

CURRICULUM VITAE

of

Prof. Bimal K. Bose, *Ph. D., D. Sc. (Honoris Causa), IEEE Life Fellow*

Condra Chair of Excellence /Emeritus in Power Electronics

& Power Electronics Consultant

(Endowed Chair Professor/Emeritus in Electrical Engineering)

Department of Electrical Engineering and Computer Science

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Encyclopedia Wikipedia: https://en.wikipedia.org/wiki/Bimal_Kumar_Bose

Engineering and Technology History Wiki: http://ethw.org/Bimal_K._Bose

Home Page: <http://web.eecs.utk.edu/~bose>



2009

1. *Name and Academic Rank:*

Bimal K. Bose

Professor Emeritus in Electrical Engineering

2. *Academic Qualifications:*

- Doctor of Philosophy (Ph. D.) in Electrical Engineering, Calcutta University, India, 1966
- Master of Science (M.S.) in Electrical Engineering, University of Wisconsin, Madison, 1960
- Bachelor of Elec. Engg. (B.E.), Calcutta University, India, 1956

3. *Areas of Specialization:*

Power Electronics and Motor Drives

(Includes Renewable Wind and Photovoltaic systems, Electric and Hybrid Vehicle Drives, and Artificial Intelligent Techniques in Power Electronics)

4. *Work Experience:*

- Consultant, Researcher and Educator, Power Electronics and Motor Drives (2003- present)
- Condra Chair of Excellence in Power Electronics. (Endowed Chair Professor), University of Tennessee, Knoxville (1987 -2003)
(Established university's Undergraduate and Graduate Power Electronics Programs and Power Electronics Research Laboratory)
(Concurrently – Chief Scientist and Distinguished Scientist, EPRI-Power Electronics Applications Center, Knoxville (1987- 2000)
- Research Electrical Engineer, General Electric Corporate Research & Development, (now GE Global Research Center), Schenectady, NY (1976-87)
- Associate Professor of Elec. Engg., Rensselaer Polytechnic Institute (RPI), Troy, NY (1971-1976)
- Assoc., Asstt. & Assoc. Asstt. Professor of Elec. Engg., Bengal Engineering College (Now Indian Institute of Engineering Science and Technology (IEST), India (1960 – 1971)
- Cadet & Asstt. Engineer, Tata Power Co., Bombay/ Morang Hydro, India (1956-1958)

5. *Project Experience (As Principal Investigator): (Only selected projects)*

(See publications and US patents)

1. Wind electric generation system (UT-EPA) – Fuzzy logic based control and performance optimization
2. Electric Vehicle Microcomputer control with DC motor drive (GE-DOE)
3. Switched Reluctance Motor Drives (GE)
4. High Frequency Link Power Conversion for AC Motor Drive (GE)
5. Soft-Switched Resonant Link Inverter Induction Motor Drive (RPI-GE)
6. Soft-Switched High Frequency Non-Resonant Link Power Conversion for Motor Drive (UT-US Navy)
7. Control of Sector Wound Linear Inductor Motor Drive for Federal Railroad Transportation (GE-FRA)
8. Hybrid Vehicle Microcomputer Control with stepper motor engine control and DC propulsion Drive (GE-DOE)
9. Sliding Mode Servo Control of Induction Motor (GE)
10. Scalar Decoupled Control of Induction Motor (GE)
11. Electric Vehicle Control with Induction Motor Drive (GE-DOE)
12. Electric Vehicle DSP Control with IPM Synchronous Machine Drive (GE-DOE)
13. Microprocessor Based PWM for Induction Motor Drive (GE)
14. Microprocessor Control of Residential PV system (GE-Sandia National Lab.)
15. Position Sensorless Servo Control of PMSM Drive (UT-EPRI)
16. Expert System Based Selection of Motor Drive Products (UT-TVA)
17. Expert System Based Automated Design of Induction Motor Drive(UT-TVA)
18. Fuzzy Logic Based Efficiency Optimized Control of Induction Motor (UT-EPA)
19. Neuro-Fuzzy Sensorless Control of Induction Motor Drive (UT-GM)
20. Power Converter System for 25 MW Superconducting Magnet Sync. Machine for Ship Propulsion (UT-US NAVY)
21. Neural Network Based Space Vector PWM of Induction Motor Drive (UT-GM)
22. Multi-Level Converter Space Vector PWM (UT-Mitshubishi and GM)

