

CURRICULUM VITAE



Dr. KRISHNA BIHARI YADAV
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Qualification:

Doctor of Philosophy (Electric Machinery)
M.Sc. Engg. (Power Electronics),
B.Sc. Engg. (Electrical Engineering),

Research Interest Area:

- Multiphase Electrical Machines
- Power Electronics & Electric Drives
- Power System Economics
- Renewable power Generation

Date of Birth: 07.01. 1964

Correspondence Address:

Department of Electrical Engineering,
N.I.T. Jamshedpur,
Jharkhand -831 014,
India.

Permanent Address:

At & P.O. Basuari,
Via: Ghoghardiha,
District: Madhubani,
Bihar- 847 402, India.

Education

Ph.D. (Electric Machinery): Alternate Hydro Energy Centre (AHEC), Indian Institute of Technology Roorkee (IIT R), Uttarakhand (India), Awarded in the year 2007.

Title of Thesis: Multi-Phase Induction Generator for Small Hydro Power Scheme

M.Sc.Engg. (Power Electronics): First Class with Distinction, National Institute of Technology, (Formerly RIT) Jamshedpur, Ranchi University, Ranchi (India) in the year 2002.

Title of Dissertation: Development & Performance Evaluation of Linear Capacitive Displacement Transducer

B.Sc.Engg. (Electrical): First Class with Distinction, National Institute of Technology, (Formerly RIT) Jamshedpur, Ranchi University, Ranchi (India) in the year 1989.

Title of Project: Braking of Electric Motors

I. Sc. (Math): First Division, L. N. Mithila University, Darbhanga, Bihar (India) in the year 1983.

Matriculation (Science): First Division, Bihar School Examination Board, Patna, Bihar (India) in the year 1980.

DOCTORAL AWARD

Awarded Ph. D. degree under regulation & Seal of Indian Institute of Technology, Roorkee (India) on 17th November 2007 under Quality Improvement Programme (QIP) of MHRD, Govt. of India during July, 2003 to December, 2006 at Alternate Hydro Energy Centre, as a full time Research Scholar.

PROFESSIONAL MEMBERSHIP

- Life Member (LM 23646): Indian Society for Technical Education (India)
- Life Member (MIE-134881-1): The Institution of Engineers (India)
- Chartered Engineer (M-134881-1): Authorized by Institution of Engineers (India) to use the Style & Title on 03.12.2007
- Fellow (FIE/ F-125208): The Institution of Engineers (India)

EXPERIENCE

A. Industrial:

1. Served M/S Utkal Automobiles Limited, Jamshedpur as a Graduate Engineer Trainee (GET) from Aug 1989 to Aug. 1990 and subsequently as Electrical Engineer from Sept.1990 to March 1993.
2. Served M/S Narbheram Switchgear, Adityapur, Jharkhand as a Design Engineer from April 1993 to Feb. 1995.
3. Served M/S Bihar Sponge Iron Limited, Chandil, Jharkhand as a Senior Electrical Engineer from March 1995 to Apr. 1996.

B. Teaching:

- **An experience of twenty four years in teaching at Department of Electrical Engineering, National Institute of Technology (formerly R.I.T), Jamshedpur, (INDIA) as a**
 - a. **Lecturer from May-08, 1996 to May-07, 2002;**
 - b. **Lecturer (Senior Scale) from May-08, 2002 to May-07, 2006;**
 - c. **Lecturer (Selection Grade) from May-08, 2006 to May-03, 2007;**
 - d. **Associate Professor from May-04, 2007 continued.**

- **Courses Taught at UG Level**
 - **Basic Electrical Engineering (1996-2003);**
 - **Network Theory (1996-2003);**
 - **Protection of Power System and Apparatus(1996-2003);**
 - **Utilization of Electrical Power (2007-2010);**
 - **Power System (2007-2009);**
 - **Electrical Machines I (2007-2009)**
 - **Electrical Machines II (2007-2019)**
 - **Control Theory (2010);**
 - **Fundamental of Electro-mechanics (2014-2017)**
 - **Modern Power Station Practice (2010-2011)**
 - **Power System Design (2019-2020)**

- **Courses Taught at PG Level**
 - **Thyristor Circuit II (2002-2003);**
 - **Generalized Theory of Electrical machines (2007-2012);**
 - **High Voltage DC Transmission (2017-2018)**
 - **Special Electrical Machines (2019-2020)**

- **Laboratory Course:**
 - **Basic Electrical Engineering Lab.(UG)**
 - **Electrical Machine Lab. (UG)**

