# Personal Details Ujjwal K. Saha, PhD (1996), IIT Bombay

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### Professional Experiences

Professor - IIT Guwahati - Since February 2012

- Associate Professor IIT Guwahati September 2003 to February 2012
- Assistant Professor IIT Guwahati July 2000 to September 2003
- Lecturer NERIST, Itanagar October 1996 to July 2000

# Courses Taught

- 0 Engineering Drawing (UG)
- Fluid Mechanics I & II (UG) 0
- Thermodynamics (UG)
- Applied Thermodynamics I & II (UG) 0
- Mechanical Measurements (UG) 0
- Internal Combustion Engines (UG)
- Experimental Methods (PG) Shared 0
- Fluid Mechanics (PG) 0
- Aerodynamics (PG)
- Gas Turbine Theory (PG) 0
- Introduction to Aerospace Engineering (UG/PG)  $\circ$
- Rocket Propulsion (UG/PG)
- 0 Technical Writing (PG)
- Applied Mechanics (UG) @ NERIST 0
- Hydraulic Machinery (UG) @ NERIST 0
- Thermal Turbomachines (UG) @ NERIST

### Research Interests

Areas of research interest include, but are not limited to

- Turbomachines (Wind, Hydro)
- Aerodynamics (Bluff Body, Sports)
- Reciprocating I C Engines (Diesel, Dual Fuel)
- Alternative Fuels (Gaseous, Liquid)
- Aerospace Propulsion (Nozzles, Fans/Compressors)
- Aerospace Engineering Education

### Supervision of Students

- = 12 Completed + 7 Ongoing (Graduated PhD students are listed in page 6)
- MTech = 62 Completed + 4 Ongoing
- MS(R) = 04 Completed 0
- BTech = 33 Completed (including 7 from NERIST) + 1 Ongoing



Details of journal/conference publications can be found from Google Scholar Citations.

### Selected Journals

- AIAA Journal of Aircraft, 2012
- AIAA Journal of Spacecraft and Rockets, 2021
- AIP Journal of Renewable and Sustainable Energy, 2013, 2018, 2021, 2022
- Applied Energy, Elsevier, 2014
- Applied Thermal Engineering, Elsevier, 2012, 2016
- ASCE Journal of Energy Engineering, 2014<sup>2</sup>, 2016, 2017, 2018, 2020
- ASME Journal of Computing and Information Science in Engineering, 2022<sup>2</sup>
- ASME Journal of Fluids Engineering, 2021
- ASME Journal of Energy Resources Technology, 2016, 2018<sup>2</sup>, 2019<sup>2</sup>, 2020<sup>2</sup>, 2021<sup>2</sup>, 2022<sup>3</sup>
- ASME Journal of Engineering for Gas Turbines and Power, 2011, 2014, 2015, 2019, 2022
- ASME Journal of Solar Energy Engineering, 2019<sup>2</sup>, 2021, 2022
- Cleaner Engineering and Technology, Elsevier, 2022<sup>2</sup>
- Computers and Structures, Elsevier, 2009
- Current Science, Indian Academy of Sciences, 2017
- Energy, Elsevier, 2011, 2018
- Energy Conversion and Management, Elsevier, 2013<sup>2</sup>, 2014<sup>2</sup>, 2018<sup>2</sup>, 2019, 2020
- Experimental Thermal and Fluid Science, Elsevier, 1997, 2013
- Fuel, Elsevier, 2018
- International Journal of Ambient Energy, Taylor & Francis, 2020
- International Journal of Exergy, Inderscience, 2012
- International Journal of Heat and Mass Transfer, Elsevier, 2013, 2014
- International Journal of Turbo & Jet Engines, Freund, 1995<sup>2</sup>, 1996, 2005
- Journal of the Energy Institute, Elsevier, 2019
- Journal of Marine Science and Application, Springer, 2013
- Journal of Power Technologies, Institute of Heat Engineering, Poland, 2012
- Journal of the Institution of Engineers (India): Series C, Springer, 2021
- Journal of Wind Engineering & Industrial Aerodynamics, Elsevier, 2008
- Ocean Engineering, Elsevier, 2009
- Proc. IMechE, Part A: Journal of Power and Energy, Sage, 2013<sup>2</sup>
- Proc. IMechE, Part G: Journal of Aerospace Engineering, Sage, 2008
- Proc. IMechE, Part M: Journal of Engineering for the Maritime Environment, Sage, 2011
- Renewable Energy, Elsevier, 2006, 2008, 2015, 2016, 2018
- Renewable and Sustainable Energy Reviews, Elsevier, 2009, 2013, 2015
- Sadhana Academy Proceedings in Engineering Science, India, 2020, 2021
- Thermal Science and Engineering Progress, Elsevier, 2020
- Wind Engineering, Multi-science, 2006