23. Fault Investigation and Fault Tolerant Control of IM Drive (UT-TVA)
24. Neural Network Based Feedback Signal Estimation for A Vector Drive (UT)
25. Adaptive Hysteresis Band PWM Control of IM Drive (UT)
26. Fault Investigations in Converters (UT-TVA)
27. Electrolytic Capacitor Elimination of Converters by DC-Link Active Filter (UT-TVA)
28. Fuzzy control of DC Motor Drive (UT-GM)

6. Courses Taught:

Power Electronics and AC Drives (UT-G)
 Advanced Power Electronics and Drives (UT-G and RPI-G)
 Recent Advances in Power Electronics and Drives (UT-G)
 Electrical Energy System Components (UT-UG)
 Power Electronics (UT-UG and RPI-UG)
 Power Electronic Circuits (UT-UG)
 Hydro Electric Power (IEST-UG)
 Electro Technology (IEST-UG)
 Advanced Circuit Theory (IEST-UG)
 Industrial Electronics (IEST-UG)
 Digital Circuits (RPI-UG)
 Electrical Machines and Power (UT-UG)
 Analog and Digital Computing (IEST-G)
 Motor Drives for Electric and Hybrid Vehicles (UT-UG+G)

7. Technical Expert Witness Projects:

- Farkas and Toikka, USA (Law Firm) (2009)
 Expert witness report on NAVY Aircraft Barricade Stanchion Motor Controller
 (equipment malfunction)
- William Fry, Ireland (Law Firm) (2007)
 Expert witness report in wind generation systems (patent controversy)
- McKool Smith, USA (Law Firm)
 Expert witness report in electric/hybrid vehicle drive (patent controversy) (2008)
- Mullins Handcock, Australia (Law Firm) (2003 – 2010)
 Expert witness report in cycloconverter-synchronous motor drive faults
 (equipment failure)
- Allen Arthur Robinson, Australia (Law Firm) (2010)
 Expert witness report in cycloconverter-synchronous motor drive faults
 (equipment failure)
- Fish & Richardson, USA (Law Firm) (January 2004)
 Expert witness report in converter power supplies (patent controversy)

8. Consulting Experience:

- U.S. Federal Government (National Science Foundation) Power Electronics research
 adviser for university career and SBIR projects (2012-2013)
- Emerson Electric Co., USA: (Dec. 2009 – Jan. 2010) (through Red Chalk Group)
 Evaluation of switched reluctance motor patents – Advice on long term potential of SR drives
- USDA, USA: (June 2004)
 Evaluation of USDA proposals for wind generation and photovoltaic projects and giving

advice in this area

- American Superconductors, USA: (December 1999 – April 2000)
Evaluation of power converters for 25 MW superconducting magnet ship propulsion for US Navy
- Fuji Electric Co, Japan: (August 1998 – July 2000)
Consultation in power electronics and motor drives
- General Dynamics Land Systems, USA: (June 1999 – January 2000)
DC-DC power converter development and design for Army hybrid vehicle
- Kolmorgen Corporation, USA: (October 1995)
Technology advancements in servo and industrial drives
- Ansaldo, Italy: (July 1994)
Technology trends in power electronics and drives
- Delco Remy Corporation, USA: (December 1993 – February 1994)
Fuzzy logic -based control of electric vehicle drive
- Reliance Electric Co., USA: (March – May 1993)
Analysis of induction motor vector control
- Motion Control Engineering, USA: (1991)
Vector control of elevator induction motor drives
- Lutron Electronics, USA: (June – September 1974)
Lighting control by power electronics
- PCI Ozone Corporation, USA: (April 1974 – November 1975)
Development and design of power electronics apparatus for ozonator & General Consulting
- GE Corporate R & D Center, USA: (June 1973 – July 1975)
Development and design of high frequency link power converter
- Bendix Corporation, USA (September 1975)
Evaluation of power electronics ignition system for cars
- Electric Power Research Institute, USA: (June 1987 – May 1989)
General consultant for power electronic projects
- Honeywell, USA: (July 1993)
Recent advances in power electronics, General consultation
- Research Triangle Institute, USA: (September 1993- March 1995)
Development of fuzzy logic- based induction motor control for efficiency improvement in wind generation system
- Power Electronics Applications Center, USA: (June 1987-July 1989)
R & D and applications of power electronics and motor drives

