

## Dr. Bimal K. Bose

### *Office Address*

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**Dr. Bimal K. Bose** (*Life Fellow, IEEE*) held the Condra Chair of Excellence (Endowed Chair) in Power Electronics at the University of Tennessee, Knoxville since 1987, where he was responsible for teaching and research program in power electronics and motor drives. Concurrently, he served as Distinguished Scientist (1989-2000) and Chief Scientist (1987-1989) of EPRI-Power Electronics Applications Center, Knoxville, TN. Prior to this, he was a Research Engineer in the GE Corporate Research and Development (now GE Global Research Center), Schenectady, NY, for 11 years (1976-1987), an Associate Professor of Electrical Engineering, Rensselaer Polytechnic Institute, Troy, NY, for five years (1971-1976), and a faculty member at Bengal Engineering and Science University for 11 years (1960-1971). He is specialized in power electronics and motor drives, specially including power converters, PWM techniques, microcomputer/DSP control, electric/hybrid vehicle drives, renewable energy systems, and artificial intelligence (expert system, fuzzy logic and neural network) applications in power electronics and motor drives. He has been power electronics consultant in a large number of industries. He holds a Honorary Professorship in Shanghai University (1991), China University of Mining and Technology (1995), X'ian Mining University (1998) (also Honorary Director of Elec. Engg. Institute) and Huazhong University of Science and Technology (2002). He has authored more than 250 papers and holds 21 U.S. patents. He has authored/edited seven books in power electronics: *Power Electronics and Motor Drives – Advances and Trends* (Academic Press, 2006), *Modern Power Electronics and AC Drives* (Prentice-Hall, 2001), *Power Electronics and AC Drives* (Prentice-Hall, 1986), *Power Electronics and Variable Frequency Drives* (Wiley/IEEE Press, 1997), *Modern Power Electronics* (IEEE Press, 1992), *Microcomputer Control of Power Electronics and Drives* (IEEE Press, 1997), and *Adjustable Speed AC Drive Systems* (IEEE Press, 1981). He has given tutorials, keynote presentations and invited seminars extensively throughout the world, particularly in IEEE sponsored programs and conferences. Dr. Bose has served the IEEE in various capacities, including Chairman of the IEEE Industrial Electronics Society (IES) Power Electronics Council, Associate Editor of the IEEE Trans. on Industrial Electronics, IEEE-IECON Power Electronics Chairman, Chairman of the IEEE Industry Applications Society (IAS) Industrial Power Converter Committee, IAS member of the Neural Network Council, Vice-Chair of the IEEE Medals Council, Member of IEEE-USA Energy Policy Committee, Member of the IEEE Fellow Committee, Member of Lamme Medal Committee, Member of IEEE Power Engineering Medal Committee, Member of IEEE Awards Board, etc. He served as a Member of the Editorial Board of the *Proceedings of the IEEE* and the *Journal of Intelligent and Fuzzy Systems* since. He was the Guest Editor of the Proceedings of the IEEE “Special Issue on Power Electronics and Motion Control” (August 1994). He has served as a Distinguished Lecturer of both the IAS and IES. Dr. Bose is a recipient of a number of awards, including IEEE Power Electronics Society Newell Award (2005), IEEE

Millennium Medal (2000), IEEE Meritorius Achievement Award in Continuing Education (1997), IEEE Lamme Medal (1996), IEEE-IES Eugene Mittelmann Award (for lifetime achievement in power electronics and motor drives)(1994), IEEE Region 3 Outstanding Engineer Award (1994), IEEE-IAS Outstanding Achievement Award (1993), Calcutta University Mouat Gold Medal (1970), GE Silver Patent Medal (1986), GE Publication Award (1985), and a number of IEEE prize paper awards. He also received the Distinguished Alumnus Award (2006) from Bengal Engineering and Science University, India. The IEEE Industrial Electronics Society Magazine published a special issue (June 2009) “*Honoring Dr. Bimal Bose and Celebrating His Contributions in Power Electronics*”

with his photo on cover page and defining “*Dr. Bimal Bose: A Reference for Generations*”

Dr. Bose received B.E. degree in 1956 from Calcutta University, India; M.S. degree from University of Wisconsin, Madison in 1960 and Ph.D. degree from Calcutta University in 1966.

