CURRICULUM VITAE

Prof. Vijaya Bhaskar
Office Address:
Associate Professor,
Room no-22, Academic Building
Department of Electrical Engineering,
Indian Institute of Technology (Indian School of Mines),
Dhanbad, Jharkhand – 826004.

Education:

PhD	Electrical Engineering from National Institute of Technology, Warangal, India in 2017.
M.Tech	Power Electronics and Drives from National Institute of Technology, Warangal, India in 2009.
B.Tech	Electrical and Electronics Engineering Jawaharlal Nehru Technological University, Hyderabad, India in 2006.

Research Interest:

- ✧ Power electronics
- ✧ High frequency inverters
- ✧ Special purpose drives
- ✧ Co-ordinate micro grid controllers
- ✧ Battery Management

Experience :

- ✧ From :Aug 2023 Associate Professor IIT(ISM) Dhanbad
- ✧ From :Jun 2012 Assistant Professor IIT(ISM) Dhanbad

Courses taught:

- ✧ Modelling of Electrical Machines
- ✧ Applied Electrical Engineering
- ✧ Microprocessors and Micro controllers
- ✧ Electrical Drives
- ✧ Design of Power converters
- ✧ Basic Electrical Engineering

Laboratories taken:

- ✧ Basic Electrical Engineering laboratory
- ✧ Electrical Drives laboratory
- ✧ Mine Electrical Engineering laboratory

Contribution to Laboratory Development at IIT(ISM) Dhanbad:

- ✧ Faculty in charge: UG Electrical Drives Laboratory, Electrical Engineering Department.
- ✧ Developed new experimental set ups for Electrical Drives Lab. The experiments are used for 5th/7th semester B-Tech (EE) students.
- ✧ Purchased new experimental setup and Experimental components for Electrical Drives Lab.

New Syllabus Prepared for B. Tech, EE/IIT(ISM) Dhanbad:

- ✧ Applications of Electrical Drives [L-T-P: 3-0-0]

Project supervision:

- ✧ UG: complted-10, ongoing-01
- ✧ PG: completed-40, ongoing-01
- ✧ **PhD: Awarded: 02, ongoing:02**

Sl. No	Name of Candidate	Thesis Title	Status
1	Mrutunjaya Panda (17DR000582)	Coordinated Power Management Strategies For Multiple Sub-grids in Photovoltaic-Battery Based DC Microgrid	**Awarded on: 22/11/2022 Full Time**
2	Prashant Kumar (18DR0100)	Disturbance Observer Based Sensorless Motor Drive Control For Low-Power Electric Transportation System	**Awarded on: 8/05/2023 Full Time**
3	Alok Ranjan	Electrical Drives	Ongoing **Full Time**
4	Abhishek	Power Electronics	Ongoing **Full Time**

Details of Research Work and Funding from External Agencies:

Sl. No.	Name of PI/Co-PI etc.	Sponsoring Authority	Topic/ Field	Sanctioned Amount (Rs.)	Status
1	D.V.Bhaskar (PI)	SERB	Multi-output series resonant inverter for non-contact heating in rural domestic cooking Applications.	15,18,000	Completed
2	D.V.Bhaskar (PI)	TEQIP-II under minor research project (MRP) scheme	High Frequency Resonant Inverter for Multi-Output Induction Heating Applications	2,00,000/-	Completed

Patents:

Patent Title	cyclic on-off control for a three output inverter for induction cooking application with independent control
Name of Applicant(s)	Neti Vishwanathan, **D.Vbhaskar,**Tanmoy Maity S. Porpandiselvi
Patent No.	201641030518
Award Agency/ Status /year	India/ Waiting/2016

Publication Details

Type of Research Papers	Nos.
International Journals	**15**
International Conferences	**16**
Total Research Papers	**31**

A. International Journals :

1. P. Kumar, **D. V. Bhaskar,** R. K. Behera and U. R. Muduli, "Continuous Fast Terminal Sliding Surface Based Sensorless Speed Control of PMBLDCM Drive," in IEEE Transactions on Industrial Electronics, doi: 10.1109/TIE.2022.3225850.**(Q1)**