9. Other Work Experience:

- Distinguished Scientist, EPRI-Power Electronics Applications Center, Knoxville (1989 - 2000)
- Chief Scientist, EPRI-Power Electronics Applications Center (1987-1989)
- Adjunct Assoc. Prof. of Elec. Engg., Rensselaer Polytechnic Institute (1976 - 82)
- Senior Adviser, Beijing Power Electronics R & D Center (1990-1992)
- Visiting Danfoss Professor, Aalborg University, Denmark, 1997
- Visiting Professor, University of Padova, Italy, (2003)
- Visiting Professor, Federal University of Mato Grosso Sul, Brazil, 2006
- Visiting Professor, Sevilla University, Spain, 2008
- Visiting Professor, European Ph.D. School on Power Electronics, Italy, 2010

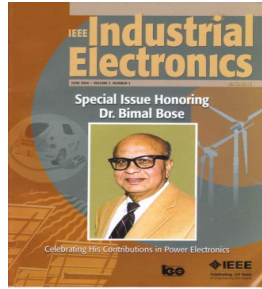
9. Honors and Awards:

- Elected Member, US National Academy of Engineering (2017)
- **Doctor of Science (*Honoris Causa*) degree** from the President of India in the annual convocation of IEST on January 19, 2013 *"In recognition of his outstanding contribution in engineering and his dedicated service to the nation"*



President is awarding the degree to Dr. Bose

- **Dr. Bimal Bose Energy Systems Award** for young scientists was established by the IEEE Industrial Electronics Society that was funded by IES and IEEE Foundation with the article "Doing Research in Power Electronics"
(Cover page of IES Magazine, vol. 9, March 2015)
- Special Issue of IEEE Industrial Electronics Magazine, June 2009, *"Honoring Dr. Bimal Bose and Celebrating His Contributions in Power Electronics"* (with front page photo)



- **Lifetime Achievement Award** by IEST Alumni Association of USA and Canada, July 2018
- **Distinguished Alumnus Award** “for outstanding contribution to the profession and the Alma Mater”
- IEEE Power Electronics Society **William W. Newell Award** (2005) “for outstanding achievements in the interdisciplinary field of power electronics”
- **IEEE Millennium Medal** (2000) “for outstanding contributions in power electronics”
- **IEEE Meritorious Achievement Award in Continuing Education** (1997) “for exemplary and sustained contributions to continuing education”
- **IEEE Lamme Gold Medal** (1996) “for contributions in power electronics and drives”



IEEE President is awarding the Lamme medal

- IEEE Industrial Electronics Society **Eugene Mittelmann Award** (1994) “in recognition of outstanding contributions to research and development in the field of power electronics and a lifetime achievement in the area of motor drives”
- IEEE Region 3 **Outstanding Engineer Award** (1994) “for outstanding achievements in power electronics and drives technology”
- IEEE Industry Applications Society **Outstanding Achievement Award** (1993) “for outstanding contributions in the application of electricity to industry”
- IEEE **Life Fellow** (1996) (**Fellow** in 1989) “for contributions in power electronics and drives technology”
- Member, Tau, Beta Psi Honor Society (1997)
- Distinguished Alumnus Award of IEST, India (2006)

- Fellow of the Royal Society of Uganda (1999)
- GE Silver Patent Medal (1986)
- GE Bronze Patent Medal (1984)
- GE Publication Award (1985)
- **Mouat Gold Medal**, Calcutta University (1970) “*for research contributions in magnetic amplifiers and industrial electronics*”
- **Premchand Roychand Scholar** of Calcutta University (1968)
- One of the ‘**Developers, Movers and Shakers in Power Electronics**’, PCIM Journal, (1990)
- Honorary Professor: Shanghai University, China, (1991)
China University of Mining and Technology, China, (1995)
X’ian Mining Institute, China, (1998)
- Guest Professor: Huazhong University of Science and Technology, China, (2003)
- Honorary Director, Electrical Engg. Inst., X’ian Mining Inst., China, (1998)
- Distinguished Lecturer, Texas A & M University, (2001)
- Distinguished Lecturer: IEEE Industrial Elec. Society (1988 -)
IEEE Industry Appl. Society (1994 - 1995)
- IEEE/IE Prize Paper Awards: 4
- Fellow of Electromagnetics Academy, USA
- “Bimal Bose Award in Power Electronics”, IETE, India, (1983-)
- Distinguished Lecture Award, IEST, (2010-)
- Listed in: Marquis Who’s Who in America (1990)
Who’s Who in the World (2013)
Marquis Who’s Who in American Education (2007)
Marquis Who’s Who in Finance and Business (2009)
Marquis Who’s Who in Science and Engineering (2011)
Who’s Who in Electromagnetics Academy (1990)
Who’s Who in Technology
Int’l. Who’s Who in Engineering
Who’s Who in American Men and Women in Science (2013)
Who’s Who in Asian Americans
Int’l. Directory of Distinguished Leadership
Strathmore’s Who’s Who
Who’s Who in the South and Southwest (2002)
Outstanding People of the 21st Century, IBC (2001)
Great Professors in Power Electronics (2003-)
Who’s Who Historical Society (2001)
Who’s Who in Power Electronics
Listed in “Notable Alumni in IEST”, India
“Dr. Bimal K. Bose: A Reference for Generations” – IEEE IES Magazine Editor-in-Chief

