

BIODATA

Dr. Sukanta Debnath



1. Father's Name Gopal Chandra Debnath
2. Mother's Name Kanan Debnath
3. Date of birth 06/03/1986
4. a) Gender: Male b) Marital Status: Married c) Spouse: Dr. Upama Das
5. a) Permanent address: Vill: East Kalabaria, P.O: Maichara, South Tripura, 799155
PhoneNo. +919774929058 E-mailID sukanta@sitcoe.org.in
6. Nationality Indian
7. Category OBC

8. Details of Educational Qualification (from Secondary Level):

Exam. Passed	Specialization	Board/University	Passing Year	Class / Division	%marks
MADHYAMIK	ALL	TBSE	2002	1 ST	65.63
DIPLOMA	ELECTRICAL ENGINEERING	WBSCTE	2007	1 ST	67.00
B.TECH	ELECTRICAL ENGINEERING	WBUT	2010	1 ST	64.30
M.TECH	POWER SYSTEM	NIT AGARTALA	2012	1 ST	72.00
P.HD	POWER ELECTRONICS AND DRIVES	NIT MIZORAM	2021	1 ST	87.50

9. Doctoral Degree Details

Thesis Title :	Design and Control of Single and Double Coil Based Active Magnetic Bearing.
Research area :	POWER ELECTRONICS AND MACHINE DRIVES
Date of Thesis Submission :	29-Dec-2020
Date of Viva-Voce :	22-May-2021
Degree Awarded Date :	22-May-2021

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Name(s) of Supervisors(s) & Address : Dr. PABITRA KUMAR BISWAS
Assistant Professor NIT Mizoram
Chaltlang, Dawrkawn Aizawl Mizoram-796012

10. M.Tech Degree Details

Dissertation Title : Modeling and simulation of Dynamic Voltage Restorer

Area of Dissertation work : Power system

Name(s) of Supervisors(s) & Address : Prabir Ranjan Kasari, Assistant Professor, NIT Agartala

11. Details of employments:

Sl. No.	Name and address of Employer	Designation	From	To	Brief description of duties
1	Sharad Institute of Technology College of Engineering	ASSISTANT PROFESSOR	08/01/2024	Till Date	TEACHING
2	NIT Mizoram	TEMPORARY FACULTY	21/02/2023	31/12/2024	TEACHING
3	NIT Mizoram	ASSISTANT PROFESSOR	13/03/2013	12/02/2023	TEACHING

12. Course[s] Taught

Course Title	Level (UG/PG)	Branch
Switchgear and Protection	UG	EEE
Basic Electrical Engineering	UG	EEE, CE, ME, ECE, CSE
Electrical And Electronic Measurement	UG	EEE, ECE
Electrical Energy Utilization And Audit	UG	EEE
Electrical Machines-I	UG	EEE
Power System	UG	EEE
Renewable Energy Sources	UG	EEE

13. Laboratory Classes[s] Conducted

Name of Laboratory	Level (UG/PG)	Branch
Basic Electrical Engineering Lab	UG	EEE, CE, ME, ECE, CSE
Electrical And Electronic Measurement Lab	UG	EEE, ECE
Power Systems Lab-II	UG	EEE
Electronic System Design Laboratory	UG	EEE
Instrumentation Laboratory	UG	EEE

