



DR. SUSHOVAN CHATTERJEE

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Cooch Behar Government Engineering College (under Department of Higher
Education, Govt. of West Bengal), Cooch Behar-736170, West Bengal, India

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BME (Hons.) (Jadavpur University), MME (Jadavpur University), PhD (IIT Guwahati), CEng (India), MIE (India), WBSGS

Brief Biographical sketch:

Dr. Chatterjee was born in south Kolkata, completed his schooling from Ramkrishna Mission Vidyalaya, Narendrapur, done his graduation [Bachelor of Mechanical Engineering (with Honors)], and post-graduation [Master of Mechanical Engineering (with specialization in Applied Mechanics)] both from Jadavpur University, Kolkata; and subsequently PhD in Energy from Centre for Energy, Indian Institute of Technology Guwahati. He is significantly involved in active interdisciplinary research in versatile domain since last fifteen years.

Dr. Chatterjee is currently working as Associate Professor and Head, Department of Mechanical Engineering, Cooch Behar Government Engineering College, under Department of Higher Education, Government of West Bengal, since December 2016. He is actively contributing towards academic, research, and administrative accomplishment.

Accolades:

- ❖ Honoured for the best presentation in International conference on 'Biofuel Vision 2015' at Engineering College Bikaner, Rajasthan on October 15, 2006.
- ❖ Awarded National prizes and certificates of merit under national scholarship scheme for securing high marks for both during madhyamik as well as higher secondary examinations from Government of West Bengal.
- ❖ Honoured for the best presentation in Design Section of Technical Session in 'National conference on Emerging Trends in Mechanical Engineering' at Maharashtra Institute of Technology, Aurangabad (March 2009).
- ❖ Chartered Engineer (India), Corporate Member of The Institute of Engineers (India), Membership no. M-1570638.

Teaching Interest: Dr. Chatterjee is very much passionate about teaching undergraduate and post graduate subjects like, Solid Mechanics, Fracture Mechanics, Principles of Combustion, Renewable Energy, etc.

Research Interest: Renewable Energy, Design and thermal optimization of chemical process, Stress analysis on structural/machine elements, Processing and characterization of alternative fuels for I.C. engines, CFD based acoustics.

Honorary editorial assignments:

- Editorial board member of Fluid Dynamics & Materials Processing, Tech Science Press.
- Editorial board member of International Journal of Automobiles and Automobile Technologies.
- Associate Editor of International Journal of Applied Research in Mechanical Engineering.

Administrative responsibilities executed:

At NIT Silchar: Associate warden, PG Hostel (February 2015 to November 2016), Member Secretary DPPC (Departmental Post Graduate Program Committee) (September 2012 to December 2016). Faculty advisor, B.Tech. Time-table coordinator of Mechanical Engineering Department (2008 to 2015). Founder-faculty coordinator SAE BAJA student's project during 2011-2016. Member of DUGC and DPMC of Mechanical Engineering Department, NIT Silchar up to November 2016.

At Cooch Behar Government Engineering College: Head, Department of Mechanical Engineering, Member of Academic and Technical Committee, Coordinator of Anti-ragging squad, Joint Coordinator of Orientation/Induction Program 2019.

Chairing Technical session at International Conference:

- Chaired a technical session at International Conference on Advanced Research in Mechanical Engineering (ICRME) held at Bangkok, Thailand held during March 23-26, 2013.
- Chaired two technical sessions at "International Conference on Recent Trends in Engineering and Material Sciences" held during 17th -19th March 2016 at Jaipur National University (JNU), Jaipur, India.

Invited talk delivered:

- On 9th August 2020, delivered an invited talk in an international webinar on "Effect of global pandemic in our professional life and possible steps to overcome them" conducted by Siliguri Institute of Technology, West Bengal.
- On 8th February 2020, delivered two invited lectures in UGC sponsored workshop on 'MOOCS, e-content development and open educational resources' conducted by the UGC Human Resource Development Centre, University of North Bengal.
- On 29th February 2020, delivered an invited lecture entitled "Renewable Technology used for rural infrastructure development" in a 4-days refresher training for Nirman Sahayaks, organized by Civil Engg. Department of Cooch Behar Government Engineering College.
- On 26th March 2016, delivered an invited lecture entitled "Prospective novel green means for synthesis and application potentialities of future generation biofuels: technological and environmental challenges" in a short term course 'Recent Advances in Chemical Science and Technology' organized by Department of Chemistry NIT Silchar.