(2009)

“An innovator, educator, and mentor to many members of the industry all over the world. He has been a reference for generations of young (and not so young) engineers and scientists working in the area of power electronics and motor drives” – Honoring Dr. Bimal K. Bose in IES Magazine, Franquelo, Nagy and Wen (June 2009)

“A Living Legend in the Field of Power Electronics” – IES Magazine Editor (2022)

“Recognized as world-renowned authority and pioneer in power electronics” - Wikipedia

“Bose is an innovator, educator and member to many members of the industry all over the world. He has been a reference for many engineers and scientists working in the area of power electronics and motor drives” -Wikipedia

“King of Power Electronics and Motor Drives” – Thailand

“Father of Power Electronics and Motor Drives” – Poland and Japan

“Leader in Power Electronics” – India

“Pioneer in Power Electronics and Motor Drives” – USA

“Father of Neural Network Applications in Power Electronics” – Iraq

- Google Scholar Citations: 26,653 (on Oct. 13, 2022)

11. Some Notable Contributions:

- Built the University of Tennessee Power Electronics program single-handedly from zero-ground to the center-stage of the world.
- Invented Transistor AC Switch and applied in matrix converter in 1973 (later published in 1976 [78]. Transistor AC Switch is now widely used in AC-AC power conversion. This is recognized as “Key Milestone Contribution” in literature.
- Invented Adaptive Hysteresis-Band Current Control technique for voltage-fed converter [20]. The technique is now routinely used in DTC controlled commercial drive by ABB and other applications.
- Invented soft-switched high-frequency link non-resonant converter systems [89][90].
- Invented and demonstrated for the first time that a high-frequency link cycloconverter can operate in programmable leading power factor [44].
- Proposed MPPT (maximum power point tracking) control algorithm of PV converter which is now commonly used [59].
- Pioneer in microprocessor control of power electronic systems. (First published microprocessor application paper [258]. DSPs are now routinely used in power electronic systems.
- Pioneer in Expert System, Fuzzy Logic and Neural Network (AI) applications in power electronics and motor drives. Now used in many industrial systems. It is now an emerging technology. Promoted education in this area by including text book chapters
- Invented dc link active filter (1991) to demonstrate electrolytic capacitor elimination and filtering 2nd harmonic in single phase operation [137].
- Pioneered power electronics applications for cleaner environment to solve global warming problem.
- First time, power electronics and motor drives text book was introduced in English language (1986).
- Some books are universally popular and are followed as graduate texts all over the world. Translated in different languages.
- Promoted power electronics globally through wide scale seminars, tutorials, keynote addresses, books and invited presentations (IEEE Continuing Education Award in 1997).