14. Journal Papers SCI/Scopus/Web of Science

1. **Sukanta Debnath**; Upama Das; Pabitra Kumar Biswas, “Comparative Analysis of Single Coil and Double Coil Active Magnetic Bearings for High Speed Application”, *Electrical Engineering*, 2024. (SCI)
2. **Sukanta Debnath**; Das, U.; Biswas, P.K.; Aljafari, B.; Thanikanti, S.B. Design and Control of Multicoil Active Magnetic Bearing System for High-Speed Application. *Energies* 2023, 16, 4447. <https://doi.org/10.3390/en16114447> (SCI)
3. U. Das, **Sukanta Debnath**, S. Gupta, P. K. Biswas, T. Sudhakar Babu and N. I. Nwulu, "Active Magnetic Bearing System Using I-Type and U-Type Actuator," in *IEEE Access*, vol. 11, pp. 62780-62798, 2023, doi: 10.1109/ACCESS.2023.3276324. (SCIE)
4. Laldingliana, J., **Sukanta Debnath**, Biswas, P.K. et al. Design and speed control of U-type 3-coil active magnetic bearing. *Electr Eng* (2023). <https://doi.org/10.1007/s00202-023-01838-y>. (SCIE)
5. S. Gupta Suraj Gupta; Pabitra Kumar Biswas; **Sukanta Debnath** et. al., "Metaheuristic Optimization Techniques Used in Controlling of an Active Magnetic Bearing System for High-Speed Machining Application," in *IEEE Access*, vol. 11, pp. 12100-12118, 2023, doi: 10.1109/ACCESS.2023.3241854. (SCIE)
6. Gupta, S., **Sukanta Debnath**, S. & Biswas, P.K. Control of an active magnetic bearing system using swarm intelligence-based optimization techniques. *Electrical Engineering* 105, 935–952 (2023). <https://doi.org/10.1007/s00202-022-01707-0>. (SCI)
7. **Sukanta Debnath** and Pabitra Kumar Biswas (2021). Study and analysis on some design aspects in single and multi-axis active magnetic bearing (AMB). *Journal of Applied Research and Technology*, 19(5), 448-471. <https://doi.org/10.22201/icat.24486736e.2021.19.5.1211>. (SCOPUS)
8. **Sukanta Debnath** & Pabitra Kumar Biswas (2020) Advanced Magnetic Bearing Device for High-Speed Applications with an I-type Electromagnet, *Electric Power Components and Systems*, 48:16-17, 1862-1874, DOI: 10.1080/15325008.2021.1908454. (SCIE)
9. **Sukanta Debnath**, Biswas, P.K. Design, analysis, and testing of I-type electromagnetic actuator used in single-coil active magnetic bearing. *Electr Eng* 103, 183–194 (2021). <https://doi.org/10.1007/s00202-020-01071-x>. (SCI)
10. Pachuau, Jonathan & **Sukanta Debnath** & Biswas, P.. (2019). Fem Software Based 2-D and 3-D Construction and Simulation of Single and Double Coils Active Magnetic Bearing. *International Journal of Innovative Technology and Exploring Engineering*. 8. 665-675. 10.35940/ijitee.K1716.0881119. (SCOPUS)
11. **S. Debnath**, P. K. Biswas and U. Das, "Analysis and simulation of different types of power amplifiers used in electromagnetic levitation system", *Journal of Power Technologies*, vol. 98, no. 2, pp. 220-227, 2018. (ESCI)
12. **Sukanta Debnath** & Biswas, P. K. (2020). Comparative magnetic analysis of I-type actuator based active magnetic bearing system, *Journal of Power Technologies*. 2020, Vol. 100 Issue 3, p211-222. 12p. (ESCI)
13. **S. Debnath**, P. K. Biswas and J. Laldingliana, "Analysis Simulation and Hardware Implementation of Single Switch Power Amplifier for Active Magnetic Bearing (AMB) system", *Journal of Power Technologies*, vol. 100, no. 4, pp. 308-314, 2020. (ESCI).
14. Upama Das, P.K. Biswas, **Sukanta Debnath**, “A Comparative Study between Load and No-Load condition of Brushless DC Motor Drives by Using MATLAB”, *Journal of Power Technologies*, vol. 98, no. 3, pp. 281-286, June. 2017. (ESCI).