- Control Lab. (UG)
- Power System & Machine Lab. (PG)

C. Administrative:

(a) Institutional:

- **Professor In-Charge**
 - I. Electrical Maintenance & Repair (EMR) Section - 1999 to 2003
 - II. Institute Cricket &Basket ball Committee - 1999 to 2003
- **Assistant Warden**
 - Ambedkar Hall of Residence (PG Hostel) - 1998 to 2003
 - Aryabhata Hall of Residence (UG Hostel) - 2008 to 2011
- **Faculty Advisor:**
 - Team Incredible, Centre for Innovation, Incubation & Entrepreneurship, Project Titled, “Production of Electricity Using Gravitational Energy - 21.01.2016
- **Member:**
 - Institute Medical Committee 2017
 - Faculty Screening Committee 2019

(b) Departmental:

- **Professor In-Charge**
 - I. Electrical Machine Laboratory - 2007 -Contd.
 - II. Industrial Tour & Training - 2007 -2010
 - III. B. Tech. (H) Project Work - 2007 -2010
- **Faculty Advisor & Tabulator-B. Tech.-2006 batch - 2007 -2011**
- **Convener**
 - I. Industrial Training V/V committee -2007 – 2008
 - II. Project Evaluation Board -2007 - 2008
 - III. M. Tech. Admission Committee - 2013 - 2014
- **Member of Doctoral Scrutiny Committee - 2007 – Contd.**

(c) Outreach:

- **Course Faculty: Continuing Education Program (CEP) of NIT Jamshedpur for TYCC of Tata Steel, Jamshedpur -2013-2020**
- **Project Supervisor: Continuing Education Program (CEP) of NIT Jamshedpur for 6th Semester, EEE, TYCC of Tata Steel, Jamshedpur -2012 & 2014 Batch**
- **External Examiner: Engineering Institutions i.e. RVS, BACET and MCET under Kolhan University as an External Examiner for v/v examination of U.G. since 2010**
- **External Expert: Dr. C.V. Raman University, Bilaspur, Chhattisgarh (India) as an External Examiner for Ph. D. Thesis evaluation & final v/v examination -2016**
- **Guest Lecture: Multi-phase Induction Machines, OP Jindal University, Raigarh-496109, C.G. (India) -2016**
- **Paper Setter: NIT Patna (Bihar), BIT Mesra, Ranchi (Jharkhand)-20**
- **Paper Reviewer: IOSR, IJCA, PESA-2013, ICASPCT-2016**
- **Chairman: Technology Co-operative Consumer Store Ltd., NIT Jamshedpur from 2008 to 2012**
- **Invited Delegate:**
 - (i) **Presented Paper at IEEE International Conference on Power Electronics, Drives, and Energy Systems (PEDES-2006), Dec.12-15, 2006 at I. I. T. Delhi, India.**
 - (ii) **Presented Paper at IEEE International Aegean Conference on Electrical Machines and Power Electronics and Electro-motion Joint Conference (ACEMP-2007), Sept. 10-12, 2007 at Bodrum, Turkey.**

RESEARCH GUIDANCE & SUPERVISION:

Ph. D. Thesis

1. **Mr. Alok Kumar Mohanty, Reg. No.-2012RSEE004, “Performance Evaluation of Stand-Alone, Six-Phase Induction Generator for Renewable Power Generation” Submitted in December 2016 ; Awarded**

2. **Mrs. Anumeha, Reg. No.-2011RSEE012, “Gravitational Search Algorithm Implemented Economic Operation and Control of Power System” submitted in December 2017; Awarded**
3. **Mr. Prabhat Kumar, Reg. No: 2008RSEE003, “Performance Evaluation of Multi-Phase Induction Motor For Enhanced Operational Reliability” ; Continuing**
4. **Mr. Alok Priyadarshi, Reg. No. 2017RSEE001, “Smart Grid in India- Scope & Challenges” – Continuing**
5. **Mr. Vishal Rathore, Reg. No.: 2018RSEE009, “ Cascaded H-Bridge Based MLI Fed Six-Phase Induction Motor Drive for High Power Applications”- Continuing**