Research Contributions:

Sponsored Research Project completed:

Title of the Project: Development of an enzymatic process for production of microalgal biodiesel. (Project no. 8023/RID/RPS-27(POLICY-III)(NER)11-12), **Role:** Principal Investigator, **Funding Agency:** All India Council for Technical Education (AICTE), **Period:** April 2012 to September 2014, **Amount sanctioned:** Rs 10,40,000/-

Selected Publications:

In conference proceedings:

1. "Analysis of Design and Material Selection of a Spur gear pair for Solar Tracking Application", Materials Today Proceedings (2018), 5(1): 789-795. DOI: [10.1016/j.matpr.2017.11.148](https://doi.org/10.1016/j.matpr.2017.11.148)
2. "Numerical investigation of thermal-hydraulic performance of channel with protrusions by turbulent cross flow jet", AIP Conference Proceedings (2018), 1966(1):020021. DOI: [10.1063/1.5038700](https://doi.org/10.1063/1.5038700)
3. "Effect of Pre-treatment and Calcination Process on Micro-Structural and Physico-Chemical Properties of Hydroxyapatite derived from Chicken Bone Bio-waste", Materials Today Proceedings (2019), 15(2): 188-198. DOI: [10.1016/j.matpr.2019.04.191](https://doi.org/10.1016/j.matpr.2019.04.191)
4. "Characterization of hydroxyapatite derived from eggshells for medical implants", Materials Today Proceedings (2019), 15(2): 323-327. DOI: [10.1016/j.matpr.2019.05.012](https://doi.org/10.1016/j.matpr.2019.05.012)
5. "Mechanical and Morphological Characterization of Walnut Shell Reinforced Epoxy Composite", IOP Conf. Series: Materials Science and Engineering (2018), 377(1): 012011. DOI: [10.1088/1757-899X/377/1/012011](https://doi.org/10.1088/1757-899X/377/1/012011)

In book chapter:

"Purification, immobilization and application of a Pseudomonas lipase for transesterification of lipid" Chapter 4, page 33-42 in "Biodiesel Production Technologies". 1st ed. Jaipur, Pointer publishers. (2007) ISBN: 978- 81-7132-517-7.

In Journals:

International Journals

1. "Taming waste: Waste *Mangifera indica* peel as a sustainable catalyst for biodiesel production at room temperature", Renewable Energy (2020), 161: 207-220. DOI: [10.1016/j.renene.2020.07.061](https://doi.org/10.1016/j.renene.2020.07.061)
2. "Transesterification of soybean oil at room temperature using biowaste as catalyst; an experimental investigation on the effect of co-solvent on biodiesel yield", Renewable Energy (2020), DOI: [10.1016/j.renene.2020.08.011](https://doi.org/10.1016/j.renene.2020.08.011)
3. "Zinc oxide supported silver nanoparticles as a heterogeneous catalyst for production of biodiesel from palm oil", Environmental Progress (2019), DOI: [10.1002/ep.13369](https://doi.org/10.1002/ep.13369)
4. "CFD analysis on an elliptical chamber muffler of a C.I. engine", International Journal of Heat and Technology (2019), 37(2): 613-619. DOI: [10.18280/ijht.370232](https://doi.org/10.18280/ijht.370232)
5. "Effect of thermal treatment on the physico-chemical properties of bioactive hydroxyapatite derived from caprine bone bio-waste", Ceramics International (2019), 45(17B): 23265-23277. DOI: [10.1016/j.ceramint.2019.08.023](https://doi.org/10.1016/j.ceramint.2019.08.023)
6. "Thermo-Hydraulic Performance of Rectangular Channel Roughened with Combined Semi-circular and Triangular Ribs", Heat and Mass Transfer (2019), 55(10):2889-2900. DOI: [10.1007/s00231-019-02630-0](https://doi.org/10.1007/s00231-019-02630-0)
7. "Characterization of mechanical and micro-architectural properties of porous hydroxyapatite bone scaffold using green micro algae as binder", Arabian Journal for Science and Engineering (2019), 44(9):7707-7722. DOI: [10.1007/s13369-019-03877-9](https://doi.org/10.1007/s13369-019-03877-9)
8. "Effect of ZnO reinforcement on the compressive properties, in vitro bioactivity, biodegradability and cytocompatibility of bone scaffold developed from bovine bone-derived HAP and PMMA", Ceramics International (2019), 45(16):20331-20345. DOI: [10.1016/j.ceramint.2019.07.006](https://doi.org/10.1016/j.ceramint.2019.07.006)
9. "Effect of dual pre-treatment on mechanical, morphological, electrical and thermal properties of rubber seed shell reinforced epoxy composites", Arabian Journal for Science and Engineering (2019), 44(2): 845-856. DOI: [10.1007/s13369-018-3302-3](https://doi.org/10.1007/s13369-018-3302-3)
10. "Degradation of Aerodynamic performances of two typical Aerofoils under Heavy Rain: A Comparative Case Study Using CFD Simulation", European Journal of Electrical Engineering, (2018), 20(3): 325-332. DOI: [10.3166/ejee.20.325-332](https://doi.org/10.3166/ejee.20.325-332)
11. "Effect of Reinforcements on Polymer Matrix Biocomposites -An Overview", Science and Engineering of Composite Materials, (2018), 25(6):1039-1058. DOI: [10.1515/secm-2017-0281](https://doi.org/10.1515/secm-2017-0281)
12. "Waste snail shell derived heterogeneous catalyst for biodiesel production by the transesterification of soybean oil", RSC Advance, (2018), 8(36): 20131-20142. DOI: [10.1039/C8RA02397B](https://doi.org/10.1039/C8RA02397B)
13. "A comparative analysis on two gear tooth materials for low speed and high torque transmission", Advances in Modelling and Analysis C (2018), 73(3): 79-83. DOI: [10.18280/ama.c.730301](https://doi.org/10.18280/ama.c.730301)
14. "Extraction of a cardanol based liquid bio-fuel from waste natural resource and decarboxylation using a silver-based catalyst", Renewable and Sustainable Energy Reviews (2017), 72:560-564. DOI: [10.1016/j.rser.2017.01.035](https://doi.org/10.1016/j.rser.2017.01.035)
15. "CFD analysis on hydrodynamic conditions of a designed spiral column photobioreactor for cultivation of microalgae", World Journal of Engineering (2017):14(5):443-450. DOI: [10.1108/WJE-10-2016-0105](https://doi.org/10.1108/WJE-10-2016-0105)
16. "Computational fluid dynamic analysis of the exhaust gas flow through absorptive and reactive mufflers: some case studies", Proc IMechE Part D: Journal of Automobile Engineering (2017), 231(11):1568-1588. DOI: [10.1177/0954407016676230](https://doi.org/10.1177/0954407016676230)
17. "Silk-cocoon matrix immobilized lipase catalyzed transesterification of sunflower oil for production of biodiesel", Journal of Catalysts, Volume 2014 (2014), Article ID 868535. DOI: <http://dx.doi.org/10.1155/2014/868535>
18. "Silk-fiber immobilized lipase-catalyzed hydrolysis of emulsified sunflower oil", Applied Biochemistry & Biotechnology, (2009), 157(3): 593-600. DOI: [10.1007/s12010-008-8405-y](https://doi.org/10.1007/s12010-008-8405-y)
19. "Recent Inventions in Biodiesel Production and Processing- A Review", Journal of Recent Patent on Engineering (2008), 2: 47-58. DOI: [10.2174/187221208783478552](https://doi.org/10.2174/187221208783478552)

