day Research Development Programme on "Advancement in Electrical Power Systems" 19th to 21st July 2016, MVJ College of Engineering, Bangalore,
15	Talk at AMC College of Engg, Bangalore, 17 th Sept 2016, thro Extn Lect CCE, IISc
16	Invited talk at 5 th National conf on Thermal Power Generation, by Engineers Assn West Bengal Power Dev Corpn, Kolkatta, 25 th Sept 2016.
17	Talk at MSR Univ of App Sciences, Bangalore, Sat 22 nd Oct 2016, thro Extn Lect CCE
18	Talk at SIT Tumkur Recent trends in UHV Transmission, FD Prog: 25 th Dec 2016
19	Talk Recent trends in UHV Transmission, 10 th Feb 2017, Jain College of Engg, Belgaum
20	Talk Recent trends in UHV Transmission, on 25 th March 2017 at KLE Engg, Belgaum
21	Talk at "Science in Action" Exhibition, 18 th -20 th Aug 2017, Jawaharlal Nehru Planetarium, Bangalore
22	Chief guest/ talk "Importance of Science Education", 23 rd Aug 2017, Mount Carmel College Bangalore
23	Chief guest/ Talk at Acharya International Business school, Bangalore, 5 th Sept 2017
24	Invited talk at IEEE APEEC Intl conf, Le meridian, Bangalore, 10 th Nov 2017
25	Invited talk at IIT Ropar, IEEE-Catcon 2017, (also co-chaired a session) Oct.2017
26	Invited talk at Aditya Birla Insulators, Kolkatta, 27 th , 28 th Nov 2017
27	Chief guest/Invited talk at Thyagaraja College of Engg, Madurai, 10 th & 11 th Dec 2017
28	Chief guest/ Invited talk, Smart metering for a micro grid, KLE Belgaum, 16 th Jan 2018
29	Chief guest/ talk at Nandi International College Bellari, 20 th Jan 2018
30	Chief guest/talk at Tadapathri College of Engg, Tadapathri, AP, 22 nd March 2018
31	Keynote talk at National conference in E & E, MVJ college of Engg, Bangalore 30 th April 2019
32	Evaluation of BE Final year projects, annual Project exhibition, Sir MVIT, Bangalore, 10 th June 2019
33	Technical talk/panel discussion, Seminar on Solar Energy, National Institute of Advanced Studies, organized by Environmental Association of Bangalore, 22 nd June 2019
34	Chief Guest, Inaugural function, Rajyapuraskar Scout training camp, KV IISc, 20 th July 2019
35	Technical talk, "Recent Advances in Power Transmission, at Vijayanagara Sri Krishnadevaraya University, Bellary, 31 st Jan 2020
36	Technical talk, "Recent Advances in Power Transmission ", 8 th Feb 2020, PVKKIT, Anantapur-AP
37	Technical talk, "Recent Advances in UHV Power Transmission, Anna Univ, Thirichy, 29 th July 2020
38	Technical talk, "Need for UHV Power Transmission in India", Sri Saividya Inst of Tech, Bangalore, Webinar, 30 th July 2020.
39	Webinar: "Smart Energy Management", Maharashtra Inst of Tech, Pune 19 th Sept 2020

40	Workshop on Advances in Dielectrics and High Voltage Engineering 15th IEEE ICIS 2020, IIT Ropar Invited talk: Development of Energy Monitoring System for a Typical Micro-grid, 26th Nov 2020
41	Session Chair, IEEE ICIS IIT Ropar Track: Power, Energy and High Voltage Engineering, 27 th Nov 2020
42	Invited talk: Faculty Dev program on “Smart Cities”, Dayanandsagar Inst of Tech Bangalore, 21 st Jan 2021
43	Webinar: “Smart Energy Management system”, college, Ahmednagar, Maharashtra, 30 th Jan 2021
44	Invited talk FDP, “UHV AC/DC transmission - Operational issues”, IIT-BHU, Varanasi, 2 nd Feb 2021
45	Invited talk FDP program, “Research opportunities for Electrical/Electronic Engineers”, MVJ College of Engg & Technology, Bangalore 3 rd March 2021
46	Invited to speak at the inaugural event of GDC 16 th Cohort meeting, IIT Madras, 31 st May 2021
47	Keynote speech, “Smart Energy Management”, ICDI3C-2021 Intl conf organized by MVJ College of Engg & Technology, Bangalore 12 th June 2021
48	Atmanirbhar prog HAL-IISc SDC Training program on Renewables for societal needs, 1 st Sept 2021
49	Technical talk, Condition monitoring of overhead EHV/UHV Insulators, Intl Faculty Development Program, NIT Patna 18 th Sept 2021
50	Technical talk online, Smart Energy Management, MCE Hassan, 1 st Jan 2022
51	Technical talk for Faculty development program “Condition Monitoring of Power Apparatus”, conducted by Dept of EE IIT Madras, 28 th Feb 2022.
52	Tech talk: High Voltage Engg, Lublin Institute of Tech, Poland 20 th -24 th June 2022
53	Advances in EHV / UHV Transmission & Energy Systems Talk to FDP VIT, 14 th July 2022
54	BE Final year Project evaluation, Sir MVIT, Bangalore, 18 th July 2022
55	Basics of Lightning, Lightning Protection, Talk to Engineers of IIA, Bangalore, 20 th July 2022
56	Advances in EHV / UHV Transmission Engg, Invited talk, Rasoni Engg College Pune, 17 th Sep 2022
57	Interaction with KREIS school children & Faculty Karnataka, online, 15 th Oct 2022
58	Chief guest at Chaitanya School Bangalore, (distribution of technical kits to NASA participation students) 19 th Nov 2022
59	KEB Engineers Association, Chief guest Engineers day celebration, 16 th Jan 2023
60	Chief guest, Inauguration of "Samsung Innovation Campus" at Don Bosco Institute of Technology, 17 th March 2023