M. Tech. Dissertation

1. **Mr. P. Vinod Kumar, Roll No. 06/2006/ PS/EE, M. Tech. (PS), “ Performance Evaluation of Multi-phase Induction Generator” -2008**
2. **Mr. Ravi Shankar Kumar, Roll No. 11/2007/PS/EE, M. Tech. (PS), “Comparison of Conversion Characteristic of Various Load Flow Methods using MATLAB” -2009**
3. **Ms. Madhumita Mondal, Roll No. 09/2007/PS/EE, M. Tech.(PS), “ Modeling of Voltage Source Converter for Load Flow Analysis”-2009**
4. **Mr. S. Polamarasetti, Roll No. 07/2008/PS/EE, M. Tech. (PS), “An Investigation on Optimal Matching of a Synchronous Machine Rated Power with a Wind Turbine Rotor Size” -2010**
5. **Mr. R. Subba Reddy, Roll No. 13/2008/PS/EE, M. Tech. (PS), “ Comparison of Ratings & Design of PWM Voltage Source Rectifiers and Active Power Filters for AC Drives with Unity Power factor”, -2010**
6. **Mr. Rupesh Kumar, Roll No. 03/2009/PS/EE, M. Tech. (PS), “Power Quality Improvement through a Voltage-Controlled DSTATCOM” -2011**
7. **Mr. Dhananjay Mohanta, Roll No. 05/2009/PS/EE, M. Tech. (PS), “ Analysis of a Series Resonant Inverter with Bidirectional Switches taking all Transients into Account” -2011**

8. **Mr. Prashant Biswal, Roll No. 03/2010/PS/EE, M. Tech. (PS), “Power Quality Issues of Electric Power System & its DVR based Compensation” -2012**
9. **Mr. Akhilesh Kumar, Roll No. 06/2010/PS, M. Tech. (PS), “Optimal Location & Sizing of Distributed Generation using Genetic Algorithm” -2012**
10. **Mr. Rewati Raman Yadav, Roll No. 08/2011/PS, M. Tech. (PS), “Design and Implementation of PLC based Monitoring & Control System for Induction Motor”, -2013**
11. **Mr. Prashant Chandra, Roll No. 02/2011/PS/EE, M. Tech.(PS), “Modeling and Performance Analysis of Permanent Magnet Brushless DC Motor for High Response Utility Drive” -2013**
12. **Mr. Sumit Mandal, Roll No. 27/2012/PS/EE, M. Tech. (PS), “Modeling and Performance Analysis of Six-Phase Induction Motor” -2014**
13. **Mr. Samarendra Pratap Singh, Roll No. 15/2012/PS/EE, M. Tech. (PS), “Steady State Analysis of STATCOM based on Multi-pulse Configuration” -2014**
14. **Mr. Diwakar Verma, Roll No. 04/2013/PS/EE, M. Tech. (PS), “Six-Phase Squirrel Cage Induction Motor and its Comparative Evaluation with Equivalent Three-Phase Counterpart using MATLAB /SIMULINK” -2015**
15. **Mr. Avinash Anand, Roll No. 03/2014/PS/EE, M. Tech. (PS), “Simulation of a PWM Reactive Power Compensator on Matlab Platform” -2016**
16. **Mr. N. Sujendra, Roll No. 06/2014/PS/EE, M. Tech. (PS), “Doubly Fed Induction Generator for Wind Turbines” -2016**
17. **Mr. Priya Ranjan Kumar, Roll No. 12/2015/PS/EE, M. Tech. (PS), “Power Flow Control in DFIG for Variable Speed Wind Turbine using STATCOM” -2017**
18. **Mr. R. Gopala Krishna, Roll No. 16/2015/PS/EE, M. Tech. (PS), “PV Inverter Control using Fuzzy based Controller in CERTS Microgrid”-2017**
19. **Mr. Sumeet Kumar, Roll No. 09/2015/PS/EE, M. Tech. (PS), “A Control Strategy of DFIG based Wind Farms for Power System Frequency Regulation” -2017**
20. **Mr. Rajiv Kr. Srivastava, Roll No. 02/2000/PE/EE, PTPG (PE), “Design of High Power Li-Ion Battery Charger for Electric Vehicle” -2007**

PUBLICATIONS

- International Journal:

1. G. K. Singh, **K. B. Yadav**, and R. P. Saini, “Analysis of a saturated multi-phase (six-phase) self-excited Induction Generator,” International Journal of Emerging Electric Power System, ISSN: 21945756-1553779X, Vol. 7, Issue 2, Article 5, PP: 01-21, Copyright © 2006 The Berkeley Electronic Press. (**Scopus, SCImago Indexed**).
2. Prashanta Biswal and **K. B. Yadav**, “Design of DVR for Improvement of Voltage Profile Using Synchronous Reference Frame Based Control Strategy”, IOSR Journal of Electrical and Electronics Engineering (IOSRJEEE), ISSN: 2278-1676 Volume 1, Issue 6 (July-Aug. 2012), PP: 01-08 (**IC, GSC Indexed**).
3. Prabhat Kumar, **K. B. Yadav**, “Torque Profiles of Asymmetrically Wound Six-Phase Induction Motor (AWSP-IM) under Phase-Loss Conditions”, IOSR Journal of Electrical and Electronics Engineering (IOSR-JEEE), Volume 7, Issue 2, pp: 68-80, e-ISSN: 2278-1676, p-ISSN: 2320-3331, Volume 7, Issue 2, Jul.-Aug. 2013, (**IC, GSC Indexed**).
4. Prabhat Kumar and **K. B. Yadav**, “Performance Prediction of Multi-Phase Induction Motor”, International Journal of Current Engineering and Technology, ISSN 2277-4106 © 2013 INPRESSCO, All Rights Reserved, Vol.3, No.5, pp:1756-1762, December 2013 (**IC, CR, GSC Indexed**).
5. Alok Kumar Mohanty, **K. B. Yadav**, “Design and Implementation of a Multi-Phase Induction Machine Operating in Generating Mode for Power Generation” in International Journal of Computer Applications, ISSN- 0975-8887, Vol-131. No-10, 2015, pp.28-33, 2015 (**DOAJ, NASA-ADS, GSC Indexed**)
6. Anumeha, **K. B. Yadav**, S. Agrawal, “Solution of Economic Load Dispatch Problem of Power System by Modifying the Gravitational Search Algorithm,” Energy Education Science and Technology Part A: Energy Science and Research, ISSN: 3109-3122, Vol. 33, Issue-6, pp.25-32, 2015 (**Scopus Indexed**).
7. Prabhat Kumar, **K.B.Yadav**, “Modeling and Analysis of Asymmetrically wound 6-phase Induction Motor for improved performance” *International Journal of All Research Education and Scientific Methods (IJARESM)*, ISSN: 2455-6211, Volume 4, Issue 5, May- 2016 (**IC, CR, GSC Indexed**).
8. Alok Kumar Mohanty, **K. B. Yadav**, “Fixed-Pitch Wind Turbine Interfaced Self-Excited Multi-Phase Induction Generator for Stand-Alone Renewable Power Generation -An Operational Review”, International Journal of Applied Engineering Research, ISSN: 0973-4562, Vol-11, No-8, pp-5834-5842, 2016 (**Scopus Indexed**).

9. Alok Kumar Mohanty, **K. B. Yadav**, “Transient Analysis of a Multi-phase Induction Machine Operating as a Generator” in Indonesian Journal of Electrical Engineering and Computer Science, ISSN **2502-4752**, Vol-2, No-1, pp.79-87, 2016 (**Scopus Indexed**).
10. Alok Kumar Mohanty, **K. B. Yadav**, “Estimation of Excitation Capacitance Requirements of an Isolated Multi-Phase Induction Generator for Power Generation” in International Journal of Power Electronics & Drive Systems, ISSN: 2088-8694, Vol. - 7, No 2, pp: 561-567, IJPEDS- June-2016 (**Scopus Indexed**).
11. Anumeha, **K. B. Yadav**, S. Agrawal, “Economic Load Dispatch of Generating Units With Multiple Fuel Options Using Gravitational Search Algorithm,” International Journal of **KASMER**, ISSN: 0075-5222, Vol.-44, No. -1, pp. 364-381, 2016 (**Scopus Indexed**).
12. Anumeha, **K. B. Yadav**, S. Agrawal, “Economic Operation of interconnected power system and unidirectional flow through GSA,” International Journal of Computer Applications, ISSN: 0975–8887, Volume 149 – No.7, pp: 11-17 September 2016 (**DOAJ, NASA-ADS and GSC Indexed**).
13. Sumeet Kumar, **Dr. K.B. Yadav**, “Control of Power flow in DFIG generators for variable speed wind turbine using STATCOM” International Journal of Advance Research and Innovative Idea in Education (IJARIE); ISSN (O)-2395-4396, Vol.-2, Issue-1, pp. 1-9, 2016 (**ICI, SIS Indexed**).
14. Anumeha, **K. B. Yadav**, S. Agrawal, “Economic Operation of Power Wheeling Under deregulated environment using soft computing”, Journal of Engineering and Applied Sciences (Medwell Publisher), ISSN: 1816949X, 18187803, 2017 (**Scopus Indexed**) -Accepted for publication
15. Anumeha, **K. B. Yadav**, S.Agrawal, “Economic Operation of interconnected power system and unidirectional flow through GSA,” International Journal of Emerging Technology and Advanced Engineering, ISSN (O): 2250-2459, DEC. 2017. (**NSL, NISCAIR Indexed**) - Accepted
16. R. Gopalakrishna, **K. B. Yadav**, “Photovoltaic Inverter control using Fuzzy based controller in a CERTS Micro grid”, International Journal of Advance Research and Innovative Idea in Education (IJARIE); ISSN (O)-2395-4396, pp 2468-2478, Vol. -3, Issue-3, 2017 (**ICI, SIS Indexed**).
17. Alok Kumar Mohanty, **K.B. Yadav**, “Assessment of excitation capacitance for a multiphase isolated self-excited induction generator for power generation”, International Journal of Power Electronics, ISSN: 1756-638X, Vol. 8, No. 2, pp 148-158, January 2017