### Selected Conference Proceedings

- ASME 2022 Power Conference, Pittsburgh, USA, 2022
- ASME 2021 Gas Turbine India Conference (in virtual mode), 2021<sup>3</sup>
- ASME 2021 International Mechanical Engineering Congress and Exposition (in virtual mode), 2021<sup>2</sup>
- ASME 2021 Power Conference (in virtual mode), 2021
  ASME 38th International Conference on Ocean, Offshore & Arctic Engineering, Glasgow, Scotland, 2019
- ASME Gas Turbine India Conference, IIT Madras, Chennai, India, 2019
- ASME 37th International Conference on Ocean, Offshore & Arctic Engineering, Madrid, Spain, 2018 ASME Gas Turbine India Conference, Bangalore, India, 2017<sup>3</sup>
- ASME 11th International Conference on Energy Sustainability, Charlotte, North Carolina, USA, 2017
- ASME Turbo Expo, Charlotte, North Carolina, USA, 2017
- ASME 35th International Conference on Ocean, Offshore & Arctic Engineering, Busan, South Korea, 2016 ASME Gas Turbine India Conference, Hyderabad, India, 2015<sup>3</sup>
- ASME-ATI-UIT Conference on Thermal & Environmental Issues in Energy Systems, Napoli, Italy, 2015
- ASME Gas Turbine India Conference, New Delhi, India, 2014<sup>2</sup>
- ASME 12<sup>th</sup> Biennial Conference on Engineering Systems Design & Analysis, Copenhagen, Denmark, 2014<sup>2</sup> ASME Turbo Expo, Dusseldorf, Germany, 2014
- ASME Gas Turbine India Conference, Bangalore, India, 2013
- ASME International Mechanical Engineering Congress and Exposition, San Diego, USA, 2013
- ASME 11<sup>th</sup> Biennial Conference on Engineering Systems Design and Analysis, Nantes, France, 2012
- ASME International Mechanical Engineering Congress & Exposition, Colorado, USA, 2011
- ASME International Mechanical Engineering Congress & Exposition, Vancouver, Canada, 2010 7<sup>th</sup> International Conference on Flow Dynamics, Sendai, Japan, 2010
- ASME-ATI-UIT Conference on Thermal & Environmental Issues in Energy Systems, Sorrento, Italy, 2010
- ASME Internal Combustion Engine Division Fall Technical Conference, Texas, USA, 2010
- 2<sup>nd</sup> International Conference on Mechanical, Industrial & Manufacturing Technologies, Singapore, 2010 ASME 4th International Conference on Energy Sustainability, Arizona, USA, 2010
- ASME 28th International Conference on Ocean, Offshore & Arctic Engineering, Hawaii, USA, 2009
- ASME Internal Combustion Engine Division Spring Technical Conference, Wisconsin, USA, 2009
- World Renewable Energy Congress IX and Exhibition, Florence, Italy, 2006
- 16<sup>th</sup> International Symposium on Air Breathing Engines, Ohio, USA, 2003
- 7th International Symposium on Fluid Control, Measurement & Visualization, Sorrento, Italy, 2003
- 19th Canadian Congress of Applied Mechanics, Calgary, Canada, 2003
- 13th International Symposium on Air Breathing Engines, Tennessee, USA, 1997
- ASME Turbo Asia, Jakarta, Indonesia, 1996
- ASME Cogen Turbo Power, Vienna, Austria, 1995