12. Membership and Professional Activities:

Member, Organizing Committee, 3rd World Congress on Quantum Mechanics and Nuclear Physics (2020)
 Member, Executive Committee, World Congress on Material Science and Nano Technology, Amsterdam (2020)
 Member, Int'l. Conf. on Energy Science & Elec. Engg., New Zealand (2020)
 Member, Organizing Committee, Int'l. Conf. of Electrical & Electronic Engg.(ICEEE), Canada (2020)
 Member, Organizing Committee, Atomic Molecular and Optical Physics, Canada (2020)
 Member, Organizing Committee, World Physics Congress, USA (2019)
 Member, US. National Academy of Engineering (2017)
 Chair, IE Society Honors & Awards Committee (2017-2018)
 Chair, IE Society Distinguished Lecture Committee (2014-2016)
 Honorary General Chair, Int'l. Future Energy Conf., Taiwan (2013)
 Honorary Chair, Qatar Workshop on Power Electronics (2012)
 Member, IEEE Awards Board (2010-2012)
 Member, IEEE Medal in Power Engineering Committee (2009-2012)
 Chair, IEEE Medal in Power Engineering Committee, (2013- 2014)
 Vice-Chair, IEEE Medals Council (2006- 2008)
 Member, IEEE Medals Council (2013)
 Member, IEEE Awards Planning & Policy Committee (2006-2008)
 Member, IEEE-USA Energy Policy Committee (2005-)
 Member, Editorial Board, Proceedings of the IEEE (1995 - 2006)
 IEEE Industrial Electronics Magazine (2009-)
 Int'l. Review of Electrical Engineering (2006 -)
 Journal of Intelligent & Fuzzy Systems (2000-)
 Journal of Power Electronics, Korean Inst. of Power Electronics (2003-2011)
 European Trans. on Electrical Power (2005 -)
 Asia-Pacific Engineering Journal (1992-1996)
 Inst. of IETE, India (1988-1993)
 MDPI Open Access Journal on Energy and Electronics (1998-)
 Int'l. Electro-Soft Journal (1987-1990)
 Journal of Electrical Engg. and Electronics Technology (2012-)
 WSEAS Trans. on Business and Economics, (2011-)
 Praise Worthy Prize (2005 -)
 Electronics Journal (2013 -)
 Int'l. Journal of Applied Control, Electrical and Electronics Engg. (2013 -)
 Electrical and Power Engineering Frontier (2013 -)
 Journal of Engineering Science and Research Technology (2015 -)
 Chairman, Power Electronics Council, IEEE - IE Society (1992-1999)
 Chairman, Power Electronics Program, IEEE-IECON (1988-1998)
 Member, Advisory Committee, PEDES (2010)
 Member, Advisory Committee ICEPEC (2011)
 Member, IEEE-IECON, Int'l. Advisory Committee (2012)
 Guest Editor, Proc. IEEE Special Issue on Power Electronics and Motion Control (1994)
 Chairman/Co-Chairman, Power Electronics Program, Int'l. Symp. of IE Society (1992- 2000)
 Vice-Chairman, IEEE IAS Distinguished Lecture Program (2003)
 Co-Chair, Technical Program Committee of IEEE-PESC, Toledo (1992)
 Co-Chair, Int.l. Steering Committee of Int.l. Conf. on Elec. Machines and Systems (2003)
 Chairman, Power Electronics Committee, IEEE IE Society (1999 - 2001)
 Co-General Chairman, IEEE Int'l. Conf. of PEDES (1998)
 Associate Editor, IEEE Trans. of Ind. Electronics (1992 - 2000, 2005-2006)
 Chairman, IEEE - IA Society Industrial Power Conv. Committee (1989-1991)
 Chairman, Awards Committee, IEEE IA Society Industrial Drives Committee (2000-2001)
 Member, IEEE Lamme Medal Committee (1996 – 2001)
 Member, IEEE IA Society Outstanding Achievement Award Committee (1994-1996, 2001-2004)
 Member, IEEE Fellow Committee (2005, 2007- 2009)
 Member, Int'l. Steering Committee, ICEM (2005)

