

Profile of Professor B V Babu



Dr B V Babu is Professor of Chemical Engineering at Birla Institute of Technology and Science (BITS), Pilani. He did his PhD from IIT-Bombay. He held various administrative positions as Dean-Student Welfare Division, Dean-Faculty Division1, Dean-Educational Hardware Division, Assistant Dean-Engineering Services Division, Head-Chemical Engineering Department, Incharge-Workshop, Head-Engineering Technology Department, Warden-Vishwakarma Bhawan, etc. He is a member of various academic and administrative committees at BITS Pilani. He is the member of project planning & implementation committees of BITS-Pilani Dubai Campus, BITS-Pilani Goa Campus, and BITS-Pilani Hyderabad Campus. He is external expert member of Board of Studies at Banasthali University and MNIT-Jaipur. He is expert peer committee member of National Assessment and Accreditation Council (NAAC), Bangalore, India. He is also member of Peer Review Committee for The Natural Sciences and Engineering Research Council of Canada (NSERC), Canada; National Research Foundation (NRF), International Research Grants, South Africa; and Council of Scientific & Industrial Research, New Delhi. He is the Coordinator for PETROTECH Society at BITS-Pilani. He is on Selection Committee for Faculty Recruitment at Banasthali University-Banasthali and SVNIT-Surat. He is the Task Force Leader of Campus Life Thrust area of Vision 2020-Mission 2012 Project at BITS Pilani.

He has 25 years of Teaching, Research, Consultancy, and Administrative experience. He guided 8 PhD students, 36 ME Dissertation students and 38 Thesis students and around 200 Project students. He is currently guiding 2 PhD candidates. He is on doctoral advisory committee for 10 PhD students. He currently has 3 research and sponsored projects from MHRD, UGC & KK Birla Academy. He is PhD Examiner for 10 candidates and PhD Thesis Reviewer for 6 Candidates.

His research interests include Evolutionary Computation (Population-based search algorithms for optimization of highly complex and non-linear engineering problems), Environmental Engineering, Biomass Gasification, Energy Integration, Artificial Neural Networks, Nano Technology, and Modeling & Simulation.

He is the recipient of National Technology Day (11th May, 2003) Award given by CSIR, obtained in recognition of the research work done in the area of 'A New Concept in Differential Evolution (DE) – Nested DE'. His paper entitled "Convective and Radiative Heat Transfer in Pyrolysis of a Biomass Particle" authored by A S Chaurasia, **B V Babu**, Amanpreet Kaur, and V Thiruchitrabalam, published in Indian Chemical Engineer Journal, Vol. 47 (No. 2), pp. 75-80, April-June, 2005 earned the **Kuloor Memorial Award, 2006 awarded for the Best Technical Paper** published in the Institute's Journal "Indian Chemical Engineer" in its issues for 2005.

He is the Life member of Indian Institute of Chemical Engineers (IChE), Life member of Indian Society for Technical Education (ISTE), Life member of Institution of Engineers (IE), Fellow of International Congress of Chemistry and Environment (ICCE), Life member of Indian Environmental Association (IEA), Life member of Society of Operations Management (SOM), Associate Member of International Society for Structural and Multidisciplinary Optimization (ISSMO), Member of International Institute of Informatics and Systemics (IIS), Member of International Association of Engineers (IAENG). Nine of his technical papers have been included as successful applications of Differential Evolution (DE: a population based search algorithm for optimization) on their Homepage at <http://www.icsi.berkeley.edu/~storn/code.html#appl>.

He has around 190 research publications (International & National Journals & Conference Proceedings) to his credit. He completed three consultancy projects successfully and he has been Technical Consultant for Maharashtra Electricity Regulatory Commission (MERC), Mumbai and offering Advisory Services in the "Study relating to Bagasse

Based Co-generation". He also has been invited as a consultant by a Bahrain (Middle East) based company for making a complex of chemical factories. He is a Panel Expert for www.chemicalhouse.com. He is Technical Consultant for Sangam (India) Limited Textile Industry at Bhilwara for Removal of Color, BOD, and COD from Effluent Treatment Plant.

He has published five books (1) "Process Plant Simulation", EDD, BITS-Pilani, 2002, (2) "New Optimization Techniques in Engineering", Springer-Verlag, Germany, 2004, and (3) "Process Plant Simulation", Oxford University Press, India, 2004, (4) "Environmental Management Systems", EDD, BITS-Pilani, 2005, (5) "Chemical Engineering Laboratory Manual", EDD, BITS-Pilani, 2006. In addition he has written several chapters and invited articles in various books, lecture notes, and International Journals. He was invited to write an editorial and for cover design on **Conservation of Natural Resources**, for December 2006 Issue of International Research Journal of Chemistry & Environment. He was invited to write an editorial on **Materials Engineering/Fluids Engineering/Advanced Technologies in Materials Science** for August-October 2008 Issue of Journal of Future Engineering and Technology

He was the Invited Chief Guest and delivered the Keynote addresses at seven international conferences and workshops (Desert Technology-7, Jodhpur; Life Cycle Assessment, Kaula Lumpur; Indo-US Workshop, IIT-Kanpur; Indo-French Workshop, TERI-New Delhi; Indo-US Workshop, Kolkata; Research tools Workshop, BITS Pilani-Goa Campus; Process Modeling & Simulation Workshop, UPES-Dehradun) and three national seminars. He organized many Seminars & Conferences at BITS-Pilani. He also chaired 20 Technical Sessions at various International & National Conferences. He delivered 50 invited lectures at various IITs and Universities abroad.

He is Editorial Board Member of six International Journals 'Energy Education Science & Technology', 'Research Journal of Chemistry and Environment', 'International Journal of Computer, Mathematical Sciences and Applications', 'Journal on Future Engineering and Technology', 'International Journal of Applied Evolutionary Computation', and 'Innovative Energy Policies'. He is the referee & expert reviewer of 70 International Journals. He is also on the Programme Committees at many (around 140) International Conferences. He reviewed five books of McGraw Hill, John Wiley & Science, Elsevier, Oxford University Press, and Tata McGraw Hill publishers.

He is the Organizing Secretary for "National Conference on Environmental Conservation (NCEC-2006)" held at BITS-Pilani during September 1-3, 2006. He is also the Organizing Committee Member (Publicity Chair), and Session Organizer for the Special Session on "Evolutionary Computation" at The Second International Conference on "Computational Intelligence, Robotics, and Autonomous Systems (CIRAS-2003)", National University of Singapore, Singapore, December 15-17, 2003. He is the Session Chair and organized an Invited Session on "Engineering Applications of Evolutionary Computation Techniques" at "The Eighth World Multi-Conference on Systemics, Cybernetics, and Informatics (SCI-2004)", Orlando, Florida, USA, July 18-21, 2004.

Details are available at <http://discovery.bits-pilani.ac.in/~bvbabu/>.