

BIO-DATA



1. **Name** Dr Bindu S
2. **Designation** Professor and Head of the Department, Dean Student affairs
3. **Residential Address** 305, Shailesh CHS, Sector-11, New Panvel, 410206
4. **Date of birth** 26-5-1970
5. **Total Experience**
 - i. **Teaching** 29 years
 - ii. **Industrial** 0 years

6. **Qualifications**

Exam Passed	Year	Institution/ University	Branch/Specialization	Percentage/CGPI
B.Tech	1992	M G Univ. Kerala / MACOE Kothamangalam	Electrical & Electronics Engineering	77.83% (Distinction)
M.E	2001	VJTI, Mumbai	Power Systems	79% (Distinction)
Phd	2014	VJTI, Mumbai	High voltage Engineering	--

7. **Employment Record**

Institution	Year (From To)	Designation
Fr. C. Rodrigues Institute of Technology,	June 2015 till date	Professor
Fr. C. Rodrigues Institute of Technology,	Aug 2001 June 2015	Associate Professor
Fr. C. Rodrigues Institute of Technology,	July 1994 to 2001	Lecturer
Ramarao Adik Institute of Technology, Navi Mumbai	Oct 1992 to May 1994	Lecturer

8. **Undergraduate / Postgraduate Teaching Experience and Subjects Taught**
Subjects Taught at UG level

Sr.No.	Name of Subject	Semester
1	BEE	I
2	Electrical Machines-1	III
3.	Electrical Machines-2	V
4.	Electrical Machines-3	VI
5.	HVDC	VII
6.	Drives and Control	VIII
7.	Electric Traction	VI

Subjects Taught at PG level

Sr.No	Name of Subject	Semester
.		

1	Research Methodology	III sem ME & Phd course work
2.	Research and publication ethics	Phd course work

9. Research Funding / Consultancy Services:

Research Grants:

Sr.No	Name of Funding Organization	Type of Grant	Amount (Rs.)	Year	Name of Research Project
1	BRNS	2011/34/33 /BRNS with ATC	2203250	2011-2013	Development of Peaking switch and Characterization of Marx Generator
2	BRNS	34/14/11/2 014-BRNS	2213600	2014-2017	Modeling and Characterization of Solid State Marx Generator and its Source
3.	University of Mumbai	No APD/237/1 63	15000	2016	Current fed Cockcroft-Walton multiplier applied to a high voltage step up DC-DC converter
4	AICTE/MODRO B	9-142/IDC/ MODROB /Policy-1/2019-20	1215686	2019-21	Transmission line simulator with protection system interfaced with IOT system

10. Professional Societies Fellowship / Membership

- **IEI-Fellow member**
- **IEEE-Senior member**
- **ISTE-Life member**

11. Achievements / Awards / Position

- Power System Operation Corporation (POSOCO) - a subsidiary of Power Grid Corporation of India Ltd (POWERGRID), in partnership with the Foundation for Innovation & Technology Transfer (FITT), IIT Delhi, has awarded POSOCO Power System Award (PPSA 2014) to the PhD theses "Modeling of Peaking Switch and its Characterization" for innovative research in the areas of power systems
- Second rank in the Electrical Department in the Poster presentation for Research Scholars on "National Science Day" Organized by VJTI on 29th February 2012
- Dean student affairs Fr C Rodrigues Institute of Technology
- Best paper award for "Performance analysis of Bipolar Marx Generator Topologies with input switch charging and Inductive charging method" IEEE & CSI sponsored ICISIM-2017, Oct 5th and 6th, Aurangabad, Maharashtra, India
- Member of Grievance cell of Fr C Rodrigues Institute of Technology, Vashi

12. Projects guided in UG/PG level

UG Project

Guided more than 22 Projects at the undergraduate level in the field of Electrical Engineering.

