DIVYA S
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DEPARTMENT OF EEE
B.M.S COLLEGE OF ENGINEERING
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PROFESSIONAL OBJECTIVE

Innovation is the key aspect in this era of growing technology. I am interested in Research & Development in my career, as it offers challenging work.

SKILLS

Programming Skills : Basic C- Programming and Data structures, coding the TMS320F28379D

CAED Tools : Solid Edge

Other tools : MATLAB, MultiSim, PSim, LabView, Kiel, LTspice, KiCAD, Altium

CURRENT PROFESSIONAL EXPERIENCE

Assistant Professor in the Department of Electrical and Electronics Engineering, BMS College of Engineering, Bangalore, from 31st August 2012 to date.

DUTIES

- BOE Co-ordination, 2022 - 2023
- Handled Analog Electronic Circuits (AEC) GATE 2021 classes for the EEE students during December 2020.
- Involved in the INTERNSHIP FOR STUDENTS /FACULTY ON 3D EXPERIENCE PLATFORM BY DASSAULT SYSTEMES (Virtual Lab creation) from June 2020 to December 2020.
- SPOC from BMS College of Engineering for the MOU between GALE Creative Agency, Bangalore and BMS College of Engineering
- One of the faculty Co - Ordinator for the BMSCE – UPAGRAHA Satellite Project, Electrical Power Subsystem team, from the Dept. of EEE, BMSCE. [2020 – 2023]
- UG NBA Department coordinator (2019 – 2020), Timetable coordinator, VTU Activity point coordinator for the batch of 2019 – 2023, EEE.

- One of the faculty Co-Ordinators for the "Mixed Reality Based Content Creation for Electrical Machines", a Dassault Systèmes Foundation and BMS College of Engineering project.

- One of the faculty in charge for the "TESTING, VERIFICATION AND VALIDATION PLATFORM FOR MOTOR CONDITIONING MONITORING SERVICES", an ABB project, June 2016 to Dec 2016.

TECHNICAL TALK DELIVERED

- Delivered a technical talk on "Modelling of Power Electronic Converters", in the Two-week value-added course on "Modelling, Simulation, Robotics and Automation" held from 21st March 2022 to 1st April 2022, organized by the Department of EEE, BMSCE.

- Delivered a three-day lecture from 29th January 2020 to 31st January 2020 on **"Fundamentals of HDL"**, a refresher course organised for the sixth-semester students in the EEE department, BMSCE.

BOOKS AUTHORED

- Co-authored a Textbook **"BASIC ELECTRICAL ENGINEERING"** bearing **ISBN:** 978-81-940490-1-2.
- Published a book chapter titled "Design and Development of an Electrical Power System for a 3U CubeSat" pp 127–146 in the Smart Small Satellites: Design, Modelling and Development, Part of the Lecture Notes in Electrical Engineering book series (LNEE, volume 963), Proceedings of the International Conference on Small Satellites, ICSS 2022.

COMPETITIONS/AWARDS

- Was a co-mentor for the project titled, "Design and Development of a solar PV Emulator-fed DC-DC converter", funded by the NITT UG Merit certificate Awards by the 1974 NITT Batch and Dr Ram and Thaila Foundation.

- Guided an 8th Semester UG project titled, "Design and Implementation of Converters for an Islanded DC Microgrid". This received the Consolation prize at the project exhibition held in the Dept. of EEE, BMSCE on 9th July 2022.

- Received certificate of appreciation from the Ministry of Education's INNOVATION CELL (Government of INDIA) and AICTE for exceptional contribution as Primary Evaluator in 'Toycathon, 2021'.

- Received the **NPTEL DISCIPLINE STAR** Certificate of Appreciation in **Electrical Engineering**, during July – December 2021, from NPTEL.

- Guided a 6th Semester UG project titled "Design and Simulation of Voice Controlled Robotic Car", which bagged First place in the paper presentation competition in the National Level Technical Symposium TRIGGER 2k21, organised by the Department of CSE, RRCE, on 12th July 2021.

- Received the "TI Embedded System Design Using MSP430 MCU MOOC" Certificate of appreciation for fostering the ecosystem bridging Government, Academia and Industry on 26th Dec 2020.

- Received Certificate of Accomplishment from Dassault Systèmes for my involvement in the REMOTE SUMMER INTERNSHIP ASSIGNMENT FOR FACULTY ON 3D EXPERIENCE PLATFORM BY DASSAULT SYSTÈMES (Virtual Lab creation), Assignment period – 16 weeks starting July 2020.