## Research Projects

- APGCL (Guwahati) Sponsored Feasibility Studies of Generating Electric Power using Helical Water Turbine – with V Kulkarni, P Tripathy, and Others, Budget = Rs.27.2 Lakh, 2012-2014.
- CPRI (Bangalore) Sponsored Design of a 25 kWe Pressurized Circulating Fluidized Bed Unit with P Mahanta and P Kalita, Budget = Rs.35.7 Lakh, 2011-2014.
- DRDO (Tezpur) Sponsored Utilization of Bio-waste for Generating Power in Diesel Engines with N Sahoo, Budget = Rs. 9.91 Lakh, 2011-2013.
- ADnENERGY (London) Sponsored Development and Analysis of Twisted Two-bladed, Two-stage Savonius Rotor for Power Generation—with N Sahoo, P Mahanta and D Bhagabati, Budget = Rs. 8.83 Lakh, 2010-2012.
- **KVIC** (Mumbai) Sponsored Setting up of Technical Backup Unit at IIT Guwahati for R & D Interface with Khadi and Village Industries Sector with P Mahanta, R M Punekar, A K Das, A D Sahasrabudhe, S K Kakoty and Others, Budget = Rs.26.7 Lakh, 2003-2008.
- MNRE (New Delhi) Sponsored Design and Development of a High Performance Biogas Digester for the N-E Region of India with P Mahanta and A Dewan, Budget = Rs. 18.9 Lakh, 2002-2005.
- **ARDB** (New Delhi) Sponsored Computation of Two Dimensional Incompressible Viscous Flow through Cascade with M K Das, Budget = Rs. 4.22 Lakh, 2002-2004.

### Consultancy / Course Projects

- APDCL (Guwahati) Sponsored Supply of Technical Manuscripts for a Govt. of Assam Organization, Budget = Rs. 9.10 Lakh, 2017.
- Ministry of Higher Education (Assam) Sponsored Technical Specifications of Two-wheeler Vehicle to the top 1000 Girl Students who Pass the Higher Secondary Examination in 2017 – with V Kulkarni and B Mehta, Budget = NIL, 2017.
- BCPL Sponsored Setting of Confidential Papers for Engineering Non-Executives of a Govt. of India Enterprise, Budget = Rs. 5.40 Lakh, 2013.
- NEEPCO Sponsored Setting of Confidential Manuscripts for Engineers and Officers of a Govt. of India Enterprise, Budget = Rs. 1.90 Lakh, 2013.
- WWF Sponsored Design and Fabrication of a Pedal Operated Biomass Briquetting Machine with P Mahanta and D K Sarma, Budget = Rs. 0.57 Lakh, 2012.
- NERAMAC Sponsored Vetting of a Feasibility Report on Setting-up of Cold Storage Chain with S K
  Kakoty and D K Sarma, Budget = Rs. 0.5 Lakh, 2011.
- OIL-Duliajan Sponsored A Preliminary Project Report on Generation of Electrical Power from Small Quantities of Gas Available in Isolated Pockets of OIL India's Oil Fields – with R Uppaluri, A K Ghosal and Others, Budget = Rs. 4.08 Lakh, 2008.
- GIAN-NE Sponsored Technical Assessment of the Wind Turbine-cum-Water Pump System Developed by M. Hussain – with S K Dwivedy, P Mahanta and P Kalita, Budget = Rs. 0.30 Lakh, 2007.
- Dhriti Sponsored Development of an Energy Efficient Machine for Arecanaut Leaf Plate Manufacturing – with P Mahanta and Others, Budget = Rs. 2.5 Lakh, 2007.
- Kirloskar Sponsored Performance Testing of 5 HP Diesel Engine Driven Centrifugal Pumpsets with P Mahanta and A K Dass, Budget = Rs. 0.4 Lakh, 2003.