PG level

- Electromagnetic Field Calculation and Optimization of UHVDC converter valve shield case
- Electrical Calculation and Modeling of Low Voltage Circuit Breaker
- Performance Analysis of Solid State Marx Generator
- Design and simulation of 30 kv solid state dc source
- Solid-state unipolar pulsed power marx-type generator using switch-capacitor cells
- Modeling of Bipolar Solid state Marx Generator Including Parasitic Capacitance Effect
- Design, Simulation and Implementation of Generalized Solid State Bipolar Marx Generator
- Current fed Cockcroft-Walton multiplier applied to a high voltage step up DC-DC converter
- Control of HVDC Light System using Decoupled Vector Control Technology
- PMU Based Power System Protection for a Grid Connected System
- Design and Performance Evaluation of a 4.5 kW DC/DC Converter for Battery Charging Application

Ongoing PhD work

- Analysis of Indian Power Sector performance
- Investigation on Solid State Marx Generator
- Investigation in to Protection aspects of DC micro grid using Signature Analysis
- Investigation on Performance Enhancement of Distance Relay using Data Analytic Approach.

13. Short Term Training Programmes attended/ Organized

Organized:

1. ISTE sponsored one week STTP on “DSP, Arduino and C/Pythons” from May 10 to 15th May, 2021 at FCRIT, Vashi.
2. AICTE-ISTE sponsored one week STTP on "Teaching Pedagogies for Engineering Education", from June 24 to 28, 2019 at FCRIT, Vashi..
3. AICTE-ISTE sponsored one week STTP on “ELECTRIC AN D HYBRID ELECTRIC VEHICLE TECHNOLOGY” from June 18th -23rd , 2018, at FCRIT, Vashi
4. AICTE-ISTE sponsored one week STTP on Reliability in Electrical and Electronics Systems from June 27 to 1st July, 2017 at FCRIT, Vashi.

Attended

1. AICTE sponsored one week ATAL Online Elementary FDP on "Artificial Intelligent Techniques applied to Power Systems " from 13/12/2021 to 17/12/2021 at Vasavi College of Engineering
2. Online FDP Programme “Emerging areas in Engineering and Technology” from 5th May to 9th May 2021 at Agnel Polytechnic, Vashi
3. AICTE sponsored one week STTP "Outcome Based Education: a step towards Excellence", from May 11 to 15, 2020 at COE, Karad
4. Participated in the Scilab training organized at Indira College of Engineering and Management in January 2020 semester, with course material provided by the Spoken Tutorial, IIT, Bombay

5. AICTE sponsored one week STTP "Teaching Pedagogies for Engineering Education", from June 24 to 28, 2019 at FCRIT, Vashi
6. AICTE sponsored one week STTP under QIP on Renewable Energy source for sustainable development: Need, Technologies and policies
7. School on Pulsed Power Technology by Power Beam Society of India at BARC May 2010-2011
8. School on Pulsed Power Technology by Power Beam Society of India at BARC 2012
9. School on Pulsed Power Technology by Power Beam Society of India at VJTI 2013
10. Two week course on Research Methodology, IIT Bombay, Mumbai
11. Course On AC/DC drives at Advanced training Institute, Mumbai
12. Microcontroller application in power Electronics at IIT Bombay
13. Scilap Workshop organized by the ICT at IIT Bombay, local centre MES Pillai college of Engineering.

14. List of Journal Papers Published

1. Dipti D. Patil, **Bindu S**, SushilThale "A Novel Method for Real Time Protection of DC Microgrid Using Cumulative Summation and Wavelet Transform" International Journal of Advanced Technology and Engineering Exploration accepted for publication in 2022
2. Dipti D. Patil, **Bindu S**, SushilThale "Deep Neural Network Enabled Fault Detection in LVDC Microgrid Using Empirical Mode Decomposition" International Journal of Advanced Technology and Engineering Exploration accepted for publication in March 2022
3. Kiruthika, **Dr Bindu S** "Secured protection of transmission line by distance relay using data mining approach" Indonesian Journal of Electrical Engineering and Computer Science Vol. 23, No. 1, July 2021, pp. 1~13 ISSN: 2502-4752, DOI: 10.11591/ijeecs.v23.i1.pp1-13
4. Ninad. P. Totare1, **Dr. Bindu. S**, "Total Factor Productivity Analysis in the Regime of Multi-Year Tariff Policy Using Fisher Index Method" International Review of Electrical Engineering (I.R.E.E.) Praise worthy publication, Vol. 16, N. 2 ISSN 1827- 6660 March – April 2021
5. Neelam Pinchari, **Dr Bindu S** "Compact Solid-State Marx Generator for Repetitive Applications" International Journal "Engineering, Technology & Applied Science Research", Vol. 10, No. 5, 2020, 6224-6230
6. Kiruthika, Dr Bindu S "Classification of Electrical Power System Conditions with Convolutional Neural Networks" International Journal of Engineering, Technology & Applied Science Research Vol. 10, No. 3, 2020, 5759-5768
7. **S.Bindu**, H.A Mangalvedeker, Mrunal Parekh, Archana Sharma, D.P Chakravarthy, K.C Mittal (2012) "Electrodynamic Simulation of High Voltage Peaking Switch" IEEE Transaction on Plasma Science, Vol 40, No.11, pp 3093-3400.
8. **S.Bindu**, Mrunal Parekh, H.A Mangalvedeker, Archana Sharma, D.P Chakravarthy, (2013) "Modelling and analysis of High Pressure Peaking Switch" J. Phys.: Conf. Ser. 377 012098, pp 1-8.
9. **S.Bindu**, H.A Mangalvedeker, Archana Sharma, P C Saroj, D.P Chakravarthy, A K Ray (2013) "Development of Transfer Function Model and Analysis of the Peaking Capacitor and Switch" IEEE Transaction on Plasma Science, Vol 41, No.08, pp 2415-2420

