

BIO DATA



Dr. C.NAYANATARA, B.E, MBA, M.Tech, Ph.D,
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Anna University Recognized Supervisor

Ref no.343004

EDUCATION QUALIFICATION:

1. Degree: PhD

Department: Faculty of Electrical Engineering

University: Anna University, Chennai.

Year: September 2017

2. Degree: MBA

Specialization: Marketing

Year of Passing: 2005

Class obtained: 72% with First Class

University: Annamalai University, Chidambaram.

3. Degree: M.Tech

Specialization: Power system Engineering

Year of Passing: 2008

Class obtained: 8.53 First class with **Distinction**

University: SRM University, Chennai.

4. Degree: B.E

Specialization: EEE

Year of Passing: 2001.

Class obtained: 70% and First

University: Madras University, Chennai.

PROFESSIONAL EXPERIENCE:

Name of the Institution	Position	From	To	Experience
Sri SaiRam Engineering College	Professor	21-06-2007	Till date	-
Valliammai Engineering College	Lecturer	01-06-2003	31-05-2007	4 Years
Innovative CAD GrafX Pvt.Ltd.	Sr.Academic Counsellor	03.06.2001	30.05.2003	2 Years

RESEARCH AREAS OF INTEREST:

- Distributed Generation and Micro grid
- Power Quality Issues
- Demand Side Management
- Smart Grid
- Heuristic Search Techniques
- Flexible AC Transmission Systems
- High Voltage Engineering
- Electric Vehicle with Routing
- Power Electronics

FUNDS RECEIVED:

- Received Rs.18,000/- from PALS INNOWAH for the project titled” **Solar Powered WPPO Oil Production From Plastic Waste**”.
- Received Rs.1, 50,000/- for “**Installation of 1kW windmill**”.

RESEARCH ACTIVITIES

- Guiding 8 Ph.D Scholars
- DC member for 7 Candidates
- Reviewer for
 1. International Journal of Electric Power and Energy Systems
 2. Journal of Electrical Engineering and Technology
 3. IET- Renewable Power Generation
 4. Scientific Reports
 5. Discover Sustainability
 6. Evolutionary Intelligence

LIST OF PUBLICATIONS:

INTERNATIONAL JOURNALS:

- **Nayanatara. C** has published the paper entitled "Heuristic DRP-DG optimization strategy adopted for maximizing total social welfare in the real time Indian utility network" on IET Renewable Power Generation System. (2022).
- **Nayanatara. C** has published the paper entitled "Flexible Dispatch Strategy Adopted by Optimizing DG Parameters in a Real Time Power System Distributed Network" Journal of Electrical Engineering & Technology <https://doi.org/10.1007/s42835-021-00938-8>, (2021)
- **Nayanatara. C** has published the paper entitled "Real Time Low-Cost Automated Production System Using Internet Of Things" International Journal of Aquatic Science ISSN: 2008-8019 Vol 12, Issue 03, (2021).
- **Nayanatara. C** has published the paper entitled, "Optimization of DG parameters in the distributed network in the presence of Battery powered energy source using Differential Evolution Algorithm", Solid State Technology, Volume 63. No. 6, (2020).
- **Nayanatara. C**, has published the paper entitled, "Overcurrent and Earth fault Relay Coordination for Microgrid with Numerical Relay Features", International Journal of Innovative Technology and Exploring Engineering (IJITEE), Volume 9. No. 3, January (2020).
- **Nayanatara. C** has published the paper entitled, "Comparative analysis of PV powered KY and Luo converter", International Journal of Emerging Trends in Engineering Research, Volume 8. No. 10, October (2020).
- **Nayanatara. C** has published the paper entitled, "IoT Based Integrated Home Security and Electrical Appliances Control System", Test Engineering and Management, (2019).
- **Nayanatara. C** has published the paper entitled, "IoT based approach in a power system network for optimizing distributed generation parameters", CMES, vol.119,2, (2018).
- **Nayanatara. C** has published the paper entitled, "Approach of hybrid PBIL control in distributed generation parameters for IEEE and real time Indian utility system" on IET Renewable Power Generation System. (2017).
- **Nayanatara. C** has published the paper entitled, "Hybrid Optimization Implemented for Distributed Generation Parameters in a Power system Network" on Elsevier Publication International Journal of Electrical Power and Energy Systems 78 (2016) 690-699.
- **Nayanatara. C** has published the paper entitled, "GA Implemented for Distribution Generation Parameters in IEEE and Indian Utility System" on Middle-East Journal of Scientific Research, Volume 10, Issue 4, July 2015, p. 1552 – 1557.
- **Nayanatara. C** has published the paper entitled, "MGA Approach for optimization of Distributed Generation parameters in power system Network" in International Journal of Advancements in Electrical Engineering - IJAEEE, Volume 4, issue 2, OCT (2015) P. 0147-0151.
- **Nayanatara. C** has published the paper entitled "Micro-Genetic Algorithm based Optimization of DG Devices Considering the Economic Saving Cost", International Journal of Electrical Engineering and Embedded Systems, 2011, Vol 2, Issue 2, pp 191-199.