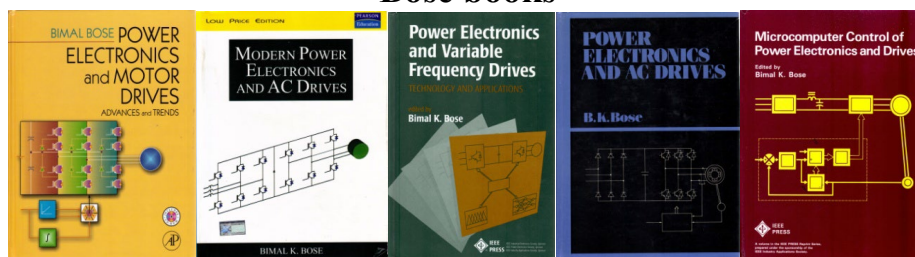
Member, IEEE IAS Neural Network Council (1992-1995)
 Power Electronics Adviser to China, Brazil and Chile (1977-1994)
 Member, National Power Electronics Committee, USA (1987 -1992)
 Member, Int'l. Council for Power Electronics Cooperation (1987 -1995)
 Member, ASEE (1997-2000)
 Member, Technical and Program Committees, CICEM, China (1999)
 Member, Int'l. Steering Committee, Power Electronics Conf., Algeria, 2000
 Member, Int'l. Conf. on Energy, Automation and Information Technology, IIT, Kharagpur (2001)
 Member, Honorable Organizing Committee, PCC, Osaka (2002)
 Member, Int'l. Steering Committee, PEDS Conf., Bali (2000)
 Member, Advisory Committee, IEEE Electromagnetic Compatibility Conference, Thailand (2002)
 Member, Int'l. ACEMP Conf., Turkey (Steering and Organizing Committees) (1995, 2001)
 Co-Chair, Int'l. Conf. on Elec. Machines and Syst., Beijing (2003)
 Member of Honorable Board of Organization, Int'l. Power Elec. Conf., Tokyo (1990, 1995, 2000)
 Member, Int'l. Scientific Committee of Electralis, Belgium (2001)
 Member, Honorary Board, Int'l. Conf. on Elec. Drives and Energy Quality, Romania (2003)
 Member, IEEE Int'l. Power Electronics Congress, Mexico (2002)
 Member, IEEE Spectrum Advisory Board (1997-2000)
 Program Reviewer, Electrical Engg. Dept., Nevada University, Reno (2000)
 Member, Int'l. Advisory Committee, IEEE-ICIEA, China (2009)
 Founder Member, Power Electronics for Universal Brotherhood (1990 - 2000)
 Member, Advisory Committee of IASTED Int'l. Conference, Palm Springs, CA (2003)
 Member, Int'l. Steering Committee, PEDS, Singapore (2003)
 Member, Editorial Advisory Committee, Int'l. Journal of Industrial Electronics.
 Member, IEEE-IAS Drives Committee (1977 -)
 Member, IEEE -IAS Industrial Power Converter Committee (1975-)
 Member, Int'l. Steering Committee, Celaya, Mexico (2004)
 Member, Int'l. Advisory Committee, IEEE-ICIEA, X'ian, China (2009)
 Honorary Chair, IEEE-POWERENG, Portugal (2007)
 Paper Reviewer: IEEE IA Trans.
 IEEE PELS Trans.
 IEEE IE Trans.
 Proc. of the IEEE
 IEEE- IECON, IAS, PESC, ISIE, IPEC, PEMC, Int'l. Journal of Mechatronics
 IEEE Trans. On Mechatronics
 Int'l. Journal for Computation and Mathematics in Elec. & Electronic Engg.
 (COMPEL (2006-)
 European Power Elec. (EPE) Conf.
 Int'l. Journal of Circuit Theory and Applications
 IEEE IE Society Magazine
 Book Reviewer: Automatica
 John Wiley
 Elsevier
 IEEE Press
 Prentice Hall
 CRC Press
 IEEE Spectrum interview for Power Electronics and Drives, pp. 104-107
 (as Member, Spectrum Advisory Board), (2000)
 Plenary speaker, Int'l. Power Electronics Conf., Busan (2004)
 Plenary speaker, IEEE-Int'l. Symposium in Alternate Sources of Energy and Energy Quality (SIFAE
 & CE), Bogota, Colombia (2007)
 Plenary speaker, National Power Electronics Congress, Roorkee IIT, India (2010)
 Distinguished lecturer, Texas A&M University (2002)
 IEEE Distinguished Lectures: Argentina (2012), Bombay and Pune (2012), Delhi (2007), Sydney (2009),
 Singapore (2011), Hong Kong (2005), Auckland and Christ Church (2009), Hyderabad (Faraday Memorial
 Lecture), Delhi and Kolkata (2006), and Taiwan (2008)

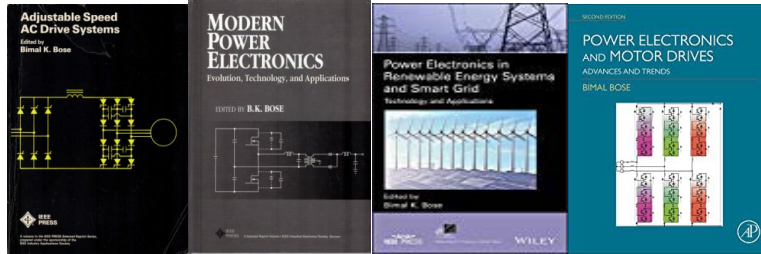
Doctoral thesis examiners: IITs of India [Delhi (2008,2009,2014,2014,2014,2016,2019,2020,2021), Roorkee (1991,2015,2016,2017,2018,2019,2019,2021), Kanpur (2021), Madras (1995,1996,1997), Kharagpur (1986,2012)], NITs of India [Kurukshetra (2021), Warangal (2016), Sikkim (2022)], VTU, India (2021), Univ. of Hyderabad, India (2005), BMS College, India (2022), JU, India (2000), Singapore NTU (2005,2011,2012), Hong Kong [Poly. Univ. (2000), Univ. of Hong Kong (D.Sc.)(1995)], Australia [(Univ. NSW) (2005), Australia Griffith Univ. (2021)], Finland [Helsinki Univ. of Tech. (1998), Lapeenranta (2010)], Florionopolis, Brazil (1991) Cyprus Univ. (2022), Chile Santiago (2005), China CUMT (2005)