- Guided a UG student project, titled "Energy Harvesting Using Thermoelectric Generator", which won third place in the National Level MAKE–A–THON organised by Shri Shankaracharya Technical Campus (SSTC), Bhilai, Chhattisgarh, held on 27th and 28th January 2020.

ONLINE CERTIFICATION COURSE

ALTIUM DESIGNER ESSENTIALS

- Completed the Altium-approved program of study and assessment on Altium Designer Essentials from 13th September 2024 to 30th September 2024.

COURSERA

- Successfully completed the 5-week online non–credit course "Introduction to Calculus", authorised by The University of Sydney and offered through Coursera. Received certificate on 30th December 2020. Grade Achieved is 81%.

- Successfully completed the 3-week online non–credit course "Renewable Energy and Green Building Entrepreneurship", authorised by Duke University and offered through Coursera. Received certificate on 2nd October 2020. Grade Achieved is 79.13%.

- Successfully completed the 5-week online non–credit course "Getting Started with Google Sheets", authorised by Google Cloud and offered through Coursera. Received certificate on 23rd September 2020. Grade Achieved is 100%.

- Successfully completed the 9-week online non–credit course "Introduction to Programming with MATLAB", authorised by Vanderbilt University and offered through Coursera. Received certificate on 31st August 2020. Grade Achieved is 100%.

- Successfully completed the 3-week online non-credit course "Photovoltaic Solar Energy" from the Ecole Polytechnique, France, offered through Coursera. Received certificate on 29th June 2020. Grade Achieved: 96.40%

MATH WORKS TRAINING

- Successfully completed the self-paced training course on **"State flow Onramp"** conducted by the MathWorks Training Services on 8th July 2024.

- Successfully completed the self-paced training course on **"Solving Non–Linear Equations with MATLAB" conducted by the MathWorks** Training Services on 29th June 2020.

- Successfully completed the self-paced training course on **"Solving Ordinary Differential Equations with MATLAB"** conducted by the MathWorks Training Services on 28th June 2020.

- Successfully completed the self-paced training course on **"Introduction to Linear Algebra with MATLAB"** conducted by the MathWorks Training Services on 10th June 2020.

- Successfully completed the self-paced training course on **"MATLAB Onramp"** conducted by the MathWorks Training Services on 3rd June 2020.

NPTEL Online Certification course

- Successfully completed the **12-week NPTEL plus Online Certification course** from January to May 2025 in the subject "**Modeling and Digital Implementation of Power Electronic Converters for Renewable Applications**" with a consolidated grade of 'B'. Organized by Prof. N. Lakshminarasamma, IIT Madras.

- Successfully completed the **12-week NPTEL plus Online Certification course** from September to December 2024 in the subject **"Digital Controller for Power Applications"** with a consolidated grade of 'A'. Organized by Prof. N. Lakshminarasamma, IIT Madras.

- Successfully completed the **12-week NPTEL Online Certification course** from July to October 2023 in the subject **"**Digital Control in Switched Mode Power Converters and FPGA-based Prototyping**"** with **Elite – Silver** grade. Organized by Prof. Santanu Kapat, Department of Electrical Engineering, IIT Kharagpur. **Topper in the course. https://nptel.ac.in/courses/108105186**

- Successfully completed the **8-week NPTEL Online Certification course** from July to September 2021 in the subject **"Advanced Linear Continuous Control Systems: Applications with MATLAB Programming and Simulink"** with **Elite – Silver** grade. Organised by Dr Yogesh Vijay Hote, Department of Electrical Engineering, IIT Roorkee.

- Successfully completed the **8-week NPTEL Online Certification course** from July to September 2021 in the subject **"DC Microgrid and Control System"** with **Elite – Silver** grade. Organized by Prof. Avik Bhattacharya, IIT Roorkee.

- Successfully completed the **12-week NPTEL Online Certification course** from January to April 2021 in the subject "High Power Multilevel Converters – Analysis, Design and Operational issues" with an **Elite** grade.

- Successfully completed the **12-week NPTEL Online Certification course** from September to December 2020 in the subject **"Power Electronics"** with **Elite – Silver** grade.

- Successfully completed the **2-week NPTEL Online Certification course** on **"Digital Transformation in Teaching and Learning Process"** from April 6th to April 22nd, 2020.