20. "Structural analysis for exhaust gas flow through an elliptical chamber muffler under static and dynamic loading condition", *Advances in Modelling and Analysis B* (2018), 61(2): 92-98. DOI: [10.18280/ama_b.610207](https://doi.org/10.18280/ama_b.610207)
21. "Analysis on stress concentration to predict elastic follow-up condition for two typical power piping configurations using ANSYS software", *World Journal of Modelling and Simulation* (2018), 14(3): 174-180. <http://www.wjms.org.uk/wjmsvol14no03paper02.pdf>
22. "Numerical Investigation on Friction Factor Characteristics for Protruded Channel under Turbulent Cross-Flow Condition", *International Journal of Engineering and Advanced Technology* (2018), 8(2C2): 69-73.
23. "Crack Propagation and Fracture analysis in engineering structure by generative part structural analysis", *International Journal of Current Research*, (2014), 6(06): 7032-7037.
24. "Numerical Scrutiny on Friction Factor Characteristics for Protruded Channel under Turbulent Cross-Flow Condition", *International Journal of Innovative Technology and Exploring Engineering* (2019), 8(6S4): 146-150.

National Journals

1. "Experimental and FEA Analysis of Dynamic Characteristics of Cantilever Beam Influenced by Crack", *Journal of Material Science and Mechanical Engineering* (2017): 4(2): 88-92.
2. "A Review on Aerodynamics of Flight in Adverse Condition", *Journal of Aeronautical and Automotive Engineering* (2016): 3(1): 38-42.

Papers and presentations in various conferences:

International conferences

1. Presented paper entitled "Facile synthesis and characterization of silver support zinc oxide nano particles" 24th Annual International Conference on Composites and Nano Engineering, Haikou, Hainan Island, China, 17-23 July 2016.
2. Presented paper entitled 'Simulation of Hydrodynamic Conditions of a Photo-bioreactor for Microalgae Cultivation' in International Mechanical Engineering Congress 2014, held at National Institute of Technology Trichy, during June 13-15, 2014. This paper was published in the journal '**Applied Mechanics and Materials**' (Trans Tech Publications, Switzerland), **Vols. 592-594: 2427-2431**. DOI: [10.4028/www.scientific.net/AMM.592-594.2404](https://doi.org/10.4028/www.scientific.net/AMM.592-594.2404)
3. **Honoured for the best presentation** in International conference on 'Biofuel Vision 2015' for presenting paper entitled 'Purification, immobilization and application of a Pseudomonas lipase for transesterification of lipid for production of biodiesel from vegetable oil' at Engineering College Bikaner on October 15, 2006. (This news appeared in newspaper 'The Hindu' October 16, 2006; page 3).
4. Presented paper entitled 'Breathing crack in beam and cantilever using contact model dynamic analysis -a study' in International Conference on Wisdom Computing and Communications (WCAC 2011) on November 17, 2011, at Kuala Lumpur, Malaysia. This presented paper was further published in '**International Journal of Wisdom Based Computing**' (2011), 1(3): 39-42.
5. Presented paper entitled 'Crack Propagation Study in Some Model Engineering Structures using CATIA Software' in International Conference in Mechanical, Electrical and Computer Engineering, held at Bangkok during 24-26th March 2013.
6. Presented paper entitled 'Biocatalysis- an eco-friendly alternative for future biodiesel industries' in International Conference on Biomass for Biofuels and Value Added Products (ICBBVAP 2012) on 23rd October 2012 at Kuala Lumpur, Malaysia.
7. Presented paper entitled 'Viability study of cashew nut shell as a feedstock for biodiesel' in International Conference on Green Technology for Environmental Pollution Prevention and Control held at National Institute of Technology Tiruchirappalli, Tamilnadu on 29 September, 2014.
8. Paper entitled "CFD analysis of hydrodynamic condition of designed spiral column photobioreactors for cultivation of microalgae" was adjudicated for **the best paper award** in International Conference on "Contemporary Challenges in Management, Technology & Social Sciences" held during April 05-06, 2014 at MGIMT, Lucknow, This paper was presented in oral session by M. Tech. scholar Mr Sanjoy Paul. The full paper of this conference was selected for publication in "Handbook of Management, Technology and Social Sciences" **ISBN - 978-81-928926-3-4, pp. 166-174**. <http://semsindia.org/publication/conference-book>.
9. Paper entitled "Application of optimization techniques in bio-diesel processing" was published in the proceedings of International Conference on Sustainable Manufacturing and Operations Management (ISOM 2013) held during June 26-28, 2013 at University of Mauritius, Reduit, Mauritius, **pp. 212-215**. https://issuu.com/giapindia/docs/isom_2013_proceedings_giap_journal/238
10. Paper entitled "Evaluation of Bend Curvature of Superheater Tube using CFD Analysis" accepted for oral presentation in ASME 2015 Power and Energy Conversion Conference held at San Diego Convention Center, San Diego, USA (28th June to 2nd July).
11. Two papers in "International Conference on Recent Trends in Engineering and Material Sciences" held during 17-19 March 2016 at Jaipur National University (JNU), Jaipur, Rajasthan. One in paper oral session presented by self and the other in poster session presented by M. Tech. scholar Ms. Sweta Baruah. Both abstracts appeared in the conference proceedings.
12. "A Review on Vibration Analysis and Identification of Crack in Cantilever Beam", published in the proceedings of the International Conference on Innovative Research in "Mechanical, Electrical, Electronics, Civil, Computer Science and Information Technology" (MECIT-2017), Jawaharlal Nehru University, New Delhi, 29th April 2017.
13. Presented four papers in International Conference on Recent Trends in Engineering, Science & Management (ICRTESM-2015) on 15th March 2015 at Jawaharlal Nehru University (JNU Convention Center), New Delhi. These papers were further published in special issue of '**International Journal of Advance Research in Science and Engineering**' having the following details:
 - "Effect of Pressure Angle of Spur Gears on Bending and Contact Stresses: A Comparative Study Using Finite Element Software", *International Journal of Advance Research in Science and Engineering* (2015), 4(01):517-526.
 - "Optimization of the Solvent Extraction Rate and Extraction Efficiency Considering Flow Rate, Heating Rate, and Solvent Concentration", *International Journal of Advance Research in Science and Engineering* (2015), 4(01):527-533.
 - "Structural Analysis of The Exhaust Gas silencer for The Flow through perforated and non-perforated silencer", *International Journal of Advance Research in Science and Engineering* (2015), 4(01): 534-540.
 - "Finite Element Based Computational Study for Assessment of Elastic Follow-Up in Autoclave Pressure Vessel", *International Journal of Advance Research in Science and Engineering* (2015), 4(01):541-546.