- [Conferences](#)

1. G. K. Singh, **K. B. Yadav**, and R. P. Saini, “Modeling and Analysis of Multi-Phase (Six-Phase) Induction Generator”, International Conference on Electric Machines and Systems (ICEMS-2005), Nanjing, China, 27-29 Sept. 2005 Vol. 3, pp. 1922 – 1927, ISBN:7-5062-7042-8, IEEE.
2. G. K. Singh, **K. B. Yadav**, and R. P. Saini, “Capacitive Self-Excitation in a Six-Phase Induction Generator for Small Hydro Power -An Experimental Investigation”, in Proc. International Conference on Power Electronics, Drives, and Energy Systems (PEDES-2006), Dec.12-15, 2006 at New Delhi, India, Paper No.5A-20, ISBN: 0-7803-9771-1, IEEE
3. G. K. Singh, **K. B. Yadav**, and R. P. Saini, “A Self-Excited Six-Phase Induction Generator for Stand-Alone Renewable Energy Generation: An Experimental Investigation,” International Aegean Conference Electric Machine, Power Electronics and Electromotion (ACEMP '07), Sept. 10-12, 2007 at Bodrum, Turkey, Paper No. 205,ISBN: 978-1-4244-0890-0, pp 690-695, IEEE.
4. **K. B. Yadav**, Alok Kumar Mohanty, Prabhat Kumar, “Recent Research Trend on Multi-phase Induction Machines”, IEEE Fifth International Conference on Control, Communication and Power Engineering 2014 (CCPE 2014), Feb 21-22, 2014, PP 580-587, Chennai, India.@ Elsevier.
5. Anumeha, **K. B. Yadav**, S. Agrawal, “Economic Operation of Two Area Power System through Gravitational Search Algorithm,” IEEE International conference on Recent Developments in Control Automation And Power Engineering (RDCAPE-2015), Amity University, Noida, March 12-13, 2015, ISBN: 978-1-4799-7247-0, pp194-198, IEEE.
6. Anumeha, Kaushik Paul, **K. B. Yadav**, Niranjana Kumar, “Application of Gravitational Search Algorithm to Analyze Economic Load Dispatch in Power System Network” IEEE Power India International Conference (PIICON-2016), ISBN: 978-1-4673-8962-4, PP.1-6, Nov. 25-27, 2016, Bikaner, India,.
7. Prabhat Kumar, **K. B. Yadav**, Diwakar Verma, “Performance Prediction of Asymmetrically Wound Six-Phase Induction Motor (AWSP-IM) under Various Load Condition”, IEEE 2nd International Conference on advances in Steel, Power and Construction Technology (ICASPCT-2016), Paper No.179, 17-19 March, 2016, Raigarh, India
8. Prabhat Kumar, **K. B. Yadav**, Diwakar Verma, “Performance Evaluation of Asymmetrical Multiphase Induction Motor Using Matlab /Simulink”, Proceedings 2016 International Conference on Advances in Computing Communication and Automation, ICACCA 2016, 8-9 Apr 2016, Tula's Institute Dehradun, India ©2016, ISBN: 978-1-5090-0674-8, IEEE
9. Alok Kumar Mohanty & **K. B. Yadav**, “Performance Analysis of DTC Based induction Motor Drive”, IEEE 1st National Conference on Power Electronics Systems & Applications, PESA 2013, pp.264-269,16-17 March,2013, Rourkela, Orissa, India.