Member of Committees outside IISc

- I. Member, Board of Studies in Electrical Engineering (UG & PG)
 - a. Member, Academic Council Ballari Institute of Tech & Management, Ballari , 2021-23
 - b. Nominee of VC, UVCE, Bangalore University (2014-17)
 - c. Nominee of VC-VTU Belagavi to Malnad College of Engg, Hassan (2016-2018)
 - d. BMS Institute of Technology, Bangalore (2017-19)
 - e. Nominee of VC-VTU, Nitte Meenakshi Inst of Technology, Bengaluru (2018-2020)
 - f. Nominee of VC-VTU, BOS, Dept of Electrical & Electronics Engg, SDM College of Engg & Tech, Dharwad (Autonomous), (23.3.2020 to 23.3.2022).
 - f. Nominee of VC-VTU, Gogte Inst of Tech, Belagavi (Sept 2021- Aug 2024)
 - g. Member, Board of Studies & Advisory Board, MVJ College of Engg & Tech, Bangalore
 - h. Member, Governing body, Tadapathri Engg College, Tadapathri – AP (2018-2020)
- II. Member technical committee for finalising the specification of machinery & equipment’s procurement for Govt Tool Room & Training Center (GTTC) Bangalore 2022.
- III. Member Academic Council, Karnataka Residential Educational Institutions Society (KREIS) Govt of Karnataka, 2022-
- IV. Member, Selection/ Promotion Review Committee, Central Power Research Institute Bangalore, India.(Engg officers to Addl Director level)(since 2012 till date)
- V. Member Selection/Promotion committee: Engineer /Sr Engineers at **DBT-inStem**, Bangalore (2022-
- VI. Advisor, 11kV/440V Substation at JN Planetarium, Bangalore, request by Director (2021-Nov 2022)
- VII. Member VTU Research Project Review panel member 9th Sept 2021
- VIII. Member selection: TIFAC-DST Women Scientist Scheme-C (WOS-C): Internship in Intellectual Property Rights (IPRs) for the Self-Employment selections (KSCST) 25-29th Nov 2021

- IX. Member to conduct Scientific audit for Karnataka Residential Education Society schools KREIS Dec 2021-June 2022
- X. Member Faculty selection committee, Siddaganga Institute of Tech, Tumkur, Karnataka.
- XI. Member Teachers selection committee, Kendriya Vidhyala IISc Bangalore
- XII. Member: (a) Administrative Staff Evaluation Committee, KSCST Bangalore.
(b) Expert committee for evaluating UG/PG projects funded by KSCST since 2005
- XIII. PhD Thesis examiner: VTU Belgaum, JNTU Kakinada, JNTU Hyderabad, Kalasalingam, Kerala and Anna University (evaluated total of 10 PhD thesis during the review period)
- XIV. Question paper setting for PhD Entrance exam, Faculty of Engg, Bangalore Univ, 2016
- XV. Reviewed B. E (E & E) 2018 -19 Scheme & Syllabus of Undergraduate Program, SDM Engg, Dharwad
- XVI. Reviewer of papers submitted to:
 - a. IEEE Transactions on Dielectric and Electric Insulation
 - b. IEEE Transactions on Power Delivery
 - c. IEEE Transactions on Plasma Science
 - d. IEEE Transactions on Smart Grid
 - e. IET Science Measurement & Technology
 - f. IET Generation, Transmission & Distribution
 - g. Engineering Failure Analysis, Journal -Elsevier
 - h. Journal of Electrical Engineering, Springer Nature
 - i. Sadhana, Journal of the Indian Academy of Sciences
 - j. Current Science and few more journals & Several international/ National conferences
- XVII. Evaluated Project proposals submitted for
 - a. Funding by SERB-DST
 - b. Projects funded by CPRI
 - c. Projects funded by ISTE
 - d. Projects funded by Vision Group of Science & Technology, KSCST Govt of Karnataka

SOME IMPORTANT service rendered to outside Organizations

- I. Expert Member: Investigation team, (Ref: N0-RT-11036/44/2022-MVL dated 30th March 2022), Nominated by the Director (MVL), Ministry of Road Transport and Highways (HVL Section), Government of India, to investigate the circumstances leading to the Smoke/Fire/Explosion related to 2-Wheeler E-Scooter across the Country, to report the findings and suggest suitable remedial measures for improvements. (Final report submitted to the Ministry, 10th May 2022).
- II. Member technical committee for finalising the design specification of various machinery & equipment's procurement for the Govt Tool Room & Training Centers (GTTC) across the Karnataka state, 2022.
- III. Member Academic Council, Karnataka Residential Educational Institutions Society (KREIS) Govt of Karnataka, 2022, The aim of the KREIS is to provide quality education for the SC, ST and BC Rural students in similar lines with Jawahar Navodaya Vidyalaya's, the State Government has established 826 Residential Schools and Pre University colleges.
- IV. Member, Project Advisory committee for Income generation activities for tribal dominated areas of Karnataka. (Sponsored by Karnataka state council for science & Tech and Govt of Karnataka).