13. Books:

- [1] Bimal Bose, *Power Electronics and Motor Drives - Advances and Trends*, Academic Press, First Edition, 2006.
Translated into Chinese, Swedish, Korean and Iranian
Publication in Indian Edition
- [2] Bimal K. Bose, *Power Electronics and Motor Drives -Advances and Trends*, Second Edition, 2020.
Translated into Korean, Dutch and Lithuanian
- [3] Bimal K. Bose, *Modern Power Electronics and AC Drives*, Prentice Hall, Upper Saddle River, 2002
Translated into Chinese, Iranian and Arabic
Publication in Asian and Chinese Editions
- [4] Bimal K. Bose (Ed.), *Power Electronics and Variable Frequency Drives*, IEEE Press, NJ, 1997.
Translated into Chinese, Dutch and Korean
- [5] B. K. Bose (Ed.), *Modern Power Electronics*, IEEE Press, NJ, 1992. (IEEE best seller)
Translated into Chinese
Publication in Indian Edition
- [6] Bimal K. Bose (Ed.), *Microcomputer Control of Power Electronics and Drives*, IEEE Press, NJ, 1987.
- [7] B. K. Bose, *Power Electronics and AC Drives*, Prentice Hall, NJ, 1986.
(First English language text in this area)
Translated into Chinese, Japanese, Iranian and Korean
Publication in Indian and Hong Kong Editions
- [8] Bimal K. Bose, *Adjustable Speed AC Drive Systems*, IEEE Press, NJ, 1982.
Translated into Chinese
- [9] Bimal K. Bose (Ed.), *Power Electronics in Renewable Energy Systems and Smart Grid*, IEEE Press/Wiley, July 2019.

Bose books





14. Guest Editor:

- Guest Editor, Proc. IEEE Special Issue on Power Electronics in Smart Grid and Renewable Energy Systems (vol. 105, no. 11, November 2017)
- Guest Editor, Proceedings of the IEEE Special Issue on “Power Electronics and Motion Control”, August 1994
- IEEE-IE Transactions, Special Section on “Neural Networks and Their Applications in Power Electronics and Motor Drives” February 2007
- IEEE-IAS Transactions, Guest Editorials on “What I Saw in Japan”, 1988
& “Motion Control Technology –Present and Future”, 1985
- Electronics Journal, Special Issue on “Renewable Energy Systems”, 2013
- Electronics Journal (Open Access), Special Issue on “Multi-Level Converters”, 2016

15. Book Chapters/Sections:

- [1] B. K. Bose, “Converter Control of Machines”, *Electrical Engg. Handbook*, CRC Press, 1993
- [2] B. K. Bose, “Power Electronics”, *Encyclopedia of Applied Physics*, VCH, 1996
- [3] B. K. Bose, “AC Drives”, *Systems and Control Encyclopedia*, Pergamon Press, 1987
- [4] B. K. Bose, “Adjustable Speed AC Drives”, *Power Electronics Technology and Applications*, IEEE Press, NJ, 1993
- [5] B. K. Bose, “Adjustable Speed Motor Drives” (Chapter 9), *Power Electronics Technology and Applications II*, IEEE Press, NJ, 1998.
- [6] B. K. Bose, “Power Semiconductor Devices” (Section 4, pp. 239-270) *Modern Electrical Drives*, Kulwar, 2000.
- [7] B. K. Bose. “Energy, Global Warming and Impact of Power Electronics in the Present Century” (Chapter 1), *Power Electronics for Renewable Energy Systems, Transportation and Industrial Applications*, Qatar, John Wiley, 2014
- [8] B. K. Bose and Fred Wang, “Energy, Environment, Power Electronics, Renewable Energy Systems, and Smart Grid” (Chapter 1), *Power Electronics in Renewable Energy Systems and Smart Grid*, 2019, IEEE Press/Wiley
- [9] B. K. Bose, “Artificial Intelligence Applications in Renewable Energy Systems and Smart Grid- Some Novel Applications” (Chapter 12), *Power Electronics in Renewable Energy Systems and Smart Grid*, 2019, IEEE Press/Wiley