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15. Conference Proceedings Indexed in SCI/Scopus/Web of Science/or any internationally renowned conference

1. **S. Debnath**, P. K. Biswas and J. Laldingliana, "Analysis and simulation of PWM based power amplifier for single axis Active Magnetic Bearing (AMB)," 2017 IEEE Transportation Electrification Conference (ITEC-India), Pune, India, 2017, pp. 1-5, doi: 10.1109/ITEC-India.2017.8333845.
2. D. Dutta, P. K. Biswas and **S. Debnath**, "Single-Phase Standalone Inverter Using Closed-Loop PI Control for Electromagnetic Suspension," 2023 International Conference on Inventive Computation Technologies (ICICT), Lalitpur, Nepal, 2023, pp. 1481-1487, doi: 10.1109/ICICT57646.2023.10134168.
3. S. Gupta, P. K. Biswas, J. Laldingliana and **S. Debnath**, "Comparative Analysis Among Different Types of Power Amplifier for Active Magnetic Bearing System," 2022 IEEE International Power and Renewable Energy Conference (IPRECON), Kollam, India, 2022, pp. 1-4, doi: 10.1109/IPRECON55716.2022.10059497.
4. S. Gupta, **S. Debnath**, J. Laldingliana and P. K. Biswas, "Analysis and Simulation of Fuzzy Control Base for Single Axis Active Magnetic Bearing System," 2019 International Conference on Cutting-edge Technologies in Engineering (ICon-CuTE), Uttar Pradesh, India, 2019, pp. 131-135, doi: 10.1109/ICon-CuTE47290.2019.8991527.
5. S. Gupta, J. Laldingliana, **S. Debnath** and P. K. Biswas, "Closed Loop Control Of Active Magnetic Bearing Using PID Controller," 2018 International Conference on Computing, Power and Communication Technologies (GUCON), Greater Noida, India, 2018, pp. 686-690, doi: 10.1109/GUCON.2018.8675123.
6. J. Laldingliana, **S. Debnath** and P. K. Biswas, "Analysis of a Single Actuator Double Winding Active Magnetic Bearing (AMB) Using Ansys Maxwell Simulation Software," 2018 2nd International Conference on Power, Energy and Environment: Towards Smart Technology (ICEPE), Shillong, India, 2018, pp. 1-6, doi: 10.1109/EPETSG.2018.8659141.

16. Book Chapter[s] Published

1. **Debnath, Sukanta** & Biswas, P. & Gupta, Suraj & Laldingliana, J.. (2020). Analysis and Simulation of PWM-Based Half-Bridge and Full-Bridge Switch Mode Amplifier for Active Magnetic Bearing (AMB). 10.1201/9780429355998-25.
2. Gupta, S., Biswas, P.K., **Debnath, S.** and Laldingliana, J. (2020). Optimization Techniques Used in Active Magnetic Bearing System for Electric Vehicles. In Artificial Intelligent Techniques for Electric and Hybrid Electric Vehicles (eds A. Chitra, P. Sanjeevikumar, J.B. Holm-Nielsen and S. Himavathi). <https://doi.org/10.1002/9781119682035.ch3>

17. Departmental activities like lab in-charges or department level committee

Activity	No. of Years	Period	
		From	To
B.Tech coordinator	1	28-08-2019	17-01-2021
Faculty Advisor	2	18-01-2021	18-05-2022
Lab in charge	6	28-08-2019	18-05-2022

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18. Establishment of new Lab

Name of Lab	Year of Establishment	Department/Institute
INSTRUMENTATION	2015	EEE/NIT MIZORAM

19. Faculty In charge Student activities and other Institutional activities

Position held	No. of Semesters	Period	
		From	To
Scholarship in charge	6	08-08-2013	12-10-2016

20. Name and address of two References:

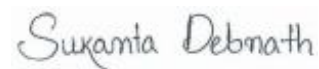
1 st Reference		2 nd Reference	
Name	PABITRA KUMAR BISWAS	Name	SUMAN MAJUMDER
Position	ASSISTANT PROFESSOR	Position	ASSISTANT PROFESSOR
Address	NIT Mizoram Chaltlang Dawrkawn Aizawl - 796012	Address	NIT Mizoram, Chaltlang, Dawrkawn Aizawl - 796012
E-Mail	pabitra.eee@nitmz.ac.in	E-Mail	suman.eee@nitmz.ac.in
PhoneNo.	9749148157	PhoneN	9862309864

DECLARATION

“I hereby declare that the statements made by me are true, complete and correct to best of my knowledge and belief.”

Place:.. MIZORAM

Date...



Signature of Applicant

Name: SUKANTA DEBNATH