## **Honors and Awards**

2006: Indian Institute of Engineering Science and Technology Distinguished Alumnus Award for Outstanding Contribution to the Profession and the Alma Mater

2005: IEEE\* Power Electronics Society William W. Newell Award for Outstanding Achievements in the Interdisciplinary Field of Power Electronics

2003: Guest Professor of Huazhong University of Science and Technology, China

2000: IEEE Millennium Medal for Outstanding Contributions in Power Electronics

1998: Honorary Professor (and Honorary Director of Elec. Eng. Inst.) of Xi'an Mining Institute, China

1997: IEEE Meritorious Achievement Award for Exemplary and Sustained Contributions to Continuing Education

1996: IEEE Lamme Gold Medal for Contributions in Power Electronics and Drives

1996: IEEE Life Fellow (Fellow in 1989) for Contributions in Power Electronics and Drives Technology

1996: Honorary Professor of China University of Mining and Technology

1994: IEEE-IE Society Eugene Mittelmann Award in Recognition of Outstanding Contributions to Research and Development in the Field of Power Electronics and Life Time Achievement in the Area of Motor Drives

1994: IEEE Region 3 Outstanding Engineer Award for Outstanding Achievements in Power Electronics and Drives Technology

1993: IEEE Industry Applications Society Outstanding Achievement Award for Outstanding Contributions in the Applications of Electricity to Industry

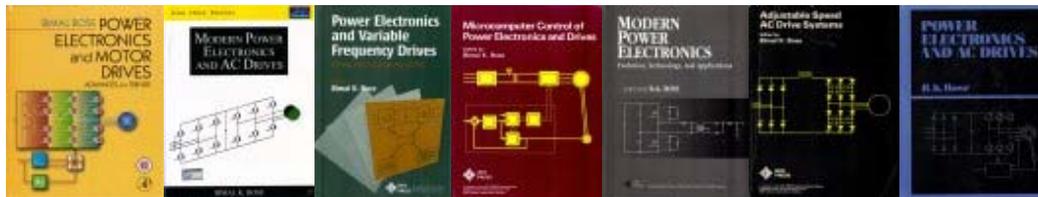
1991: Honorary Professor of Shanghai University, China

1986 GE Silver Patent Medal

1985: GE Publications Award

1970: Calcutta University Mouat Gold Medal and Premchand Roychand Scholar for Research Contribution in Magnetic Amplifiers and Industrial Electronics

## Published Books



## Recent Presentations

- Keynote Address in National Power Electronics Conference (NPEC2010), IIT, Roorkee, India, June 10, 2010, "Energy, Global Warming and Power Electronics".
- Keynote Address in IEEE Int'l. Conf. on Industrial Electronics and Applications (ICIEA2009), Xi'an, China, May 26, 2009, "Global Warming – How Power Electronics Can Help In Solving the Problem".
- Distinguished Lecture of IEEE Industrial Electronics Society, Sydney, Australia, September 25, 2009, "Power Electronics – Its Progress and Applications".
- Keynote Address in Australia Universities Power Engineering Conference (AUPEC2009), Adelaide, Australia, September 28, 2009, "Energy, Global Warming and Power Electronics".
- Keynote Address in IASTED Africa Conf. on Power and Energy Systems, Gaborone, Botswana, September 8, 2008, "Energy, Environment, and the Advancing Frontier of Power Electronics".
- IEEE IECON Panel Discussion Presentation in Orlando, USA, November 12, 2008, "Power Electronics – Introduction and Perspective".

## Recent Publications

- "A Digital PLL Scheme for Three-Phase System Using Modified Synchronous Reference Frame", IEEE Trans. On Industrial Electronics, vol. 57, pp. 3814-3821, November 2010.
- "Power Electronics and Motor Drives" –Recent Progress and Perspective", B.K.Bose, IEEE Trans. On Industrial Electronics", vol. 56, pp. 581-588, February 2009.
- "The Past, Present and Future of Power Electronics", B.K.Bose, IEEE Industrial Electronics Magazine, pp. 1-5, June 2009.
- "Simplified Space Vector PWM Algorithm for Multilevel Inverters Using Nonorthogonal Moving Reference Frame", N.P. Filho, L.daSilva, J.O.P. Pinto, and B.K.Bose, IEEE IAS Conf. Rec., 2008.
- "Improving the Dynamic Response of Shunt Active Filter Using Modified Synchronous Reference Frame PLL", C.H.daSilva, R.R.Pereira, L. daSilva, G.L.Torres, and B.K.Bose, IEEE IECON Conf. Rec., pp. 790-795, 2008.
- "Evaluation of the Auto-Associative Neural Network Based Sensor Compensation in Drive Systems", IEEE IAS Conf. Rec., pp. 1-6, 2008.
- "Neural Network Applications in Power Electronics and Motor Drives", B.K.Bose, IEEE Trans. on Industrial Electronics, vol. 54, pp. 14-33, 2007.