10 **S.Bindu**, Sachin U, H.A Mangalvedeker, Archana Sharma, P C Saroj, K C Mittal (2013) “Peaking Capacitor Parameter Evaluation with Transfer Function Model” IEEE Transaction on Plasma Science, Vol 42,No.2, pp 336-339

11 Sachin U, **S.Bindu**, H.A Mangalvedeker, Archana Sharma, D.P Chakravarthy, P C Saroj, K C Mittal, D P Chakravarthy (2014) “Analysis of HTEM Horn-Type Antenna for High-Power Impulse Radiation Applications”, IEEE Transaction on Plasma Science, Vol 42,No.2, pp 336-339

15. List of Papers Published in National and International Conferences

- 1 Bindu S, Sincy George “The effects of energy storage compensation in a non-sinusoidal power system” National Conference CIEEPS’06, Pondecherry Engg. College Sep 07-08, 2006
- 2 Bindu S, Mini N, Reshmi K “A method to improve the Reliability of Energy Storage Element in reactive power compensation” National Conference INDICON-2007 Bangalore, 2007
- 3 Bindu S, Mini N “ Reactive Power Compensation in Three Phase Circuits by different Power Defenitions: A Comparative Study” International Conference TENCON- 2008, IEEE Hyderabad section, Hyderabad ,Nov 18-21 2008, **DOI:** 10.1109/TENCON.2008.4766619
- 4 Bindu S, Reshmi K “Effect of Local compensation using Energy storage element:A case study” National Conference on Recent Trends in Engineering and Technology presented in Zenith-2009 Agnel Polytechnic, Vashi. National Conference ,Dec 30-31 2009
- 5 Bindu S, Raji M P “Reactive Power Compensation Using Shunt Active Filter National Conference on Recent Trends in Engineering and Technology.”, presented in Zenith-2009 Agnel Polytechnic, Vashi. National Conference ,Dec 30-31 2009
- 6 Mrunal Parekh, S.Bindu, H.A Mangalvedeker (2011) “Arc Modelling in Circuit Breaker” SWICON, 2011,pp.245-249.
- 7 S.Bindu, H.A Mangalvedeker, Sachin U, Archana Sharma, D.P Chakravarthy, K.C Mittal, P C Saroj (2012) “Dynamic modelling of Spark gap Switch” ICPADM -2012 International Conference on Properties and Application of Dielectric Materials, CPRI, 24-28. **DOI:** 10.1109/ICPADM.2012.6318933
- 8 Mrunal Parekh, S.Bindu, H.A Mangalvedeker, (2012) “Electromagnetic modelling of high pressure spark gap peaking switch” Electromagnetic launch symposium Beijing,China. DOI: 10.1109/EML.2012.6325059
- 9 H.A Mangalvedeker, S Bindu, (2012) “Breakdown of insulator under DC and pulsed conditions” Pulsed power conference, BARC.