- **Nayanatara. C** has published the paper entitled “Optimization of DG Devices for welfare maximization International Journal of Electrical Engineering and Embedded Systems, 2010, Vol 2, Issue 2, pp 201-208.

National Journals:

- **Nayanatara. C.** (2014), “Application of SA based DG Optimization in the Indian Electrical Network”, Indian Streams Research Journal, Vol. 4(5), Pp:1-12,2014.

International Conferences:

- **Nayanatara. C** has published the paper entitled” An Assessment on Cyber Security Challenges and Issues Associated with Cyber-Physical Power System and Electric Vehicle Charging Infrastructure” International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2024.
- **Nayanatara. C** has published the paper entitled” **Optimizing Renewable Energy Integration through Demand Response Management: A Comprehensive Review**” International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2024.
- **Nayanatara. C** has published the paper entitled” **Flexible Strategy in Distributed Generation with Demand Side Management**” International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2024.
- **Nayanatara. C** has published the paper entitled” **A Comprehensive Review of Distributed Generation and Demand Response Programs in Modern Power Networks**” International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2024.
- **Nayanatara. C** has published the paper entitled” **Solar PV and Electric Vehicle Synergy: Demand Response Program Evaluation For EV Charging Stations Towards an Optimal Plan for The Region Using Various Split Source Topology**” International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2024.
- **Nayanatara. C** has published the paper entitled “Charging Electric Vehicles at Fuel Stations Using Solar Energy And Fuel Cell Technology” IEEE Intelligent Computing and Control for Engineering and Business Systems (ICCEBS), 2024.
- **Nayanatara. C** has published the paper entitled “An Electric Vehicle Solar PV Case Studies Based Demand Response Modernization” IEEE Intelligent Computing and Control for Engineering and Business Systems (ICCEBS), 2023.
- **Nayanatara. C** has published the paper entitled” IoT Based Robot for Domestic Surveillance Using ESP-NodeMCU” IEEE Intelligent Computing and Control for Engineering and Business Systems (ICCEBS), 2023.
- **Nayanatara. C** has published the paper entitled” Flexible IoT Based DSM-DG Strategy Adopted for Benefit Maximization in a Power System Network” IEEE International Conference on Future Trends in Smart Communities (ICFTSC), 2022.
- **Nayanatara. C** has published the paper entitled” Low Frequency Underwater Acoustic Modelling Based on Deep Learning” IEEE International Conference on Future Trends in Smart Communities (ICFTSC),2022.
- **Nayanatara. C** has published the paper entitled” Energy Saving Through Optimal Dg Dispatch with Dsm For Residential Consumers” IEEE International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2022.
- **Nayanatara. C** has published the paper entitled” A Fuzzy-Genetic Approach to Identify Optimal DG Sources Plan In Power System Network.” International

Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2022.