### Curriculum Development Projects

- QIP Sponsored Introduction to Aerospace Engineering 850 slides, 2011-12
- QIP Sponsored Experimental Methods 720 slides, 2007-08
- QIP Sponsored Gas Turbine Theory 650 slides, 2006-07
- QIP Sponsored Internal Combustion Engines –966 slides, 2005-06
- QIP Sponsored Jet Propulsion 900 slides, 2004-05
- IGNOU Sponsored Heat Power Technology 5 chapters, 2004

### Short-term Courses Organized

### In association with other faculty members

- o TEQIP III Sponsored Aerospace Technology: Theory and Practice, 2021
- QIP Sponsored Aerospace Propulsion for Beginners, 2008
- QIP Sponsored Industrial Applications of Turbomachines, 2007
- QIP Sponsored Fuels & Combustion Technology, 2005
- QIP Sponsored Energy Conservation Practices, 2004
- o MNRE Sponsored Renewable Energy Applications in NE Region, 2002
- MNRE Sponsored Renewable Energy Systems, 2001

### Reviewer - Journals

### **Partial List**

- Physics of Fluids, AIP, 2022
- Shock Waves, Springer, 2022
- AIAA Journal, 2021<sup>2</sup>
- ASME Journal of Solar Energy Engineering, 2021
- Journal of Cleaner Production, Elsevier, 2021<sup>2</sup>
- ASME Journal of Energy Resources Technology, 2021<sup>4</sup>, 2022<sup>3</sup>
- Resources, Environment and Sustainability, Elsevier, 2020
- Wind Engineering, Sage, 2020
- Energy Sources, Part A, Taylor and Francis, 2020
- Engineering Science and Technology, Elsevier, 2019
- Proc. of IMechE, Part C, Journal of Mechanical Engineering Science, UK, Sage, 2019
- ASME Journal of Dynamic Systems, Measurement and Control, 2019<sup>2</sup>
- Journal of Flow Visualization and Image Processing, Begell House, 2019
- International Journal of Green Energy, Taylor and Francis, 2018
- Fuel Processing Technology, Elsevier, 2018
- Sustainable Energy Technologies and Assessments, Elsevier, 2018, 2019
- Journal of Ocean Engineering & Science, Elsevier, 2017
- International Journal of Fluid Mechanics Research, Begell House, 2017<sup>2</sup>, 2018
- Case Studies in Thermal Engineering, Elsevier, 2017<sup>2</sup>
- Energy for Sustainable Development, Elsevier, 2017
- Energy & Fuels, ACS Publications, 2016, 2018
- Journal of Wind Engineering & Industrial Aerodynamics, Elsevier, 2016<sup>5</sup>, 2017<sup>3</sup>
- International Journal of Ambient Energy, Taylor and Francis, 2015, 2017
- International Journal of Aerospace Engineering, Hindawi, 2015
- Ecotoxicology and Environmental Safety, Elsevier, 2015
- Journal of the Energy Institute, Elsevier, 2014, 2015
- Renewable Energy, Elsevier, 2014, 2018
- Industrial and Engineering Chemistry Research, ACS Publications, 2014
- International Journal of Hydrogen Energy, Elsevier, 2014
- Journal of the Brazilian Society of Mechanical Sciences and Engineering, Springer, 2013
- Renewable and Sustainable Energy Reviews, Elsevier, 2013<sup>3</sup>, 2014<sup>3</sup>, 2015, 2017
- ASCE Journal of Energy Engineering, USA, 2013<sup>3</sup>, 2015, 2019
- Energy Conversion and Management, Elsevier, 2012, 2013, 2014<sup>4</sup>, 2018<sup>4</sup>
- Alternative Energy, Acta Press, Canada, 2012
- ASME Journal of Turbomachinery, USA, 2011, 2014<sup>2</sup>
- Applied Energy, Elsevier, 2011<sup>2</sup>, 2014<sup>2</sup>
- Energy, Elsevier, 2010, 2011<sup>3</sup>, 2012<sup>2</sup>, 2013<sup>4</sup>, 2014<sup>4</sup>, 2015<sup>5</sup>, 2016<sup>4</sup>, 2018
- Fuel, Elsevier, 2009, 2010, 2011, 2015, 2018
- Sadhana Academy Proceedings in Engineering Science, India, 2009, 2013, 2015<sup>2</sup>, 2019
- Journal of Fluids and Structures, Elsevier, 2009
- Ocean Engineering, Elsevier, 2009<sup>2</sup>, 2010<sup>2</sup>, 2011<sup>2</sup>, 2013, 2016
- Journal of the Institution of Engineer (India), Springer, 2008<sup>2</sup>, 2009, 2010<sup>2</sup>, 2011<sup>2</sup>, 2013<sup>2</sup>, 2014<sup>3</sup>, 2017<sup>2</sup>, 2019
- Proc. of IMechE, Part G, Journal of Aerospace Engineering, UK, Sage, 2008<sup>2</sup>, 2009
- Experimental Thermal and Fluid Science, Elsevier, 2007, 2008, 2011, 2012
- International Journal of Energy Research, John Wiley & Sons, 2007, 2009, 2016, 2018
- International Energy Journal, AIT Bangkok, Thailand, 2007, 2010, 2019
- Proc. of IMechE, Part A, Journal of Power and Energy, UK, Sage, 2007<sup>2</sup>, 2010<sup>2</sup>, 2011, 2016
- Journal of Scientific & Industrial Research, CSIR-NISCAIR, India, 2006, 2013<sup>2</sup>, 2015
- Journal of Indian Institute of Science, Bangalore, India, 2004

