RESUME

Abhilash Tirupathi
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Career Objective

Having a Ph.D degree, 3.8 years of experience in teaching, two years of Research experience and mentoring a versatile student community at various colleges/training institutions. I would like to find myself, enhancing the learning experience in the process of professional and technical organization.

Academic Qualifications:

Qualification	University/College	Year of Passing	Status/Percentage	Mode
Ph.D (P.E.D)	National Institute of Technology, Warangal	2020	Degree Awarded on 22-06-2020	Full Time
M. Tech (P.E.D)	Sri Venkatesa Perumal College of Engineering & Tech., Puttur	2012	80.7%	Full Time
B. Tech (E.E.E)	Audisankara college of Engg., & Tech., Gudur	2009	71.2%	Full Time
Intermediate (M.P.C)	Nalanda Jr. college, Nellore.	2005	89.5%	Full Time
S.S.C	Siddhartha E/M school, Nellore.	2003	69.3%	Full Time

Experience:

- Worked as a **Postdoctoral Researcher under Prof. Dong-choon Lee at Electrical lab** in **Yeungnam University,** Gyeongsan-si, South Korea from Mar. 2021 to Feb. 2022.
- Worked as an **Assistant Manager–Research Mentor** in **Career Launcher Educate Ltd.** (Aditya group of institutions), East Godavari, from Feb. 2020 to Feb. 2021.
- Worked as an **Assistant Professor in N. B. K. R.** Institute of Science and Technology **(Autonomous)**, Vidyanagar, from July 2014 to June 2015.
- Worked as an **Assistant Professor in S. V. College** of Engineering, Tirupati, from May 2013 to June 2014.
- Worked as an **Assistant Professor in S. V. P. College** of Engg., & Technology, Puttur, from July 2011 to May 2013.

Publications:

International Journals:

1. T. Abhilash, A. Kirubakaran and V. T. Somasekhar, "A Seven-Level VSI with a Front-end Cascaded Three-Level Inverter and Flying Capacitor fed H-Bridge", *IEEE Transactions on Industry Applications*, vol. 55, no. 6, pp. 6073-6088, Aug. 2019.
2. T. Abhilash, A. Kirubakaran and V. T. Somasekhar, "A New Structure of Three-Phase Five-Level Inverter with Nested Two-Level Cells", *International Journal of Circuit Theory and Applications-Wiley,* vol. 47, no. 9, pp. 1435-1445, Sep. 2019.
3. T. Abhilash, A. Kirubakaran and V. T. Somasekhar, "A New Hybrid Flying Capacitor Based Single-Phase Nine-Level Inverter", *International Transactions on Electrical Energy Systems-Wiley*, vol. 29, no. 12, pp. 1-15, Dec. 2019.
4. T. Abhilash, A. Kirubakaran and V. T. Somasekhar, "A Three-phase Inverter Circuit using Half-bridge cells and T-NPC for Medium-Voltage Applications", *International Journal of Circuit Theory and Applications-Wiley,* vol. 48, no. 10, pp. 1744-1765, Oct. 2020.

International Conferences:

1. T. Abhilash, A. Kirubakaran and V. T. Somasekhar "A Novel 3-Phase Seven-level Inverter" *IEEE International Conference on Innovations in Power and Advanced Computing Technologies*, pp. 1-5, 2017.
2. T. Abhilash, A. Kirubakaran and V. T. Somasekhar, "A Seven-Level Hybrid Inverter with DC-Link and Flying Capacitor Voltage Balancing", *19th IEEE International conference on Environment and Electrical Engineering (IEEE-EEEIC)*, pp. 1-5, 2019.
3. T. Abhilash and D. -C. Lee, "A 3-Phase Nine-Level Inverter Topology with Improved Capacitor Voltage Balancing Method," *24th International Conference on Electrical Machines and Systems (ICEMS)*, pp. 223-227, 2021.

(You can visit my google scholar profile for complete list of publications.)