- 10 Sachin U, S.Bindu, H.A Mangalvedeker, Archana Sharma, D.P Chakravarthy, P C Saroj (2012) "Optimization of Half TEM horn antenna integrated with Marx generator for UWB application" IEEE Proceeding, 12th INCEMIC,pp. 305-308.
- 11 Sachin U, S.Bindu, H.A Mangalvedeker, Archana Sharma, D.P Chakravarthy, P C Saroj (2012) "Coupled Analysis of Circuit Model and Electromagnetic Model of Peaking Switch" IEEE Proceeding 12th INCEMIC, pp. 309-312.
- 12 Sachin U, S.Bindu, H.A Mangalvedeker, Archana Sharma, D.P Chakravarthy, P C Saroj, K C Mittal, D P Chakravarthy (2013) "Analysis of TEM Horn Antenna UWB system", Pulse power and plasma science conference, United states, **DOI:** 10.1109/PPC.2013.6627662
- 13 Mohini Kher, S. Bindu "Electromagnetic modelling of UHVDC valve casing" International conference ICACACT, Mumbai 10-11 Aug 2013
- 14 Ajay Ingle, S. Bindu (2013) " Simulation and modelling of low voltage circuit breaker under fault condition" International conference ICACACT , Mumbai 10-11 Aug 2013
- 15 Ajay Ingle, S. Bindu "Electrical and coupled field analysis of low voltage circuit breaker under fault condition" Tap Energy conference 2013 pg. no. 77
- 16 Sachin U, S.Bindu, H.A Mangalvedeker, Archana Sharma, D.P Chakravarthy, P C Saroj, K C Mittal, D P Chakravarthy (2013) "Modeling and analysis of Half TEM Horn Antenna and Jolt Antenna for High Power UWB Application: A Comparative Study" The National Symposium on High Power RF & Microwaves HPRFM-2013, 4-6 September-2013, Institute for Plasma Research, Gandhinagar, Gujarat (India)
- 17 Mohini Kher, S. Bindu (2013) "Electromagnetic modeling of three phase UHVDC valve casing" National Conference INDICON-2013, Mumbai 13-15 Dec 2013, **DOI:** 10.1109/INDCON.2013.6725986
- 18 Rakshita D, Bindu S, Sincy George, P C Saroj, Archana Sharma "Design and simulation of 30 kV solid state DC source" International Conference on Magnetics and Drives(ICMMD), AICERA-2014, Kerala24th to 26th July 2014, **DOI:** 10.1109/AICERA.2014.6908242
- 19 Harshada, Bindu S, Sincy George, P C Saroj, Archana Sharma "Design and Simulation of 50 kV,50 A solid state Marx generator" International Conference on Magnetics and Drives(ICMMD), AICERA-2014, Kerala24th to 26th July 2014, **DOI:** 10.1109/AICERA.2014.6908236
- 20 Sachin B. Umbarkar, S. Bindu, H. A. Mangalvedekar, A. Saxena, N. M. Singh, Archana Sharma, P. C. Saroj, K. C. Mittal" Particle in Cell Simulation of Peaking Switch for Breakdown Evaluation" International Symposium on Discharges and Electrical Insulation in Vacuum (ISDEIV-2014) September 28- October 3, 2014 Worli, **DOI:** 10.1109/DEIV.2014.6961678
- 21 Rashmi V. Chaugule , Ruchi Harchandani, Bindu S. "Solid state Bipolar Marx Generator Topologies: A Comparative study" ICNTE-2015 January 9-10, 2015, **ISSN:** 2278-0181
- 22 Rakshita Dhar, Bindu S, Sincy George PC Saroj, Archana Sharma "A High Voltage Zero Current Switching- Series Resonant Converter Using DSP" ICNTE-2015 January 9-10, 2015
- 23 Shreyashi De , Bindu S. " Design and Simulation of Solid state Marx Generator" ICRTIET-2015 May 1-2, 2015, Ongole
- 24 Neha Wanjari, Bindu S. "Modeling of Bipolar Solid state Marx Generator Including Parasitic Capacitance Effect" ICCDT-2015 October 11th Mumbai, 2015