National/regional/state level conferences/seminars etc.

1. Presented paper entitled 'Occasional Loads on Pipes' in 12th National Conference on Machines and Mechanism (NaCoMM) held at IIT Guwahati (December 2005).
2. **Honored for the best presentation** in Design Section of Technical Session in National conference on Emerging Trends in Mechanical Engineering (ETME 2009) at Maharashtra Institute of Technology (MIT) Aurangabad for presenting paper entitled 'Overview of some occasional loads on industrial pipelines-some studies' (March 2009).
3. Presented paper entitled 'Viability study of microbial lipid as an alternative fuel in Diesel engine' in 1st Students Chemical Engineering Congress (SCHEMCON) held at IIT Guwahati (December 2005).
4. Presented paper entitled 'Some aspects of biodiesel production from Jatropha oil by lipase catalysed transesterification' in 22nd National Convention of Mechanical Engineers held at Assam State Centre of The Institute of Engineers (India), Guwahati (September 2006).
5. Presented paper entitled 'Effect of Seismic and Other Occasional Loads on Industrial Pipelines' in National Seminar on Earthquake Hazard and Disaster Management of North-Eastern States of India held at NIT Silchar (October 2008).
6. Presented paper entitled 'Two different roles of lipase in multi-step biodiesel processing: Newer challenges in immobilization methodologies' in National conference on Emerging Trends in Mechanical Engineering at, MIT Aurangabad (March 2009).
7. Presented paper entitled 'Design of a bench-scale Bio-catalytic Transesterification set-up- a preview' in National Conference on Emerging Trends in Mechanical Engineering held at G.H. Patel College of Engineering and Technology, Vallabh Vidyanagar, Gujarat (March 2009).
8. Presented paper entitled "Seismic Analysis on Industrial Piping" in 12th West Bengal Science and Technology Congress, February 2005. (Held at West Bengal University of Technology, Saltlake, Kolkata).
9. Presented paper entitled "Viability of Microbial Lipid as an alternative fuel for C.I. engine" in 13th West Bengal Science and Technology Congress, March 2006. (Held at Ballygaunge Science College, Kolkata).