16. Keynote Addresses in National and Int'l. Conferences:

- [1]. "Advances in Power Electronics and Drives – Their Impact on Energy and Environment", IEEE- Int'l. Conf. on Power Electronics, Drives and Energy Systems (PEDES), Perth, Australia, Dec.1998.
- [2]. "Energy, Environment and Progress in Power Electronics", Japan IEE/IAS Conf., Nagaoka, Japan, August 7, 1997.
- [3]. "Recent Technology Advances in Power Electronics and Variable Frequency Drives", IEEE Int'l Power Electronics Congress, San Luis Potosi, Mexico, August 20, 1995.
- [4]. "Trends in Power Electronics and Drives Conf. on Industrial Drives", Rockhampton, Australia, Sept. 18, 1991.
- [5]. "Power Electronics – An Emerging Technology", Int'l. Workshop on Role of Univ. In Power Electronics Education and Research (EPRI), Baltimore, July 7, 1989.
- [6]. "Power Electronics and Drives – Recent R & D Trends", First Chinese Academic Conf. On Variable Speed Drives, Beidaihe, China, Aug. 13, 1989.
- [7]. "Power Electronics – Present and Future", Tokyo, Japan IEE/PCIM, Dec. 8, 1989.
- [8]. "Trends in Power Electronics and Drives", Diamond Jubilee of App. Physics Dept, Calcutta Univ., Jan.2, 1986.
- [9]. "Technology Trends in Microcomputer Control of Small Machines", Int'l. Conf. on Microcomputer Control of Small Machines (IEEE IE Society), July 14, 1986.
- [10] "Trends in Motion Control Technology", Applied Motion Control Conf., Minneapolis, June 13, 1985.
- [11] "Energy, Environment and Advances in Power Electronics", Int'l. Power Electronics Conference, Busan, Korea, October 2004.
- [12] "Intelligent control and Estimation in Power Electronics and Drives", Int'l. Power Electronics Congress (CIEP 2006), Cholula, Mexico, October 2006.
- [13] "Energy, Environment and Importance of Power Electronics", IEEE POWERENG Conf., Lisbon, Portugal, April 2007.
- [14] "Power Electronics – Its Impact on Energy and Environment", WSEAS Int'l. Conf., Venice, Italy, November 21-23, 2007.
- [15] "Energy, Environment, and the Advancing Frontier of Power Electronics" The 2nd IASTED Africa Conf. on Power and Energy Systems (AfricaPES2008), Gaborone, Botswana, September 2008.
- [16] "Energy, Global Warming and Power Electronics", Australian Universities Power Engineering (AAUP) Conf. 2009, Adelaide, September 28, 2009.
- [17] "Global Warming – How Power Electronics Can Help in Solving the Problem?" IEEE Conf. on Industrial Electronics and Applications, 2009 (ICIEA 2009), X'ian, China, May 25-27, 2009.
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17. List of U.S. Patents:

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18. Panel Discussions in International Conferences

- [1] Organizer, Chairman and Panelist in Panel Discussion Session on "Artificial Intelligence Applications in Power Electronics and Motor Drives", Int'l. Power Electronics Conf. (IPEC), Tokyo, Japan, April 1995.
- [2] Organizer, Chairman and Panelist in Panel Discussion Session on "Advances and Trends in Power Electronics", IEEE Industrial Electronics Society Annual Conf. in Roanoke, October 1996.
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19. Invited Presentations: (Distinguished lectures, Tutorials, Plenary lectures, Keynote addresses, etc.) in the following countries:

Argentina, Australia, Botswana, Brazil, Canada, China, Columbia, Costa Rica, Chile, Croatia, Czech, Denmark, Finland, France, Germany, Greece, Hawaii, Hong Kong, Hungary, India, Italy, Japan, Korea, Malaysia, Mexico, Moldova, New Zealand, Poland, Portugal, Puerto Rico, Qatar, Singapore, Slovenia, South Africa, Spain, Taiwan, Tunisia, Thailand, Turkey, USA.

Total No. 628 (approximately)

20. Philanthropic Activities:

- Bhita M. P. Institution, Burdwan, India (my old village school) (Total: \$100,000 approx.)
 - 47 annual school scholarships, Seminar Hall and Library with books, computers and sewing machines (for girls education)
- Institution of Electronics and Telecommunications, India – Introduced annual Bimal Bose Power Electronics Award (Rs. 30,000/year+Travel)
- IEST, India – Introduced annual Bimal Bose Distinguished Lecture Award
- IEEE Foundation – Heritage member for donation, \$100,000 gift

- Financial support to GRABUU, India (Gram Bangla Unnayan Udyog Inc.) for improving education and economic development .

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