2. M. Panda, **D. V. Bhaskar**, T. Maity, "A Fuzzy-Based Coordinated Power Management Strategy for Voltage Regulation and State-of-Charge Balancing in Multiple," in International Transactions on Electrical Energy Systems, 2022, https://doi.org/10.1155/2022/1288985. **(Q2)**

3. M. Panda, **D. V. Bhaskar**, T. Maity, "A Fuzzy-Based Coordinated Power Management Strategy for Voltage Regulation and State-of-Charge Balancing in Multiple," in *International Transactions on Electrical Energy Systems,* 2022, https://doi.org/10.1155/2022/1288985. **(Q2)**

4. M. Panda, **D. V. Bhaskar**, T. Maity, "Coordinated Power Sharing Among Multiple Subgrids in a Photovoltaic-Battery Based DC Microgrid ," in Energy Sources, Part A: Recovery, Utilization, and Environmental Effects,vol. 44,no.2,pp.5358-5380,2022. https://doi.org/10.1080/15567036.2022.2086649. **(Q3)**

5. M. Panda, **D. V. Bhaskar**, S. R. Salkuti, "A flexible power management strategy for PV- battery based interconnected DC microgrid, " in International Journal of Emerging Electric Power Systems, vol. 23, no. 1, pp. 105-115, 2022, https://doi.org/10.1515/ijeeps-2021-0070.

6. Mahesh, M., **Bhaskar, D.V**., Jisha, R.K. et al. Lifetime estimation of grid connected LiFePO4 battery energy storage systems,Electr Eng (2021). https://doi.org/10.1007/s00202-021-01371-w. **(Q3)**

7. P. Kumar, **D. V. Bhaskar**, U. R. Muduli, A. R. Beig and R. K. Behera, "Iron Loss Modelling with Sensorless Predictive Control of PMBLDC Motor Drive for Electric Vehicle Application," in IEEE Transactions on Transportation Electrification, doi: 10.1109/TTE.2020.3036991. **(Q1)**

8. P. Kumar**, D. V. Bhaskar**, U. R. Muduli, A. R. Beig and R. K. Behera, "Disturbance Observer based Sensorless Predictive Control for High Performance PMBLDCM Drive Considering Iron Loss," in *IEEE Transactions on Industrial Electronics*, doi: 10.1109/TIE.2021.3091937. **(Q1)**

9. P. Kumar, A. R. Beig, **D. V. Bhaskar**, K. A. Jaafari, U. R. Muduli and R. K. Behera, "An Enhanced Linear Active Disturbance Rejection Controller for High Performance PMBLDCM Drive Considering Iron Loss," in *IEEE Transactions on Power Electronics*, vol. 36, no. 12, pp. 14087-14097, Dec. 2021, doi: 10.1109/TPEL.2021.3088418. **(Q1)**

10. M. Mahesh, **Devara vijaya Bhaskar**, T. Narsa Reddy,Jens Bo Holm-Nielsen, "Evaluation of Ancillary Services in Distribution Grid using large scale Battery Energy Storage Systems" IET Renewable Power Generation, DOI: 10.1049/iet-rpg.2020.0169.**(Q1)**

11. Mrutunjaya Panda, **Devara vijaya Bhaskar**, and Tanmoy Maity "A novel dc bus-signaling based power management strategy for dc microgrid" Article December 2020, International Transactions on Electrical Energy Systems, vol.31, https://doi.org/10.1002/20507038.12758. **(Q2)**

12. Devara Vijaya Bhaskar, N. Vishwanathan, Tanmoy Maity & S. Porpandiselvi A three- output inverter for induction cooking application with independent control, EPE Journal, (2018) Vol-28:2, 89-99, DOI: 10.1080/09398368.2018.1442543. **(Q3)**

13. Devara Vijaya Bhaskar, N. Vishwanathan, Tanmoy Maity & S. Porpandiselvi (2017) Hybrid controlled dual frequency inverter for two load induction cooking application, EPE Journal, 27:2, 62-73, DOI: 10.1080/09398368.2017.1317138. **(Q3)**