Patents filed:

- Development of composite material from biodegradable Cashew nut shell (*Anacardium occidentale*). Patent no. 201731007338. Current Status: Examination awaited.
- Development of composite material from oil extracted and alkali treated Cashewnut shells (*Anacardium occidentale*). Patent no. 201731007337. Current Status: Examination awaited.

Journal paper Reviewed:

- ✓ Renewable & Sustainable Energy Reviews, Elsevier
- ✓ Heat and Mass Transfer, Springer

Project Reviewed: Central Power Research Institute (CPRI)

Professional Experiences: (in reverse chronological Order)

Designation	Employer	Duration
Associate Professor, Department of Mechanical Engineering, Cooch Behar Government Engineering College	Department of Higher Education, Government of West Bengal	Since December 2016 to till date
Assistant Professor Department of Mechanical Engineering	National Institute of Technology Silchar, Assam	July 2008 to December 2016
Lecturer, Department of Mechanical Engineering, SRSV Suri	Department of Technical Education and Training, Government of West Bengal	December 2007 to July 2008
Technical Assistant, Department of Applied Mechanics and Drawing	Bengal Engineering and Science University Shibpur (Currently IEST Shibpur), Howrah	February 2004 to July 2005
Lecturer, Department of Mechanical Engineering	B.P. Poddar Institute of Management and Technology, Kolkata	July 2003 to November 2003
Drawing Instructor	RCC Institute of Information Technology, Kolkata	September 1999 to July 2003
Apprenticeship Trainee, in quality management at Incoming Inspection Section.	Siemens Limited, Joka Works, Calcutta	October 1997 to December 1998

Some additional experiences/exposures:

- During June 2000 to July 2005, worked as honorary part-time faculty at Ramakrishna Mission Junior Technical School, Narendrapur. During this period, conducted class lectures of Basic Trade Theory, Workshop Calculation and Science and Special Trade Theory classes of Higher Secondary Vocational Stream and Technical Trade Courses.
- During January 1999 to August 1999, trained at Mechanical Technology Control Cell, Development Consultant Limited, Park Street, Kolkata. During this period, gained some practical exposures on preparation and rectification of piping layout, P&I diagram, G.A. Drawing, etc.

B.Tech. final year project supervision: (9 completed, 4 on-going)

Year	Title of the completed project	Name of the students in the project group
2012	Crack Propagation and Fracture Analysis in Engineering Structure by Generative Part Structural Analysis	Bidyot Doley, Bhriгу Thakuria, Ashok Kumar, T. Mangliandinga, S. Paominlian Simte
2013	CFD analysis of exhaust gas flow through muffler	Janardan Das, Rakesh Kalita, Rupam Das, Souvik Roy, Zorema Chawngthu
2014	Viability Study of Extraction of Biodiesel from waste Biomass (Cashew nut Shell)	Abhijit Gogoi, Purnyajit Bezbaruah, Deepjyoti Rabha, Rajib Sutradhar, Rakesh Shah
	Acoustic performance and modal analysis for the muffler of a 4-stroke 3-cylinder inline engine	Ankush Ganguly, Sayan Paul, Soumya Chakraborty, Amitava Roy, Sushanta Das
2015	Development of an experimental investigation facility for the characterization and production of biofuels using indigenous biomass	Mrinmoy Rajkhowa, Sushil Toshniwal, Anupam Dutta, Bhanita Das, Suman Pathak
2016	Estimation of instantaneous efficiency/transient response for solar flat plate collector for Silchar locality	Arijeet Roy, Nabarun Dey, Samrat Roy, Bikram Das, Joydeep Biswas
2017	Feasibility study of a portable manual compression refrigeration system	Abhik Deb, Himangshu Kalita, Saidul Islam

Students of four more project groups, had just started their work recently, but the titles of their projects are yet to be finalized.