- Successfully completed the **12-week NPTEL Online Certification course** from July to October 2019 in the subject **"Fundamentals of Electrical Engineering"** with **Elite – Silver** grade.

TECHNICAL PUBLICATIONS

- Presented a paper titled **"A NOVEL RESISTANCE SWITCHING ALGORITHM FOR OPTIMAL OPERATION IN SOLAR PV SYSTEMS"** in the IEEE North-East India International Energy Conversion Conference and Exhibition (NE-IECCE 2025), organised by IEEE IAS Joint Chapter Silchar Subsection in collaboration with Electrical Engineering Department, National Institute of Technology, Silchar, from 4th July to 6th July 2025.

- Presented a paper titled **"A COMPREHENSIVE DESIGN AND ANALYSIS OF SOLAR PV EMULATOR"** in the IEEE North-East India International Energy Conversion Conference and Exhibition (NE-IECCE 2025), organised by IEEE IAS Joint Chapter Silchar Subsection in collaboration with Electrical Engineering Department, National Institute of Technology, Silchar, from 4th July to 6th July 2025.

- Presented a paper titled, "**COMPREHENSIVE REVIEW ON ON-BOARD CHARGERS FOR ELECTRIC VEHICLES**" at the 39th National Convention of Electrical Engineers and National Conference on "Green Hydrogen, Electric Vehicles, and Energy Storage Systems," held on the 25th & 26th of October 2024, organised by the Institute of Engineers (India) – Tamil Nadu State Centre.

- Presented a paper titled, "**CONTROL SCHEMES FOR THE OPERATION OF THE GRID FORMING CONVERTER"** at the 39th National Convention of Electrical Engineers and National Conference on "Green Hydrogen, Electric Vehicles, and Energy Storage Systems," held on the 25th & 26th of October 2024, organised by the Institute of Engineers (India) – Tamil Nadu State Centre. **[BEST PAPER AWARD].**

- Published a paper titled, **"DESIGN AND SIMULATION OF VOICE CONTROLLED ROBOTIC CAR",** in the International Journal of Management, Engineering and Technology, Vol. - 1, No. 1, pp. 42-50, September 2023, E-ISSN: 2584-0657.

- Published a book chapter titled **"DESIGN AND DEVELOPMENT OF AN ELECTRICAL POWER SYSTEM FOR A 3U CUBESAT"** pp 127–146 in the Smart Small Satellites: Design, Modelling and Development, Part of the Lecture Notes in Electrical Engineering book series (LNEE, volume 963), Proceedings of the International Conference on Small Satellites, ICSS 2022. https://link.springer.com/chapter/10.1007/978-981-19-7198-3_13

- Presented a paper titled, **"DESIGN, MODELLING AND SIMULATION OF A TRADITIONAL DC-DC BOOST CONVERTER AND AN INTERLEAVED DC-DC BOOST CONVERTER"** at ICPCSES – 2022 held at B.M.S College of Engineering, Bangalore, India (Online Mode) from 28th July 2022 to 30th July 2022.

- Presented a paper titled, **"DESIGN AND DEVELOPMENT OF AN ELECTRICAL POWER SYSTEM FOR A 3U CUBESAT"** at ICSS-2022 held at Lovely Professional University, India (Hybrid Mode) from 29th April 2022 to 30th April 2022.

- Presented a paper titled, **'IMPLEMENTATION OF OPEN-ENDED LAB ASSESSMENT FOR ENHANCED LEARNING EXPERIENCE'** in the **IUCEE** Mini Symposium on Effective Practices in Teaching-Learning on 23rd – 24th April 2022.

- Published a paper titled**, "PRELIMINARY DESIGN AND SIMULATION OF THE ELECTRICAL POWER SYSTEM FOR A CUBESAT USING LTSPICE"** in the 7th International Conference on "Space Science & Communication (IconSpace2021) organised by Space Science Centre (ANGKASA), Institute of Climate Change (IPI), University Kebangsaan Malaysia (UKM) on 23rd - 24th November 2021.

- Published a paper titled, "**MULTIPHASE BIDIRECTIONAL DC-DC CONVERTER WITH PHASE SHEDDING FOR BLDC DRIVEN ELECTRIC VEHICLE"** in the 2021 IEEE International Power and Renewable Energy Conference (IPRECON 2021) held on 24th - 26th September 2021.