- **Nayanatara. C** has published the paper entitled " Distributed Network Welfare Maximization DSM-DG Strategy" International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2022.
- **Nayanatara. C** has published the paper entitled" Transfiguration of Acoustic Energy into Electrical Energy Using Piezoelectric Transducers with Boost Converter" International Conference on Power, Energy, Control and Transmission Systems (ICPECTS), 2022.
- **Nayanatara. C** has published the paper entitled" Optimal Placement of Distribution Generator by Incorporating Demand Response Strategy for Residential and Industrial User" International Conference on Computational Science and Technology (ICCST), 2022.
- **Nayanatara. C** has published the paper entitled" Deep learning enabled smart charging technology for electric vehicles" AIP Conference Proceedings 2527, 04000; <https://doi.org/10.1063/5.0109161,2022>.
- **Nayanatara. C** has published the paper entitled" IoT based smart devices framework for grid demand response management" AIP Conference Proceedings 2527, 040002 <https://doi.org/10.1063/5.0108870,2022>.
- **Nayanatara. C** has published the paper entitled" A novel approach for image restoration using convolution network-based image denoising technique" on AIP Conference Proceedings 2527, 040003; <https://doi.org/10.1063/5.0108299,2022>.
- **Nayanatara. C** presented the paper titled "Demand Response Framework for minimizing power loss by optimizing DG parameters" in International conference on Recent Developments in Electrical and power Engineering, 2022.
- **Nayanatara. C** presented the paper titled "Real Time Low-Cost Automated Production System Using Internet of Thing" in international conference on Innovations and research in Marine Electrical and Electronics Engineering, 2021.
- **Nayanatara. C** presented the paper titled "Optimal Placement of Distribution Generator by Incorporating Demand Response Strategy for Residential and Industrial User" in international conference on Computing and Communication Technologies, 2021.
- **Nayanatara. C** presented the paper titled "Congestion Management in Deregulated Power Systems using Genetic Algorithm", IEEE International Conference on Power, Energy Control and Transmission Systems (ICPECTS), 2020.
- **Nayanatara. C** presented the paper titled "Flower Pollination Algorithm in DPS Integrated DFIG for Controlling Load Frequency", IEEE International Conference on Power, Energy Control and Transmission Systems (ICPECTS), 2020.
- **Nayanatara. C** presented the paper titled "GA based Simultaneous Optimization of hybrid Distributed Generation in the Power System Network", IEEE International Conference on Power, Energy Control and Transmission Systems (ICPECTS), 2020.
- **Nayanatara. C** presented the paper titled "Optimization of Renewable Energy Parameters for maximizing Power output", IEEE International Conference on Power, Energy Control and Transmission Systems (ICPECTS), 2020.
- **Nayanatara. C presented the paper entitled** A Control Strategy adopted for improving Transient Stability in EESG based Wind Turbines" IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2019.
- **Nayanatara. C** presented the paper entitled "Optimization of hybrid energy

resources using HOMER software” IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2019.

- **Nayanatara. C** presented the paper entitled “Development of Bi-directional energy meter for a grid-connected PV system with power quality improvement using D-STATCOM” IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2019.
- Nayanatara. C presented the paper entitled “A hybrid technique of machine learning and data analytics for optimized distribution of renewable energy resource targeting smart energy management” Elsevier procedia Computer Science, 2019.
- Nayanatara. C presented the paper entitled “Multi objective placement in UCP by improved honey-bee mating optimization’ IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2018.
- Nayanatara. C presented the paper entitled “Control strategy adopted for optimization of DG parameters in the power distribution network’ IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2017.
- Nayanatara. C presented the paper entitled “Fuzzy-SA approach for optimization of Distributed Generation Parameters in a Power System network’ IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2016.
- **Nayanatara. C** presented the paper entitled Optimal Location of UPFC for congestion relief in power system using simulated annealing algorithm”, IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2016.
- **Nayanatara. C** presented the paper entitled “Simulated Annealing approach for congestion minimization using Distributed power Generation’ IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2015.
- **Nayanatara. C** presented the paper entitled Novel Multiobjective optimal placement of Multiple Distributed Generations in IEEE 33 bus Radial System using Simulated Annealing”, IEEE International Conference on Circuit, Power and Computing Technologies, February 2015
- **Nayanatara. C** presented the paper entitled “Optimal Location of Distributed Generation using Micro Genetic Algorithm, IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2014.
- **Nayanatara. C** presented the paper entitled “Optimization of Distributed Generation parameters in a power System Network for Welfare Maximization”, IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2014.
- **Nayanatara. C** presented the paper entitled “Design and Development of Series Hybrid Vehicle”, International conference on computation of power energy, information and communication ICCPEIC-2014.
- **Nayanatara. C** presented the paper entitled “Novel Optimization of Power quality Problems using Genetic Algorithm”, IEEE International Conference on Futuristic Trends in Electronics Engineering, April 2014.
- **Nayanatara. C** presented the paper entitled “Enhancement of Power Quality using FACTS Device”, IEEE International Conference on Advanced Research in Engg. and