- 25 Shreyashi De , Bindu S. “ Design and Implementation of DSP based Unipolar Solid-State Marx Generator” ICIIECS'16 , March 17-18, 2016, Karpagam, **ISSN (Print):** 2278-8948, Volume-4 Issue-2, May 2015
- 26 Rupali Shah, Bindu S “A DC source of Current-fed Cockcroft-Walton Multiplier with High Gain DC-DC Converter” ICNTE-2017, Jan 13-14, 2017, Mumbai, **DOI:** 10.1109/ICNTE.2017.7947944
- 27 Rashmi Chaugule, Bindu S. and Ruchi Harchandani Design and Hardware Implementation of Two Stage Solid State Bipolar Marx Generator” RTEICT-2016, **DOI:** 10.1109/RTEICT.2016.7807910
- 28 Harshada, Bindu S, Sincy George, Meera S, P C Saroj “Performance Analysis of Solid State Marx generator- A Comparative Study of Self Driven Gate Driver Circuit with Conventional Driver” IEEE International Conference on Recent Trends in Electronics information Communication Technology(RTEICT), May 19th to 20th 2017, India, **DOI:** 10.1109/RTEICT.2017.8256634
- 29 Ruchi Singh, Bindu S, Sincy George, Meera S, P C Saroj “Issues and Mitigation of High Voltage Isolation in Solid State Marx Genrator” IEEE International Conference on Recent Trends in Electronics Information Communication Technology(RTEICT), May 19th to 20th 2017, India, **DOI:** 10.1109/RTEICT.2017.8256825
- 30 Neelam Pinchari, Dr Bindu S “Performance analysis of Bipolar Marx Generator Topologies with input switch charging and Inductive charging method” IEEE & CSI sponsored ICISIM-2017 , Oct 5th and 6th, Aurangabad, Maharashtra, India, **DOI:** 10.1109/ICISIM.2017.8122187
- 31 Neelam Pinchari, Ruchi Singh, Bindu S “Analysis and Comparative Study of various Charging Methods Implemented for Solid State Marx Generator “ (ICAER 2017) IIT Bombay, Powai, Mumbai 12-14 December, 2017. Chapter in Springer Proceeding in Energy - Advances in Energy Research, Chapter No. 70, Vol 2, pp.no.773-785, 2020. **ISBN:** 978- 981-15-2661-9.
- 32 Dipti D Patil, Bindu S “Real time protection technique for DC micro grid using local measurements” 2018 IEEE 12th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG 2018). **DOI:** 10.1109/ICSESP.2018.8376667
- 33 M.Kiruthika, Bindu.S “Performance Analysis of a Distance Relay for Zone Identification” 2nd IEEE International conference on Power Electronics, Intelligent Control and Energy systems (ICPEICES) held on Oct.22-24, 2018. **DOI** 10.1109/ICPEICES.2018.8897426
- 34 M.Kiruthika ,Bindu.S “Fault Identification and Zone Protection in Transmission Line Using Phasor Measurement Units” IEEE International conference on New Trends in Engineering & Technology(ICNTET) held on Sept 7-8 2018. **ISBN:** 978-1-7281-0630-4
- 35 Mr Totre, Bindu.S “Impact of Various Factors on Tariff during Multi Year Tariff Period” International Conference on Smart Electric Drives and Power System (ICSEDPS) 12th -13 June 2018, Nagpur. **DOI:** 10.1109/ICSEDPS.2018.8536052
- 36 Mr Totre, Bindu.S “Multi Year Tariff Structure Impact on Financial Status of electric Utility” IEEE International Conference on Innovative Technologies in Engineering (ICITE-2018), 11th -13 April 2018, Hyderabad. **ISBN:** 978-1-5386-5793-5
- 37 Daniel Dsa, Uma L, Bindu S “Performance Comparison of Two-Level Voltage Source Converter with Sinusoidal PWM and Space Vector PWM for HVDC application” ICNTE 2019, January 2019, **DOI:** 10.1109/ICNTE44896.2019.8945916
- 38 Neelam Pinchari, Bindu S “Design, Analysis and Hardware Implementation of Modified Bipolar Solid-State Marx Generator. “ (ICAER 2019) IIT Bombay, Powai, Mumbai 10-12 December, 2019. The paper is published in Springer Proceedings of

the 7th International Conference on Advances in Energy Research. Print **ISBN**: 978-981-15-5954-9.