Member, Advisory board, Karnataka Residential Educational Institutions Society, visited several schools

Distinguished Visitor's hosted

1. Faculty Delegation from Brunel University, UK, Technical discussion and visit to Skill development center, Challakere, IISc campus, 26th April 2022
2. Prof Murray Thompson & Dr Andrew Urquhart, Univ of Loughborough, UK technical discussion Indo-UK project, visit to labs, discussion with students, 9th& 10th April 2019 at ICER/HVE IISc
3. Dr John Barton, Univ of Loughborough, UK, from 17-18th September 2019, technical discussion, visit to labs, discussion with students at ICER/HVE IISc
4. Dr He Wei, Researcher from MIT/Warwick: technical talk Desalination using solar PV, during 7th -8thJan 2020, technical discussions. at ICER/HVE IISc
5. Dr Jamet Stefan, Director EDF, France:3rdMarch 2020, Technical discussions at ICER/HVE IISc
6. Prof T S Sudarshan, Carolina Distinguished Emeritus Professor and Fellow of IEEE, University of South Carolina, Columbia, on 6th August 2018 at ICER IISc

Laboratory Safety Audit / Training Programs

- Organized lectures on laboratory safety aspects to faculty, safety wardens and student representatives, conducted internal safety audit in the Division of Electrical Sciences
- Participated in safety training program by M/s Shell Technology Center, Bangalore, on 4th April 2019.
- Developed on-line module using class marker software and conducted General safety exam for Faculty, Students, Staff, Research Assts of EECS division, IISc on 12thand 19th June 2019.

VISITS ABROAD

Sl No.	Details	Period
1	Poland Lublin University of Technology, Poland. Invited on Erasmus Faculty Teaching Mobility Fellowship,	June 2022
2	DUBAI Invited keynote speaker at the 2 nd Annual technical conference on 4 th Ind Revolution in Power Sector held at Dubai, during 19 th & 20 th Sept 2019.	Sept 2019
3	BUDAPEST, HUNGARY: Two Research papers presented at the 21 st International Symposium on High Voltage Engineering held at Budapest, Hungary, 26-30 August 2019 (Organized by Budapest School of High Voltage Engineering)	Aug-2019
4	Massachusetts Institute of Technology (MIT) Cambridge, Boston USA <ul style="list-style-type: none"> • Presented research papers at the MIT Applied Energy Symposium • Visited Global Energy Advanced Research (GEAR) Lab at MIT 	May 2019
5	Loughborough University, UK <ul style="list-style-type: none"> • Presented four papers at the Joint Virtual Clean Energy Centre (JVCEC) Conference, Loughborough University, UK • Visited Warwick University delivered a technical talk • Technical Visit to Imperial College London. 	Sept 2018
6	University of Poitiers, France Presented three research papers and chaired a session at the 10th Intl. SFE conference held at the University of Poitiers, France.	Aug/Sept 2016
7	Re Union Island (France) Presented research paper at the 3rd Intl conference (ISNPEDADM 2015), organized by University of Poitiers, France	Oct 2015
8	Abu-Dhabi Presented two research papers at the 7th Intl. conf on Applied Energy, organized by Elsevier publications & Masdar Institute of Technology, Abu Dhabi	March 2015
9	University of Waterloo, Canada Presented research paper at the IEEE 2012 Joint Electrostatic Conference, Cambridge, Ontario, Visited University of Waterloo.	June 2012
10	Houston-USA Presented technical paper at the IEEE-IAS Annual meeting 2010	July 2009
11	China / Hong Kong (a) Presented paper at the 9th IEEE-ICPADM, Harbin University (b) Visited Aero plane manufacturing Co, & Electric machines mfg Co, at Harbin.	Oct 2010
12	Malaysia (a) Presented paper at IASTED Intl conf on Power and Energy Systems, Langkawi. (b) Technical lecture at Tenang National Board Research centre Kaulalumpur, (c) Visited on site cable test station at Nilah Dist, Kaulalumpur	April 2008
13	Czech Republic (a) Presented paper at 11th Intl IEEE conference, (b) visited High Voltage Laboratory at Czech Technical University at Prague, and ZKU High Power Laboratory.	May 2007
14	Singapore Visited Nanyang Technological University, and presented two technical papers at 6th International Power Engg Conference (IPEC-2003).	Nov/Dec 2003
15	Sri-Lanka Visited High Voltage lab, delivered technical talk at Dept. of EE, University of Moratuwa.	Nov/Dec 2003
