Dr. Pradyumna Kumar Choudhury

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Academic Profile:

Educational Qualification:

Degree	Year	University/ Institute	Class/ Rank
Ph.D. (Energy)	2017	Tezpur University, Tezpur, India	
M.Tech. (Energy Technology)	2009	Tezpur University, Tezpur, India	1st Class, CGPA 8.23 (77.3 %)
B.E. (Electrical Engineering)	1992	Assam Engineering College, Gauhati University, Guwahati, India	1st Class (Honours), 8th Rank, 72.47 %

Others (Training/ Short term courses):

- Training on Entrepreneurship Development and Management at Entrepreneurship Development Institute of India (EDII), Ahmedabad, India
- Training on Solar Photovoltaics System Design and Engineering at I.I.T., Madras, Conducted by Siemens Solar, U.S.A
- Training on Energy Audit Conducted by National Productivity Council, Calcutta, India
- Training on Biomass Gasification Technology Conducted By CGPL, IISc., Bangalore
- Diploma in Computer Proficiency (D.C.P) In Dos/Windows Environment, C & Pascal Programming, Data Base Management Systems & Electronic Spreadsheet

Academic Distinction/Award:

- College Honours in Assam Engineering College
- First Class Eight Rank in the Gauhati University in B.E. (Electrical) Examination
- National Merit Scholarship since H.S.L.C. till completion of Graduation

Previous Work Experience:

11/1992 02/1994:	-	Trainee Engineer, Assam Carbon Products Limited, Guwahati, Assam
02/1994 02/1995:	-	Graduate Engineer Trainee, Assam State Electricity Board, Guwahati, Assam
05/1995 04/2000:	-	Project Associate (Energy Division), Assam Science, Technology and Environment Council, Guwahati, Assam

05/2000 - Technical Officer (Energy), Tezpur University, Assam
07/2011:
07/2011 - till date: Assistant Professor (Energy), Tezpur University, Assam

Research Interests:
Solar Energy, Hybrid Energy System, Energy Conservation and management, Instrumentation & Control, Grid Integrated System, Electric Vehicle

Research Guidance: **47 nos.**

- Ph.D. Students (continuing): **2**
- M.Tech./ PG Students (completed): **44**
- UG/Summer Interns/ Winter Interns (completed): **3**

Patent:

- **Granted:** 1 (India), Patent No: 325837 date of grant: 26/11/2019, Patent Application No. 20/KOL/2011; Title: *Digital occupancy meter for commercial passenger vehicle.*

Publications:

- Harjyoti Das, Pooja Dutta, Partha Pratim Dutta, **Pradyumna Kumar Choudhury**, Experimental analysis of a solar air heater using waste mild steel chips as a sensible heat storage material, *Environmental Science and Pollution Research*, Publisher: Springer, October 2024, Electronic ISSN 1614-7499. DOI: 10.1007/S11356-024-35415-Y
- **Pradyumna Kumar Choudhury** and Debendra Chandra Baruah, Microcontroller-based integrated data logging system for solar air heater performance assessment, *Energy Sources, Part A : Recovery, Utilization, and Environmental Effects*, 46(1):11435-11451, 2024. Publisher: Taylor & Francis, Print ISSN: 1556-7036, Online ISSN: 1556-7230. DOI: 10.1080/15567036.2024.2389221
- Achyutish Borgohain and **Pradyumna Kumar Choudhury**, Role of Portable Charger in Electric Vehicle, *Advances in Science and Technology*, ISSN: 1662-0356, Vol. 130, pp 121-128, 2023, Trans Tech Publications Ltd, Switzerland, doi:10.4028/p-5UFf4x.
- Jitumoni Swargiary and **Pradyumna Kumar Choudhury**, Design and Simulation of Grid Connected Inverters for Solar Photovoltaic Applications, *Advances in Science and Technology*, ISSN: 1662-0356, Vol. 130, pp 165-172, 2023, Trans Tech Publications Ltd, Switzerland, doi:10.4028/p-GN763x.
- Pooja Dutta , Partha Pratim Dutta , Paragmoni Kalita , Priyom Goswami , **Pradyumna Kumar Choudhury**, Energy analysis of a mixed-mode corrugated aluminium alloy (AlMn1Cu) plate solar air heater, *Materials Today: Proceedings*, 47 (11) 3352 - 3357, 2021, Publisher: Elsevier, ISSN: 2214-7853.
  https://doi.org/10.1016/j.matpr.2021.07.156