- 39 Saurabh Patil, Mahendra Rane , Bindu S “ Issues with High Voltage Measurement and its Mitigation “2019 4th International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT-2019), MAY 17th & 18th 2019, **DOI**: 10.1109/RTEICT46194.2019.9016734
- 40 Abhishek D Chalwadi, M.Kiruthika, Bindu.S , “Phasor Measurement Unit based Impedance Relay: A Case Study” 4th International Conference on Recent Trends on Electronics, Information, Communication & Technology (RTEICT-2019), May 17th & 18th 2019, **DOI**: 10.1109/RTEICT46194.2019.9016695
- 41 Abhishek D Chalwadi, M.Kiruthika, Bindu.S “PMU and DVR based Power System Monitoring, Controlling and voltage sag Compensation” International Conference on Automation, Computing and Communication 2020 (ICACC-2020) 27th - 28th June 2020, **DOI**: <https://doi.org/10.1051/itmconf/20203201006>
- 42 Fabian Tauro. Bindu S, Rane “Design of a Full-Bridge Converter for Lead-Acid Battery Charging and Powering DC Loads” IEEE International Power and Renewable Energy Conference, IPRECON 2020, 30 November to 1st December **DOI**: 10.1109/IPRECON49514.2020.9315265
- 43 Dipti D. Patil, Bindu S, Sushil Thale “Arc Fault Detection in DC Microgrid Using Deep Neural Network” International conference on Nascent Technologies ICNTE 2021, 15th and 16th January **DOI**: 10.1109/ICNTE51185.2021.9487585
- 44 Ninad P Totare , Bindu S “Electricity Distribution Firm Tariff Rationalization in Multi Year Tariff Policy” International conference on Nascent Technologies ICNTE 2021, 15th and 16th January **DOI**: 10.1109/ICNTE51185.2021.9487769
- 45 Sachin U, S. Bindu, H.A Mangalvedeker, Archana Sharma, P C Saroj “Mathematical Modeling of Peaking Switch” International conference on Nascent Technologies ICNTE 2021, 15th and 16th January, **DOI**: 10.1109/ICNTE51185.2021.9487580

17. Invited Lectures in FDP/ STTP

- **Session titled Power system Reliability for the AICTE-ISTE STTP on “Reliability on Electrical and Electronic System” at FCRIT, Vashi**
- **Session titled Design of Peaking stage for the AICTE sponsored STTP on “High voltage and Partial Discharge” at VJTI, Matunga**
- **Session titled EMF application on HVE for the ISTE sponsored STTP on “FEM and its application” at FCRIT, Vashi**
- **Session titled Application of control system in Pulse power system for the ISTE sponsored STTP on “Workshop on advanced control system” at FCRIT, Vashi**
- **Session titled Selection of drives for the ISTE on “Power Electronics drives and control” at Agnel Polytechnic Vashi**
- **Webinar on Application of Power Electronics in High Voltage Engineering at iMEET 26th April 2021**

18. International Conference Technical Program Committee Member / Reviewer
Reviewer:

- **ICNTE-2021 Biennial international Conference on Nascent Technologies in Engineering., FCRIT, Vashi**
- **ICNTE-2020 1st Biennial international Conference on Nascent Technologies in Engineering., FCRIT, Vashi**
- **ICNTE-2015 1st Biennial international Conference on Nascent Technologies in Engineering., FCRIT, Vashi**

- **ICNTE-2017 2nd Biennial international Conference on Nascent Technologies in Engineering., FCRIIT, Vashi**
 - **NCATM-2017 4th National Conference on Advances in Technology and Management**
 - **NCATM-2016 4th National Conference on Advances in Technology and Management**
 - **NPEC 2017 The 8th National Power Electronics Conference 2017**
 - **ICNTE-2019 3rd Biennial international Conference on Nascent Technologies in Engineering., FCRIIT, Vashi**
 - **RACEM -2019 4th International Conference on “Recent Advances & Challenges in Engineering & Management” VIT, Wadala, Mumbai**
 - **Reviewer for Cogent Engineering journal in April 2019"Relay Co-ordination optimization for integrated Solar photovoltaic power distribution Grid"**
- 19.**
- **Expert in the USSC at Pillai HOC college, Rasayani college in 27th Feb.2019**
 - **Expert in the USSC at RAIT, Nerul college in 8th Oct.2018**
 - **Expert in the USSC at Atharva college in 16th Sept.2017**
 - **Expert in the USSC at Harne college in 18th Nov 2017**
 - **Expert in the MPSC for the post of Professor in 2014 and 2015**
 - **External expert in the doctoral committee Amrita University**
 - **External audit expert at SIES College, Nerul, Electronics and Telecommunication Department**
 - **DAB member St Francis Institute of Technology, Mumbai 2021**