- Published a paper titled, "**MODELING AND SIMULATION OF A BATTERY CHARGING CIRCUIT FOR ELECTRIC VEHICLES USING Z-SOURCE CONVERTER"** in the International Journal of Engineering Applied Sciences and Technology, 2020, Vol. 5, Issue 4, ISSN No. 2455-2143, Pages 348-354, Published Online August 2020 in IJEAST.

- Published a paper titled, "**DESIGN AND MODELING OF Z SOURCE INVERTER WITH THE NOVEL IMPLEMENTATION OF MODIFIED MODULATING SIGNAL AND SHOOT THROUGH CONTROL**

STRATEGIES" at Michael Faraday IET International summit MFIIS 2015, held on 12th -13th September 2015 at Kolkata.

- Published a paper titled, "**DESIGN AND MODELLING OF A NOVEL TWO-STAGE CASCADED INTERLEAVED BOOST CONVERTER FOR HIGH VOLTAGE APPLICATIONS"** at Michael Faraday IET International summit MFIIS 2015, held on 12th -13th September 2015 at Kolkata.

- Published a paper titled, "**MODELING AND SIMULATION OF AN IMPEDANCE NETWORK OF Z SOURCE INVERTER USING SIMPLE BOOST CONTROL"** in the 7th National Conference on 'Advances in Energy Conversion Technologies' AECT- 2015, on 23rd – 24th Jan at MIT, Manipal.

- Published a paper titled, "**DESIGN AND MODELING OF INTERLEAVED BOOST CONVERTER FOR MEDIUM VOLTAGE APPLICATIONS"** in the 7th National Conference on 'Advances in Energy Conversion Technologies' AECT- 2015, on 23rd – 24th Jan at MIT, Manipal.

- Published a paper titled, "**MODELLING OF TRANSMISSION LINE TOWERS FOR THE LIGHTNING ATTACHMENT PROCESS"** in National Conference on 'Recent Advances in Electrical & Electronics Engineering' NCRAEEE- 2013, at UBDTCE, Davangere, pp 37-41.

PROFESSIONAL MEMBERSHIP

- IEEE Membership, IEEE Young Professionals Member, IEEE Women in Engineering Member, IEEE Industry Applications Society Member.
  MEMBER NUMBER: 96443837
- IEI Member: Membership number: M-1812143 (KARNATAKA State Centre of The Institution of Engineers (India)) – Lifetime Membership.
- IEEE SSIT Bangalore Chapter, Treasurer, 2022 - 2024

EVALUATOR FOR IDEATHON COMPETITION

- Was the evaluator in the "IDEATHON 2020 – Theme: Smart Cities" in the IEEE PES Student Congress 2020, held from 28th to 30th August 2020.

CONFERENCE ATTENDED

- Attended the "IEEE North-East India International Energy Conversion Conference and Exhibition (NE-IECCE 2025)", organized by IEEE IAS Joint Chapter Silchar Subsection in collaboration with Electrical Engineering Department, National Institute of Technology, Silchar from 4th July to 6th July 2025.

- Attended the **"ConnectNext Conference"** organized by La Fondation Dassault Systemes, India on 17th September 2020.

OTHER ACHIEVEMENTS

EDUCATION

- Secured Second rank in M.Tech (Power Electronics), Batch 2013 – 2015 from the Visvesvaraya Technological University (VTU), Belgaum with an aggregate percentage of 89.5.
- Been awarded the 'Best Outgoing Student' for the M.Tech (Power Electronics), Batch of 2013 – 2015, from the Department of Electrical and Electronics Engineering, PESIT, Bangalore.
- Secured First rank in B.E, Electrical and Electronics Engineering, Batch 2008-2012, with an aggregate of 9.76 CGPA.
- Secured Third place in Electronics Investigative Project in the Intra Collegiate Science Competition organized by Science Forum in 2007.
- Secured Second place in Electronics Project Exhibition in the Intra Collegiate Science Competition organized by Science Forum in 2006.

SPORTS

- KARATE 3^{RD} DAN BLACK BELT
- Participated in the three-day Karate and Kobudo Seminar organized by the Okinawan Shorin Ryu Karate Do Kobudo Association India from 3^{rd} to 5^{th} February 2017.
- Participated and secured Second place in the AKSKA (Akhila Karnataka Sports Karate Association of Karnataka) 4^{th} state level Karate Championship held in Bangalore, July 2012.
- Participated and secured First place in the 24^{th} AIKF (All India Karate Federation) Tournament held in Bangalore, January 2011.
- Passed Referee examination conducted by the Sports Karate Association of Karnataka in 2009.