M.Tech. final year dissertation supervision: (14 completed)

Year	Title of the completed dissertation	Scholar's name
2013	Optimization of Some Process Parameters of transesterification for Production of Biodiesel from Vegetable oil using soft computing technique	Anindita Sengupta
	Stress analysis of Typical Process Piping using ANSYS	Nasir Hasan Sk
	CFD analysis for Fluid Flow and Heat Transfer on Some Hollow Cylindrical Components in thermal Power Plant	Subhasish Das
2014	CFD Analysis on Hydrodynamic Conditions of Designed Spiral Column Photobioreactors for Cultivation of Microalgae	Sanjay Paul
	Isolation and Characterization of biodiesel from indigenous biomass	Alok Patra
2015	Finite Element based Computational study for assessment on Elastic follow-up in pressure vessel and pipeline	Phool Singh Dinakar
	Geometrical modelling and finite element based computational study on a suitable spur gear system for a single axis indigenous solar tracking application	Krishanu Gupta
	Experimental optimization of the process parameters during solvent extraction process from various non-edible biomasses	Rupjyoti Barali
	Computational analysis for flow induced stress and acoustic vibration in a silencer of a three cylinder in-line four-stroke S.I. engine	Rajesh Kumar Meena
2016	Analysis on gear tooth material for low speed and high torque transmission application	Pronita Saikia
	Acoustic behaviour and flow induced stress analysis on an elliptical chamber muffler for a C.I. engine	Sweta Baruah
	Numerical analysis of performance degradation of an airfoil under heavy rain	Jnanaranjan Acharya
2017	Experimental and FEA analysis of dynamic characteristics of cantilever beam influenced by crack	Dakshesh Kumar

PhD supervision/joint-supervision/co-supervision: (3 completed, 3 on-going)

Scholar (duration)	Working domain	Current status, thesis title
Dr. Sumit Das Lala (2015-2019)	Bio-composite	Successfully defended thesis entitled "Development of bio-composite material from Cashewnut, Rubber and Walnut seed Shells" (on 21 st October 2019)
Dr. Manoja Kumar Sahu (2015-2020)	Heat Transfer	Successfully defended thesis entitled "Numerical Investigation on thermo-hydraulic performance of channel with various shapes of rib roughness" (on 26 th August 2020)
Mr. Ikbal Bahar Laskar (2014-)	Biofuel	Submitted thesis entitled "Synthesis, characterization and application of heterogeneous catalysts in the production of biodiesel and related fuel additive" (on 10 th January 2020)
Mr. Emon Barua (2015...)	Biomechanics	On-going: (thesis title: "Development of Hydroxyapatite based Composite Bone Scaffold") Presented synopsis seminar on 31 st July 2020, expect to submit thesis in October 2020.
Mr. Abhijit Saha (2020...)	Energy storage	At very early stage, Just started: (Tentative work: "Use of thermal energy storage using some typical phase changing materials and nano-additives for crop drying applications")

One more scholar has just started his work recently; title of his thesis is yet to be finalized.

Short Term Courses/ Workshops Organized/Coordinated:

Duration	Program	Sponsored by	Role
March 18-22, 2019	ICT based short term course on "Computer Aided Design & Manufacturing"	National Institute of Technical Teachers' Training and Research (NITTTR) Chandigarh	Local Coordinator at Cooch Behar Government Engineering College
March 11-15, 2019	ICT based short term course on "CAD using SOLIDWORKS"		
February 11-15, 2019	ICT based short term course on "Green Manufacturing"		
March 12-16, 2018	In house training program on "Advancement on Joining of Materials: Welding and Allied Technologies"	National Institute of Technical Teachers' Training and Research (NITTTR) Kolkata	Local Coordinator at Cooch Behar Government Engineering College
August 6-10, 2018	ICT mode training program on "Arc Welding Processes & Physics of Welding"		
August 13-18, 2018	In-house training program on "Principles & Practices of Management"		
March 15-17, 2018	Three days' workshop on "Technological Advancement on Joining of Materials"	Cooch Behar Govt. Engineering College	Convenor
January 16-18, 2015	Workshop on "Reliability Theory and its Applications to Real Life Problems"	Central SQC Unit, ISI Kolkata	Organizing Co-Coordinator
August 14-18, 2014	"Workshop on Basic Statistics Using Software"	Applied Statistics Unit, ISI Kolkata	Local Organizer at NIT Silchar
November 26-December 6, 2013	ISTE workshop on "Engineering Mechanics" under the project "National Mission on Education through ICT"	Indian Institute of Technology Bombay	Workshop Coordinator at NIT Silchar RC