Technology on February 2013.

- **Nayanatara. C** presented the paper entitled “Optimal Location of FACTS Devices for System Loadability”, IEEE International Conference on Computation of Power, Energy Information and Communication (ICCPEIC), 2013.
- **Nayanatara. C presented** the paper entitled “Optimal Location of Facts Device for Device ATC Enhancement Using GA”, International conference on computation of power energy, information and communication ICCPEIC-2012

National Conference:

- **Nayanatara. C**, has presented the paper entitled “Harmonic Distortion Using Shunt Active Filter by Fuzzy Control technique”, National Conference on Intelligent power Electronics Technology (IPET-2015) April 2015.
- **Nayanatara. C.** (2015), has presented the paper entitled “Application of SEPIC Converter in MPPT With Variable Step Size Incremental Conductance Method”, National Conference on Recent Trends in Electrical, Electronics & Communication Engineering 20th March -2015 (NCRTEECE-2015).
- **Nayanatara. C.** Inductive Voltage Controlled Variable Power factor Buck Type AC-DC Converter. National Conference on Cutting edge Technology in Power Conversion and industrial drives, Conference Proceedings of PCID, 2005.
- **Nayanatara, C**, ‘Congestion Management by determining optimal location of TCSC using Genetic Algorithm’, National Conference on Computational Intelligence in Power Apparatus and System at SRMUniversity,2007.
- **Nayanatara. C.** Harmonic Reduction using-36 Pulse in HVDC Transmission System. National Conference on Cutting edge Technology in Power Conversion and industrial drives, Conference Proceedings of PCID, 2005.
- **Nayanatara, C**, 2008, ‘Available Transfer Capacity assessment and enhancement using FACTS devices’, National Conference on Research Scholars on Application of Emerging Technologies at Adhiyaman College of Engineering.2008.

BOOKS PUBLISHED:

- Power Quality
- FACTS

BOOK CHAPTER PUBLISHED:

1. “Heuristic Windmill Structure Considering Blade Design to Obtain the Maximum Power Output” In Recent Developments in Electronics, Computing and Mechanical Sciences, ANVI BOOKS AND PUBLISHERS- NEW DELHI
2. “Prediction and Scheduling of Energy Consumption using Machine Learning” in DIPTI Press.
3. Internet of Things- Based Advanced Metering Infrastructure (AMI) for smart Grids” Integration of renewable Energy Sources with Smart Grid – Wiley.