14. Devara Vijaya Bhaskar, N. Vishwanathan, Tanmoy Maity & S. Porpandiselvi, (2016), "Capacitor-sharing two-output series-resonant inverter for induction cooking application" IET Power Electronics,Vol. 9, No. 11,pp.2240– 2248, DOI: 10.1049/iet-pel.2016.0114. **(Q1)**

15. P. Sharath Kumar, N. Vishwanathan, and **D. Vijaya Bhaskar**," A Power Control Scheme for Multiple Load Induction Cooking with Constant Switching Frequency in Class-E Resonant Inverter" International Review on Modelling and Simulations (IREMOS), Vol 6, No 1 (2013).

B. International Conferences

1. R. K. Meena, D. V. Bhaskar, O. Al Zaabi, M. Panda, P. Kumar and U. R. Muduli, "Modeling of Two-Stage Photovoltaic Inverter with Grid Connected and Islanding Operation," 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT),Male,Maldives, 2023, pp. 1-6, doi: 10.1109/GlobConHT56829.2023.10087517.

2. A. Ranjan, D. V. Bhaskar, O. A. Zaabi, P. Kumar, K. A. Hosani and U. R. Muduli, "Voltage Fluctuations and Sensitivity Assessment of Load Flow Solutions for the IEEE 9-bus System," 2023 IEEE IAS Global Conference on Renewable Energy and Hydrogen Technologies (GlobConHT),Male,Maldives, 2023, pp. 1-6, doi: 10.1109/GlobConHT56829.2023.10087888

3. P. Kumar, **D. V. Bhaskar** and R. K. Behera, "Sliding Mode Observer based Sensorless Current Hysteresis Controller for PMBLDC Motor Drive," 2020 3rd International Conference on Energy, Power and Environment: Towards Clean Energy Technologies, 2021, pp. 1-6, doi: 10.1109/ICEPE50861.2021.9404480.

4. P. Kumar, **D. V. Bhaskar** and R. K. Behera, "Sliding Mode Observer based Rotor Position Estimation with Field Oriented Control of PMBLDC Motor Drive," 2020 3rd International Conference on Energy, Power and Environment: Towards Clean Energy Technologies, 2021, pp. 1-6, doi: 10.1109/ICEPE50861.2021.9404479.

5. M. M, **D. V. Bhaskar**, R. Krishan, J. R. Krishnan and N. Reddy, "Lifetime Enhancement of Li-Ion Batteries used for Ancillary Services," 2020 IEEE International Conference on Power Electronics,Drives and Energy Systems(PEDES),2020,pp.1-5, doi: 10.1109/PEDES49360.2020.9379486.

6. P. Kumar, **D. V. Bhaskar**, R. K. Behera and U. R. Muduli, "A Modified Torque Ripple Minimization Technique for BLDC Motor Drive using Synthesized Current Phase Compensation," 2020 IEEE International Conference on Industrial Technology (ICIT), 2020, pp. 127-132, doi: 10.1109/ICIT45562.2020.9067134.

7. M. Panda, **D. V. Bhaskar** and T. Maity, "A Novel Power Management Strategy for Hybrid AC/DC Microgrid," 2019 IEEE 16th India Council International Conference (INDICON), 2019, pp. 1-4, doi: 10.1109/INDICON47234.2019.9029061.

8. Raj A, Arulgandhi N, Patha L, **Bhaskar DV** (2018) Fuzzy logic based master-slave controller for paralleling DC–DC converters in LED applications. In: 2018 international conference on power energy, environment and intelligent control (PEEIC), pp 676–682, DOI: 10.1109/PEEIC.2018.8665426.

9. P. Kumar, R. K. Behera and **D. V. Bhaskar**, "Novel closed loop speed control of permanent magnet brushless DC motor drive," 2018 Technologies for Smart-City Energy Security and Power (ICSESP), 2018, pp. 1-6, doi: 10.1109/ICSESP.2018.8376725.