### Reviewer – Conferences

#### **Partial List**

- ASME Turbo Expo 2022, Rotterdam, The Netherlands, 2022
- 26<sup>th</sup> National and 4<sup>th</sup> Int. ISHMT-ASTFE Heat and Mass Transfer Conference, IIT Madras, India, 2021
- o ASME International Mechanical Engineering Congress and Exposition, (in virtual mode), 2021
- ASME Turbo Expo 2021 (in virtual mode), 2021<sup>2</sup>
- o 3<sup>rd</sup> National Aerospace Propulsion Conference, BMS college of Engineering, Bangaluru, India, 2020
- ASME International Mechanical Engineering Congress and Exposition, Portland, OR, USA, 2020
- o ASME Gas Turbine India Conference, IIT Madras, Chennai, 2019<sup>2</sup>
- o 2<sup>nd</sup> National Aerospace Propulsion Conference, IIT Kharagpur, India, 2018
- ASME International Mechanical Engineering Congress and Exposition, Pittsburgh, USA, 2018
- ASME Gas Turbine India Conference, Bangalore, 2017<sup>4</sup>
- 24<sup>th</sup> National and 2<sup>nd</sup> Int. ISHMT-ASTFE Heat and Mass Transfer Conference, Hyderabad, India, 2017
- 6<sup>th</sup> International and 43<sup>rd</sup> National Conference on FMFP, MNNIT Allahabad, India, 2016<sup>2</sup>
- o ASME Turbo Expo 2016, Seoul, South Korea, 2016
- ASME Gas Turbine India Conference, Hyderabad, India, 2015
- 23<sup>rd</sup> National & 1<sup>st</sup> International ISHMT-ASTFE HMT Conference, Thiruvananthapuram, 2015
- o 5<sup>th</sup> International and 41<sup>st</sup> National Conference on FMFP, IIT Kanpur, India, 2014
- ASME 12<sup>th</sup> Biennial Conference on Engrg. Systems Design & Analysis, Copenhagen, Denmark, 2014<sup>2</sup>
- 22<sup>nd</sup> National & 11<sup>th</sup> ISHMT-ASME Heat & Mass Transfer Conference, IIT Kharagpur, 2013<sup>2</sup>
- o ASME Gas Turbine India Conference, Bangalore, 2013
- ASME International Mechanical Engineering Congress & Exposition, San Diego, USA, 2013<sup>4</sup>
- o ASME Gas Turbine India Conference, Mumbai, 2012
- o 5<sup>th</sup> BSME International Conference on Thermal Engineering, Dhaka, 2012<sup>2</sup>
- o 11th Asian International Conference on Fluid Machinery, IIT Madras, 2011
- o ASME-JSME-KSME Joint Fluids Engineering Conference, Hamamatsu, Japan, 2011
- 34<sup>th</sup> National Conference on Fluid Mechanics & Fluid Power, BIT Mesra, Ranchi, India, 2007<sup>2</sup>