Google scholar link:

https://scholar.google.co.in/citations?user=W8EUB7gAAAAJ&hl=en&oi=ao

Research Experience:

- Hands-on experience with DIGILENT SPARTAN-6 (XC6SLX45) FPGA Processor and d-space.
- Hands-on experience in making Gate driver circuit boards using optocouplers (TLP250).
- Hands-on experience in making power circuits with MOSFETs and IGBTs on PCBs.
- Hands-on experience in working with Pragna IGBT VSI Modules.

Research work in Ph. D

- Title: **Performance Evaluation of Hybrid Multilevel Inverter Topologies for Medium-Voltage Applications**
- Description: The advantages of using multilevel topology include the reduction of power ratings of the power devices and lower cost. The design intention of a hybrid inverter is to attain an optimal trade-off in the selection of power devices in terms of switching frequency and voltage sustaining capability. An optimised hybrid inverter is therefore more efficient as it can generate the same number of output voltage levels using fewer power devices and DC sources as compared with conventional MLI topologies. Novel hybrid MLIs have been developed and proposed with the reduced number of component counts, reduced voltage rating of the switching devices, and improved efficiency.

GATE Teaching Experience:

- Worked as a Freelancer in **VANI INSTITUTE (Bangalore)** in 2016, for teaching a course on "Electrical Circuits".
- Worked as a Freelancer in **IES-GATE** academy **(Chennai)** from 2014-2016, for teaching the courses on "Electrical Circuits", "Power Electronics", and "Electrical Machines".
- Worked as a Freelancer in **SAIMEDHA (Hyderabad)** from 2015-2016, for teaching the courses on "Electrical Circuits", "Electrical Machines", and "Power Electronics".
- Worked as a Freelancer in **GATEFORUM (Warangal)** in 2015, for teaching a course on "Electrical Machines".

Work-shops attended:

1. Five-day GIAN course on "**Power conditioning for PV systems**" organized by the Department of Electrical Engineering, NIT Warangal, 2018.
2. One-week program on "**Recent trends in power electronic converters and real time control**" organized by the Department of Electrical Engineering, NIT Raipur, 2015.

Interested subjects to teach:

Primary: Power Electronics, Electrical Machines, Electric circuits.

Secondary: Control Systems, Power Systems.

Personality Traits:

- Able to act as Mentor/Guide to the students to achieve their goals.
- Dexterous to develop the challenging questions and problems in core subjects.
- Able to teach the subject by quoting practical applications and examples.
- It gives me immense pleasure to see my students reaching their goals in Placements, GATE, and other competitive exams.

Technical skills:

✓ Core subjects	:	Power Electronics and drives, Electrical Machines, Network Analysis
✓ Simulation tools	:	MATLAB-SIMULINK, PLECS, and PSIM
✓ Office tools	:	M.S. Office

Strengths:

- Endeavour to solve the problems in a realistic approach.
- Ability to work in a team as well as independently.
- Ability to complete the allotted work within time limit.
- Optimistic in utilising the available resources
- Sportive nature.

Scholastic Activities:

- Certified as **"AUTOMATION ENGINEER IN INDUSTRIAL AUTOMATION"** from Technocrat Automation Solutions Pvt. Ltd. (CHENNAI), 2011.
- Presented a paper on **"Space Vector Modulation Technique"** in a National conference held at Siddhartha Group of institutions, Puttur, 2012.
- Resource person in the event "**SCIENTIFIC HERITAGE OF INDIA**" organised by A.P. state Government retired employee's association, Gudur, 2007.
- Presented a real-time project on "**Lead acid Battery charger**" during B.Tech final year, 2009.

Personal profile:

Full Name	:	**Abhilash Tirupathi**
Father's name	:	Mr. T. Ravindra Babu
Date of Birth	:	27-03-1988
Gender	:	Male
Nationality	:	Indian
Category	:	OC (General)
Marital status	:	Single
Languages known	:	Telugu, English, and Hindi
Passport Number	:	U2696293
Permanent Address	:	Abhilash Tirupathi Villa-5, Sharvika Properties 10th Street, Krishna nagar Varadharajapuram, Kanchipuram Dt., Chennai. Tamilnadu-600048.

Declaration

I hereby declare that the above particulars are true, and complete to the best of my knowledge.

Place : Chennai

Date : 30-04-2022

(T. ABHILASH)