PATENTS:

Title of Invention	Inventors Name	Application No	Status
1. A NEW SOLAR PANEL DEVELOPMENT USING GRAPHENE DOPED WITH POLY ALUMINIUM AS A BASE MATERIAL.	C.NAYANATARA	201741033458	PUBLISHED
2. IOT BASED AUTOMATION OF HYBRID DISTRIBUTED GENERATION DEVICES	C.NAYANATARA	201741027462	PUBLISHED
3. HEURISTIC WINDMILL STRUCTURE CONSIDERING BLADE DESIGN TO OBTAIN THE MAXIMUM POWER OUTPUT	C.NAYANATARA	202041045363 A	PUBLISHED
4. IOT BASED AUTOMATED TOILBOTS	C.NAYANATARA	202041045363 A	PUBLISHED
5. AI BASED TOKEN DISPENSER FOR QUEUE MANAGEMENT	C.NAYANATARA	407415-001	GRANTED

- Completed online course from Coursera on “Architecting Smart IoT Devices”.
- Completed online course from Coursera on “Electric Power Systems”.
- Completed online course from Coursera on Introduction to “Architecting Smart IoT Devices”.
- Completed online course from Coursera on “The Sustainable Development Goals – A global, transdisciplinary vision for the future”.
- Completed online course from Coursera on “Introduction and Programming with IoT Boards”.
- Completed online course from Coursera on “Wind Energy”.
- Completed online course from Coursera on “Cybersecurity and the Internet of Thing”.
- Completed online course from Coursera on “AI For Everyone”.
- Completed NPTEL course on “Fuzzy Logic and Neural networks”.
- Completed NPTEL course on “. Effective Engineering Teaching in Practice”.
- Completed online course from Tata steel on “Power Systems Generation”.
- Completed online course from Elsevier on “Writing a persuasive cover letter for your manuscript”.
- Completed online course from Elsevier on “Successful research grant applications – getting it right”.
- NITTT (8 Module Mentor Certification)

ACADEMIC RESPONSIBILITY IN SRI SAIRAM ENGINEERING COLLEGE CERTIFICATION COURSES

- NAAC and NBA Coordinator
- Organized IEEE International Conference

- Project coordinator (2012-2019)
- Seminar In-Charge (2013,2017,2019,2023)
- Course Moderator

Membership in Professional Bodies

- Member of IEEE (Institution of Electrical and Electronics Engineers) -**94401275**.
- Life member of ISTE (Indian Society for Technical Education) - **LM 31245**
- Life member of Institute of Researchers- **LM062203**
- Life member of International Association of Engineers- **311544**

Programmes Organized

- Coordinated IIT Pals Workshops and Seminars and Winner of Innawah .
- 15 days AICTE Sponsored Faculty Development Program on Transmission and Distribution at Sri SaiRam Engineering College, Chennai.
- 2 days AICTE Sponsored Seminar at Sri SaiRam Engineering College, Chennai.
- 7 days (One week) ISTE-SRM Sponsored STTP on Power Quality Issues in power system network at Sri SaiRam Engineering College, Chennai.
- Convener and Conference Chair for IEEE Sponsored International conference on power, control and transmission systems (ICPECTS) in the year 2017 and 2020.

Special Lectures Delivered:

- A lecture on the topic “Genetic Algorithm” in AICTE sponsored SDP at Adhiparasakthi Engineering College, Melmaruvathur.
- A lecture on the topic, “FACTS devices” in AICTE sponsored SDP held at Adhiparasakthi Engineering College, Melmaruvathur.
- A lecture on the topic, “ALFC Mechanism” in the Anna University, Chennai sponsored FDP, “Power System Operation and Control” held at Valliammai Engineering.
- A lecture on the topic, “Power Quality Issues” in AICTE sponsored Seminar held at Adhiparasakthi Engineering College, Melmaruvathur.
- A lecture on the topic, “Micro-Genetic Algorithm for FACTS Controller” in AICTE SDP held at Adhiparasakthi Engineering College, Melmaruvathur.
- A lecture on the topic, “Reactive Power Compensation Techniques” ISTE-SRM sponsored STTP, held at Valliammai Engineering.
- A lecture on the topic, “FACTS devices for Transient Stability” in the AICTE sponsored SDP, held at Adhiparasakthi Engineering College, Melmaruvathur.
- A lecture on the topic, “Heuristic Search methods on power system analysis” at Anna University sponsored FDP at Sri SaiRam Engineering College.
- A lecture on the topic, “Power system analysis” at Anna University sponsored FDP at Jerusalem Engineering College.
- A lecture on the topic, “Power World Simulator” at STTP at Valliammai Engineering College.
- A lecture on the topic, “Genetic Algorithm and its Applications” at Vellammal

Engineering College, Madurai.