### Other Review Work

- Books/Manuscripts Wiley (2015), Springer (2011, 2012), McGraw Hill (2010<sup>2</sup>), Elsevier (2009, 2019)
- Video Lectures NPTEL-II (2011<sup>2</sup>), CDEEP (2010)
- Text Materials NPTEL-II (2011, 2014)
- Awards INAE Young Engineer (2014, 2015)
- R & D Projects MNRE (2022), PRISM (2021), CoPT-DRDO (2018, 2020), IUSSTF (2017), SERB-DST (2015<sup>3</sup>, 2016), NRDC (2014)

### Department Level Responsibilities

#### **Partial List**

- Secretary DPPC, 2012–2014
- o In-charge I C Engine Lab, 2012–2017
- Secretary DUPC, 2011–2012
- In-charge Fluid Mechanics Lab, 2010–2012
- o Member DUPC, 2009–2011
- o Member DPPC, 2003–2008
- o In-charge Turbomachinery Lab, 2003–2006
- MTP Co-ordinator, 2003–2004
- o Member Time Table Committee, 2002–2004
- Member Institute Library Committee, 1998–2000 @ NERIST

### Institute Level Responsibilities

#### **Partial List**

- Chairman Committee for Recommending Tender Documents of Outsourced IITG Hospital Service, 2020
- Member (Senate Nominee) Library Advisory Committee, 2019 2021
- Coordinator Examination Cell, Recruitment of Junior Assistants, IIT Guwahati, 2018
- Member IIT Guwahati Hospital Advisory Board, 2016
- Chairperson Committee for Overall Improvement of IIT Guwahati Hospital, 2015
- Member Institute Academic Disciplinary Committee, 2012–2014
- Convener Institute Comprehensive Medical Insurance Committee, 2012–2013
- Convener Convocation Food & Refreshment Sub-committee, 2012, 2013, 2014
- Organizing Chairman, DRDO SET 2009
- Organizing Vice-Chairman, DRDO SET— 2007, 2008
- Chairman, IIT-JEE 2006
- Vice-Chairman, IIT-JEE 2004, 2005
- Vice Chairman, Gymkhana, 1998–1999 @ NERIST

### Coordinating Other Responsibilities

- ISMU (Dhanbad) Entrance Examination 2008
- Assam Judicial Service Examination (Guwahati) 2008
- TISS (Mumbai) National Entrance Test 2008, 2007
- TIFR (Mumbai) PhD Entrance Test 2008, 2007
- KVPY (IISc Bangalore) Aptitude Test 2007, 2006