10. A. K. Ranjan, **D. V. Bhaskar** and N. Parida, "Analysis and simulation of cascaded H-bridge multi level inverter using level-shift PWM technique," 2015 International Conference on Circuits, Power and Computing Technologies [ICCPCT-2015], 2015, pp. 1-5, doi: 10.1109/ICCPCT.2015.7159493.

11. N. Parida, **D. V. Bhaskar** , V. Kumari, and T. Maity, "Power control techniques used in high frequency induction heating applications," 2015 International Conference on Circuits, Power and Computing Technologies [ICCPCT-2015], 2015, pp. 1-6, doi: 10.1109/ICCPCT.2015.7159378.

12. V. Kumari, **D. V. Bhaskar**, N. Parida and T. Maity, "Comparative study of multiple-output series resonant inverters for IH applications," 2015 International Conference on Circuits, Power and Computing Technologies [ICCPCT-2015], 2015, pp. 1-7, doi: 10.1109/ICCPCT.2015.7159296.

13. P. Sharath Kumar, N. Vishwanathan, B. K. Murthy and **D. Vijaya Bhaskar**, "Class-D/E resonant inverter for multiple-load domestic induction cooking appliances," 2014 IEEE 6th India International Conference on Power Electronics (IICPE), 2014, pp. 1-6, doi: 10.1109/IICPE.2014.7115834.

14. D. V. Bhaskar, N. Yagnyaseni, T. Maity and N. Vishwanathan, "Comparison of control methods for high frequency IH cooking applications," 2014 POWER AND ENERGY SYSTEMS:TOWARDS SUSTAINABLE ENERGY,2014, pp.1-6, doi:10.1109 PESTSE. 2014.6805272.

15. C. P. Roy, **D. Vijaybhaskar** and T. Maity, "Modelling of fuzzy logic controller for variablestep MPPT in photovoltaic system," 2013 IEEE 1st International Conference on Condition Assessment Techniques in Electrical Systems (CATCON), 2013, pp. 341-346, doi: 10.1109/CATCON.2013.6737524.

16. D. V. Bhaskar and N. Vishwanathan, "Full bridge series resonant inverter for induction cooking application," 2012 IEEE 5th India International Conference on Power Electronics (IICPE), 2012, pp. 1-5, doi: 10.1109/IICPE.2012.6450370.

Membership in Professional Associations:

- ✧ Senior Member IEEE, USA

Professional Services:

Reviewer (International Journals):

- ✧ IEEE Transactions on Transportation Electrification
- ✧ Advances In Electrical And Electronic Engineering
- ✧ International Journal of Emerging Electric Power Systems
- ✧ Proceedings of the Indian National Science Academy

Reviewer (International conferences):

- ✧ IEEE conferences

Administrative Responsibilites

Institute Level

- ✧ **Hostel Warden**, Jasper Hostel (**01.10.2018 to 28.06.2020)**
- ✧ **Chief Hostel warden, Diamond (29.06.2020 to 29.06.2021)**
- ✧ **Institute Representative (IR)** in IIT JEE Advance Exam for the year 2022
- ✧ **Member**, Organizing Committee of CONCETTO 2013.
- ✧ **Tabulator** for the academic session

Departmental Level

- ✧ **Faculty-in-Charge**, Electrical Drives Laboratory
- ✧ **Faculty-in-Charge**, Departmental Library
- ✧ **Member**, Departmental Faculty Screening Committee (DFSC)
- ✧ **Member**, Departmental Post Graduate Committee (DPGC)

Details of extra-curricular activities

- ✧ Cultural Secretary, Scolomin Club
- ✧ Participated in Inter IIT sports meet held at IIT Gwahati-2018 and IIT Delhi- 2022.

Personal Information

✧ Fathers's Name	: Late Aresu
✧ Mother's Name	: Smti. lakshmi
✧ Date of Birth	: 07/04/1984
✧ Gender	: Male
✧ Place of Birth	: Vinukonda,Andhra pradesh
✧ Marital Status	: Married
✧ Nationality	: Indian

Contact Details:

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Declaration:

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.