- A lecture on the topic, “Transmission and Distribution at Valliammai Engineering College, SRM Nagar
- A lecture on the topic, “Load Flow analysis” at Valliammai Engineering College, SRM Nagar
- A lecture on the topic, “Artificial Intelligence and Genetic Algorithm” at SRM-Vadapalani Campus.

Programme Attended:

- Attended Workshop on “**Embedded System and its applications**” at SRM University.
- Attended Workshop on ‘**PLC and its Applications**’ organized by the Department of Electrical and Electronics Engineering, Sri SaiRam Engineering College.
- Attended Workshop on ‘**An Overview of OrCAD**’ organized by the Department of Electrical and Electronics Engineering, Sri SaiRam Engineering College.
- Attended Short Term Training Programme on ‘**Modeling of FACTS Devices and its Applications**’ conducted by the Department of Electrical and Electronics Engineering, SRM University.
- Attended Faculty Development Programme on ‘**Electromagnetic Theory**’ conducted by the Department of Electrical and Electronics Engineering, Valliammai Engineering College.
- Attended Faculty Development Programme on ‘**Control Systems**’ conducted by the Department of Electrical and Electronics Engineering, Sri Sai Ram Engineering College.
- Attended Faculty Development Programme on ‘**VHDL Programming**’ conducted by the Department of Electrical and Electronics Engineering, Sri Sai Ram Engineering College.
- Attended Faculty Development Programme on ‘**MATLAB Applications in Electrical Engineering**’ conducted by the Department of Electrical and Electronics Engineering, Sri Sai Ram Engineering College.
- Participated in the **Indian Science congress** At SRM University.
- Attended the workshop titled:” **Optimization techniques in Power Systems**” at Adhiparasakthi Engineering College.
- Attended STTP on “**MATLAB Simulation of Power Electronic Circuits**” at Sri SaiRam Engineering College.
- Attended FDP on “**Digital Simulation of Power Electronic Circuits through PSPICE software**” on July 2015 at Sri SaiRam Engineering College.
- Attended National level FPP on “**Electrical Simulation Software**” on October 2017 at Sri SaiRam Engineering College.
- Attended “Two days International level Hands on Workshop on **Smart Microgrids And Energy Storage using HOMER**” organized by School of electrical Engineering (SELECT), Vellore Institute of Technology ,Chennai from 9th to 10th March 2018.
- Attended five days Faculty Development Programme on “**Modeling, Simulation, Control and Applications of Power Electronic Converters**” at QIS college of Engineering and Technology.
- Attended five days short term course on “**Artificial Intelligence- Concepts and Applications**” at IIITDM.
- Completed Online Course on “**Data Science and Machine Learning**”.

- Attended ATAL FDP on **Artificial Intelligence, Electric Vehicle, Data Science, Optimization Techniques.**
- Completed NAAN MUDHALVAN course on Smart Grid and its applications.
- Attended Summit on End-to End **Wind Energy Simulation at NIWE**
- Attended Industry powered FDP on **Smart Technologies on power systems L& T.**
- Participated in the AICTE Recognized Faculty Development Programme on **MATLAB - Artificial Intelligence and Optimization Techniques** at NITTTR, Chandigarh.
- Participated & completed successfully AICTE Training And Learning (ATAL) Academy Online Elementary FDP on **"Nature Inspired Optimization Techniques"** at National Institute of Technology Delhi.
- Participated in the Faculty Development Programme (FDP) on **"Interactive Approaches in Handling Renewable Energy Systems Laboratory for the New Normal"** organized by Sri Sivasubramaniya Nadar College of Engineering.
- Participated in the Online AICTE Recognized Faculty Development Programme on **Development of Residential Micro grid** (in collaboration with Typhoon) Conducted by NITTTR, Chandigarh