### Conferences / Workshops Related Activities

#### **Partial List**

- Joint Org. Secretary 8<sup>th</sup> International and 47<sup>th</sup> National Conference on Fluid Mechanics and Fluid Power, IIT Guwahati (in virtual mode), July 09–11, 2020
- o Track Chair ASME Gas Turbine India Conference, IIT Madras, December 5–6, 2019
- o Coordinator 4th National Workshop on Research Methodology in Fluid Mechanics, IIT Guwahati, June 22–23, 2019
- Track Chair ASME Gas Turbine India Conference, Bangalore, December 7–8, 2017
- Member & Session Chair Asian Congress on Gas Turbines, IIT Bombay, December 12–14, 2016
- o Joint Organizing Secretary Int. Workshop on Aspects of Fluidized Bed Technology, IIT Guwahati, July 9–10, 2016
- Treasurer India–UK Summer School on Efficient Fossil Fuel Technologies, IIT Guwahati, July 4–10, 2011
- o Member 2<sup>nd</sup> Int. Congress on Computational Mechanics and Simulation, IIT Guwahati, December 8–10, 2006
- o Joint Secretary 18th National & 7th ISHMT-ASME Heat and Mass Transfer Conference, IIT Guwahati, Jan 4–6, 2006
- Member National Symposium on Rotor Dynamics, IIT Guwahati, December 15–17, 2003
- Member 47<sup>th</sup> Congress of Indian Society of Theoretical and Applied Mechanics, IIT Guwahati, Dec 23–26, 2002

### Invited Talks / Lecture Series

### **Partial List**

- Aero-engine Axial Flow Compressors (in virtual mode), Siksha 'O' Anusandhan University, Bhubaneswar, 2021
- Small-scale Wind Turbines: Concepts and Applications (in virtual mode), Trinity College of Engineering, Pune, 2021
- Progress of Aeronautics during 20th Century and Beyond (in virtual mode), NIT Mizoram, Aizwal, 2021
- Lift and Drag (in virtual mode), Government Engineering College, Cooch Behar, WB, 2020
- Aviation Turbine Fuels (in virtual mode), NIT, Agartala, 2020
- Turbomachinery in Aerospace Vehicles (in virtual mode), National Institute of Engineering, Bangalore, 2020
- Aeronautics for Beginners (One-day Workshop), IIIT Bhagalpur, 2018
- Understanding Aerospace Engineering (One-day Lecture Series), Dibrugarh University, 2018
- Wind Tunnel Aerodynamics, Tezpur University, Tezpur, 2017
- Gas Turbine Propulsion Technology, Assam Engineering College, Guwahati, 2017
- Applied Fluid Mechanics, APDCL Training Institute, Guwahati, 2016
- Wright Brothers' Journey of Invention and the Aerial Age, NIT Silchar, 2015
- 100 Years of Aircraft Flight, National Education Day Lecture, IIT Guwahati, 2014
- History of Aircraft Flight, 16<sup>th</sup> H P Barua Memorial Lecture, IE (India), Guwahati, 2014
- Wind and Briquetting Machines for Rural Development, NERIST, Itanagar, 2014
- Energy from the Wind, Cotton College, Guwahati, 2003
- Wind Energy, Assam Engineering Institute, Guwahati, 2000

### Graduated PhD Students

- o Prosenjit Mondal (2021), Senior Engineer, Microchip Technology (India) Pvt. Ltd., Bangaluru, India
- o Maryom Dabi, (2020), Assistant Professor, NERIST, Itanagar, Arunachal Pradesh, India
- o Nur Alom, (2019), Trainee Teacher, NIT Meghalaya, Shillong, Meghalaya, India
- o Achinta Sarkar (2019), Assistant Professor, KIIT, Bhubaneswar, Odisha, India
- o Parag K Talukdar (2019), Assistant Professor (TEQIP-III), Jorhat Engineering College, Jorhat, Assam, India
- o Azd Zayoud (2016), Researcher, Université Catholique de Louvain, Belgium
- o Bhaskor J Bora (2015), Assistant Professor, Energy Institute, RGIPT, Bangaluru, India
- Sukanta Roy, (2014), Associate Professor, Curtin University, Malaysia
- o Biplab K Debnath, (2013), Assistant Professor, NIT Meghalaya, Shillong, Meghalaya, India
- o Pankaj Kalita, (2013), Associate Professor, IIT Guwahati, Guwahati, India
- o M Eswaran, (2011), Scientist E, IGCAR, Kalpakkam, Tamil Nadu, India
- Bhibuti B Sahoo, (2011), Associate Professor, VIT University, Vellore, Tamil Nadu, India.