Some other courses/trainings/workshops/conference/FDP/STTP attended only as participant:

Course/Program Detail	Duration	Organizer	
12 week online certification course (Conducted by IIT Kanpur) on 'Engineering Metrology' (honoured with 'Elite Silver' certification , scored 88% marks and ranked within first 2% topper among 875 successful candidates)	July-October 2019 (equivalent to one and half week FDP in accordance with AICTE)	Ministry of H.R.D., Govt. of India under National Programme on Technology Enhanced Learning (NPTEL)	
12 week online certification course (Conducted by IIT Guwahati) on 'IC Engines and Gas Turbine' (honoured with 'Elite Silver' certification , scored 80% marks and ranked within first 2% topper among 1557 successful candidates)	January-April 2019 (equivalent to one and half week FDP in accordance with AICTE)		
Two-Weeks AICTE sponsored Faculty Development Programme on 'Recent Development and Challenges in Materials and Manufacturing Process'	January 1-13, 2018	Bangalore Institute of Technology	
Two weeks Refresher Course on 'Computer Aided Design' (Obtained Grade A)	December 2002-January 2003	Jadavpur University	
One week workshop cum training course on 'Cryogenic Engineering and cryo-instrumentation' (conducted by Advanced Centre for Cryogenic Research)	November 13-18, 2000		
Faculty Induction Programme for Engineering College Teachers of North-Eastern Region	April 26-May 8, 2010	National Institute of Technical Teachers' Training and Research (NITTTR) Kolkata	
Two weeks short term training programme on 'Mechanical Workshop'	June 10-21, 2019		
Two weeks short term training programme on 'Concept Teaching on Engineering Mechanics'	October 22-November 2, 2018		
Two weeks short term training programme on 'Mechanical Testing of Materials'	July 2-13, 2018		
Short term training Programme on 'Renewable Energy sources and emerging Technologies'	December 18-22, 2017		
Two and half day workshop on 'Promise and Challenges of Biodiesel as Sustainable fuel for Future Use'	February 19- 21, 2015		IIT Madras
Two week Summer course on Fluid Dynamics & Its Applications	July 7-19, 2008	NIT Silchar	
One week National Faculty Development Program on 'Pedagogy: A Framework for Effective Teaching and Learning Strategies'	May 7-11, 2014		
One week short term course on Failure Analysis of Engineering Materials	September 23- 27, 2013		
One-week short term training program on 'Recents in evolutionary optimization techniques and applications'	June 1-7, 2012		
One-week short term course on 'Applications of Statistics in Engineering, Management and Applied Sciences'	October 11-15, 2012		
One week ISTE Workshop on 'Engineering Mechanics'	September 16-20, 2013		IIT Bombay
One week short term training program on 'CFD and its application'	July 2-6, 2013		MNNIT Allahabad
18th National and 7th ISHMT-ASME Heat & Mass Transfer Conference	January 4-6, 2006	IIT Guwahati	
One-week short term course on 'Hydrogen Fuel and its Applications'	September 15-19, 2008		
One-week short term course on 'Fuel Cell and Hydrogen Technology'	September 14-18, 2009		
One-week short term course on 'Mechanical Engineering Education'	December 7-11, 2009		
One-week short term course on 'Recent trends in fuels and combustion'	August 29- September 2, 2011		
Practical Training on different operations in lathe and lathe tool grinding	November 5-December 2, 1996	Don-Bosco Technical Training Institute, Calcutta	
Computer Aided Design using Auto-CAD and Auto-LISP	September 25 1997- January 29, 1998	Regional Computer Centre, Calcutta	