- Neonjyoti Bordoloi, Rumi Narzari, **Pradyumna K. Choudhury**, Rupam Kataki, Bioconversion of Food Waste into Biogas. In: Inamuddin & A. Khan (eds.), *Sustainable Bioconversion of Waste to Value Added Products*, Advances in Science, Technology & Innovation, pp 81-94, 2021, Publisher: Springer, ISSN 2522-8714, 2522-8722 (electronic), ISBN 978-3-030-61836-0, 978-3-030-61837-7 (eBook).
  https://doi.org/10.1007/978-3-030-61837-7_5
- Tamuli, B. and **Choudhury, P. K.,** Comparative Performance Assessment of a Solar Hybrid Dryer with Traditional Drying Techniques. In: Singh, S., Ramadesigan**,** V. (eds.). *Advances in Energy Research*, Vol. 2, Springer Proceedings in Energy, Chapter 32, pp 351-360, 2020, Publisher: Springer, ISBN 978-981-15-2661-9
- Dhritika Saikia and **Pradyumna Kumar Choudhury,** A case study on micro grid with flywheel energy storage system using Homer software, *Journal of Energy Research and Environmental Technology (JERET)*, 6 (30) 198-202, 2019, Publisher: Krishi Sanskriti Publications, New Delhi, India, ISSN: 2394-1561 (Print).
- **Pradyumna Kumar Choudhury** and Debendra Chandra Baruah, Experimental investigation of a tool for assessing solar air heater (SAH) performance, *Alternative* Energy and Distributed Generation,1(2)45-59, 2019, Publisher: Association of Energy Engineers (AEE), Atlanta, USA, ISSN: 2643-6973 (print), 2643-6981 (online).
  https://www.aeecenter.org/
- **Pradyumna Kumar Choudhury** and Debendra Chandra Baruah, Solar air heater for residential space heating, *Energy, Ecology and Environment*, 2 (6) 387-403, 2017, Publisher: Springer, ISSN: 2363-7692 (Print), 2363-8338 (Online);
  DOI: 10.1007/s40974-017-0077-4,
  https://link.springer.com/article/10.1007/s40974-017-0077-4
- Kangkana Hazarika and **Pradyumna Kumar Choudhury,** Automatic monitoring of solar photovoltaic (SPV) module, *Materials Today: Proceeding*, 4 (14) 12606-12609, 2017, Publisher: Elsevier, ISSN: 2214-7853;
  https://doi.org/10.1016/j.matpr.2017.10.069,
  https://www.sciencedirect.com/science/article/pii/S2214785317320825
- Washima Tasnin and **Pradyumna Kumar Choudhury,** Design and development of an automatic solar water heater controller, *2015 International Conference on Energy, Power and Environment: Towards Sustainable Growth (ICEPE)*, 12-13 June 2015, NIT Shillong, Meghalaya, 2015, pp. 1-6, Publisher: IEEE; ISBN: 978-1-4673-6503-1 (online); ISBN: 978-1-4673-6504-8 (PoD);
  DOI: 10.1109/EPETSG.2015.7510073,
  https://ieeexplore.ieee.org/document/7510073
- **P. K. Choudhury** and D. C. Baruah, Development of an empirical model for assessment of solar air heater performance, *Distributed Generation and Alternative Energy*, 29 (3) 56 - 75, 2014, Publisher: Taylor & Francis. ISSN: 2156-3306 (Print), 2156-6550 (online);
  https://doi.org/10.1080/21563306.2014.10879017,
  https://www.tandfonline.com/doi/abs/10.1080/21563306.2014.10879017

- Bibha Boro, Sanjay Basumatary, **Pradyumna K. Choudhury** and Biswajit Gogoi, Feedstocks, production, properties and blending effect of biodiesel: a review, *International Journal of Recent Development in Engineering and Technology*,3 (1), 6 -10, 2014, ISSN: 2347-6435 (Online).
  https://ijrdet.com/Volume3Issue1.php
- P. Saikia, R. Kataki, **P. K. Choudhury** and D. Konwer, Carbonization of Eight Bamboo Species of Northeast India. *Energy Sources*, Part A, 29: 799 – 805, 2007. Publisher: Taylor & Francis. ISSN: 1556-7036 (Print), 1556-7230 (Online);
  https://doi.org/10.1080/00908310500280819,
  https://www.tandfonline.com/doi/full/10.1080/00908310500280819
- **P.K. Choudhury,** R.C. Nath, K.K. Sasi, and T.B. Isha**,** Energy Conservation in Ventilation Fans. In: Pandel, U., Poonia, M.P. (eds.) *Energy Technologies for Sustainable Development*, Prime Publishing House, Ghaziabad, U.P., India, pp. 94-96, 2003. ISBN-10: 8182290007, ISBN-13: 978-8182290006

Conference Paper:

- Achyutish Borgohain and **Pradyumna Kumar Choudhury**, Role of Portable Charger in Electric Vehicle, *Third International Conference on Future Technologies in Manufacturing, Automation, Design & Energy (iCoftMADE 2022)*, 14-16 December, 2022, National institute of Technology, Puducherry
- Jitumoni Swargiary and **Pradyumna Kumar Choudhury**, Design and Simulation of Grid Connected Inverters for Solar Photovoltaic Applications, *Third International Conference on Future Technologies in Manufacturing, Automation, Design & Energy (iCoftMADE 2022)*, 14-16 December, 2022, National institute of Technology, Puducherry
- Dhritika Saikia and **Pradyumna Kumar Choudhury**, A case study on micro grid with flywheel energy storage system using Homer Software; *International Conference on Recent Trend and Practices in Science, Technology, Management and Humanities for Sustainable Rural Development (STMH - 2019)*, 6th -7th September, 2019, University of Science and Technology Meghalaya, Meghalaya
- K. Hazarika and **P. K. Choudhury**, Automatic cooling and performance monitoring of Solar Photovoltaic Modules. *International conference on Energy Options for Tomorrow: Technology to Sustainability (ICEOT 2017)*, 17- 19 April, 2017, The Neotia University, Kolkata
- **P. K. Choudhury,** B. R. Tamuli, T. Gogoi, G. Baruah and D. C. Baruah, Development of multi-point temperature measurement system for low temperature application. *International conference on Energy Options for Tomorrow: Technology to Sustainability (ICEOT 2017)*, 17- 19 April, 2017, The Neotia University, Kolkata
- T. Gogoi and **P. K. Choudhury**. Role of Nanomaterials in super capacitor application. *International conference on Energy Options for Tomorrow: Technology to Sustainability (ICEOT 2017)*, 17- 19 April, 2017, The Neotia University, Kolkata
- Bhaskar Ranjan Tamuli and **Pradyumna Kumar Choudhury**, Comparative Performance Assessment of a Solar Hybrid Dryer with Traditional Drying Techniques. *International Conference on Advances in Energy Research (ICAER 2017)*, 12-14, December, 2017, IIT, Bombay.

- Hazarika, K. and **Choudhury, P. K.,** Automatic monitoring of solar photovoltaic (SPV) module, International *Conference on Solar Energy Photovoltaics (ICSEP2016)*, KIIT, Bhubaneswar
- Tasnin, W. and **Choudhury P. K.,** Design and development of an automatic solar water heater controller, *2015 International Conference on Energy, Power and Environment: Towards Sustainable Growth (ICEPE)*, 12-13 June 2015, NIT Shillong, Meghalaya, 2015
- Bibha Boro, Sanjay Basumatary, **Pradyumna Kumar Choudhury**, Feedstocks, Production, Properties and Blending Effectof Biodiesel: A Review, *National Conference on Recent Advances in Science and Technology for Sustainable Developmet of Rural Areas in Chhattisgarh* organized by Parthivi Rashtriya Abhiyantriki Sangosthi (PARAS), 7 – 8 March, 2014, Parthivi College of Engineering and Management, Chhattisgarh
- Washima Tasnin, **Pradyumna Kumar Choudhury**, Design of Temperature Control Mechanism for Solar Water Heating System, *International Conference on Green Energy Smart Materials Through Science Technology and Management (GESM)* organized by Gauhati University, University of South Africa, Synergy for Energy Challenges and Opportunities for North East (SECONE), 21-23 January 2014 Gauhati University, (ISBN:978-81-921779-0-8).
- Bibha Boro, Sanjay Basumatary, **Pradyumna Kumar Choudhury**, Non-conventional Feedstocks, Production, Properties and Blending Effect of Biodiesel: A Review, *International Conference on Green Energy Smart Materials Through Science Technology and Management (GESM)* organized by Gauhati University, University of South Africa, Synergy for Energy Challenges and Opportunities for North East (SECONE), 21-23 January 2014 Gauhati University, (ISBN:978-81-921779-0-8).
- B. K. Sahoo, **P. K. Choudhury,** Designing and Testing of the battery performance of PIC microcontroller based solar wind hybrid system, *International Congress on Renewable Energy (ICORE) – 2011,* 2- 4 November, 2011, Tezpur University.

Awards:

- **Best Poster Award: Choudhury P. K.,** Tamuli B. R., Gogoi T., Baruah G. and Baruah D.C. Development of a multi-point temperature measurement system for low temperature application. In: *International Conference on Energy Options for Tomorrow: Technology to Sustainability (ICEOT 2017),* 17–19 April 2017, Kolkata, India.

Research project:

- *Flywheel energy storage systems for roof top photovoltaic systems*; Collaborative (Co- PI) with GIMT, Tezpur, Funded by ASTU Under IMPRINT (Rs. 3.00 Lacs), 2019-20.
- *Development of Test setup for solar thermal collector with air as working fluid and design a microcontroller-based mechanism for controlling the collector output*; Funded by ASTEC (Rs. 1.25 Lacs), 2014-17.

Membership of Professional Bodies:

- Institute of Electrical and Electronics Engineers (IEEE)
- Institution of Engineers (India) (IEI)
- Solar Energy Society of India (SESI)

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