



IEST, Shibpur

Indian Institute of Engineering Science and Technology, Shibpur
(Formerly Bengal Engineering and Science University, Shibpur)

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Personal Information

Name: Bijan Kumar Mandal

Designation: Professor



Academic Qualifications:

	Institution	Year
1. Ph.D.	Jadavpur University	2006
2. M.Tech.	Indian Institute of Technology, Kharagpur	1988
3. B.Tech. (Hons.)	Indian Institute of Technology, Kharagpur	1985

Contact Information

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Area of Research

1. Combustion
2. Alternative Fuels for IC Engine
3. CFD and Numerical Heat Transfer
4. Refrigeration
5. Combined Cycle

Courses Undertaken

UG Courses

1. Fundamentals of Thermodynamics
2. Applied Thermodynamics
3. Heat Transfer
4. Heat Power
5. Computational Fluid Dynamics
6. Mechanical Services
7. Numerical Methods and Computer Programming

PG Courses

1. Advanced Engineering Thermodynamics
2. Refrigeration Engineering
3. Cryogenic systems and Equipment
4. Gas Turbine and Compressors

Recent Publications

1. Mandal, B. K., Datta, A., and Sarkar, A.. Numerical predictions of the soot and NO formation in a confined laminar diffusion flame without and with air preheat, *Journal of Power and Energy, Proc. I. Mech. E., Part A*, 2006, Vol. 220, pp. 473-486.
2. Bijan Kumar Mandal, Amitava Sarkar, and Amitava Datta. Transient development of flame and soot distribution in laminar diffusion flame with preheated air.” *ASME Journal of Engineering and Gas Turbines Power*, 2009, Vol.131, pp.031501-9.
3. Samiddha Palit, Achin Kumar Chowdhuri and Bijan Kumar Mandal. Environmental impact of using biodiesel as fuel in transportation: a review. *International Journal of Global Warming*, 2011, Vol 3, pp. 232-256.
4. Arup Jyoti Bhowal and Bijan Kumar Mandal, Radiation effect on temperature distribution and NO formation in a diffusion flame under reduced gravity conditions, *Heat and Mass Transfer* , 2016, Vol. 52, pp.227-243.
5. Ambarish Datta and Bijan Kumar Mandal, A comprehensive review of biodiesel as an alternative fuel for compression ignition engine, *Renewable and Sustainable Energy Reviews*, , 2016, Vol. 57, pp.799-821.
6. Ambarish Datta and Bijan Kumar Mandal, Impact of alcohol addition to diesel on the performance combustion and emissions of a compression ignition engine, *Applied Thermal Engineering*, 2016, Vol. 98, pp.670-682.

7. Arup Jyoti Bhowal and Bijan Kumar Mandal, A Computational Study of Soot Formation in Methane Air Co-Flow Diffusion Flame Under Microgravity Conditions, *Microgravity Science and Technology*, 2016, Vol. 28, pp.395-412.
8. Ambarish Datta and Bijan Kumar Mandal, A numerical study on the performance, combustion and emission parameters of a compression ignition engine fuelled with diesel - palm stearin biodiesel and alcohol blends, *Clean Technologies and Environmental Policy*, 2017, Vol. 19: pp.157-173.
9. Ambarish Datta and Bijan Kumar Mandal, Engine performance, combustion and emission characteristics of a compression ignition engine operating on different biodiesel-alcohol blends, *Energy*, 2017, Vol. 125, pp. 470-483.
10. Arup Jyoti Bhowal and Bijan Kumar Mandal, Numerical Simulation of Transient Development of Flame, Temperature and Velocity under Reduced Gravity in a Methane Air Diffusion Flame, *Microgravity Science and Technology*, 2017, Vol. 29, pp. 151–175.
11. *More Information (Optional)*

SCHOLARSHIPS AND POSITIONS HELD

- National scholarship for the talented students in rural areas, 1976 (held at the end of class VIII standard)
- National Scholarship, 1978 on the basis of Madhyamik Examination
- All India Rank of 148 at IIT Entrance Examination in 1980
- National as well as Merit cum Means Scholarship, 1980-1985 on the basis of Higher Secondary Examination and IIT Semester Examinations
- Gate Scholarship from 1986 to 1988 for post graduate (M.Tech.) study at IIT, Kharagpur
- QIP Scholarship from 2001 to 2004 for research work at Jadavpur University leading to Ph.D.
- Head of the Department of Mechanical Engineering at Indian Institute of Engineering Science and Technology Shibpur (IEST Subpur, formerly BESU Shibpur) from 23rd March, 2015 to 5th May, 2017)

INVITED TALK:

1. **Biodiesel and its Impact on the Performance and Emission Characteristics of CI Engines used in Automobile Sector:** Indo-US Work shop at IIT, Mumbai, 4-5th January, 2014.
2. **Biodiesel: An Alternative Fuel for CI Engine:** National Conference on Recent Advances in Mechanical Engineering (RAME 2013), Berhampur, West Bengal, October, 2013
3. **Refrigerator and Heat Pump** : Invited talk series on Thermodynamics and its applications, 13- 14 April, 2013 at College of Engineering and Management, Kolaghat, West Bengal
4. **Air Conditioning and Psychometric** : Invited talk series on Thermodynamics and its applications, 13- 14 April, 2013 at College of Engineering and Management, Kolaghat, West Bengal
5. **Natural Convection in Square Cavity: A CFD Based Study:** JU UGC-ASC Refresher Course on Recent Advances in Trends in Applications of CFD in Engineering, 18 June- 7 July, 2012.
6. **Simulation of Diffusion Flame with Finite Rate Chemistry:** JU UGC-ASC Refresher Course on Recent Advances in Trends in Applications of CFD in engineering, 18 June- 7 July, 2012.

7. **Plate Heat Exchanger:** Refresher Course for L&T Engineers, June, 2012
8. **Heat Exchanger Design:** Refresher Course for L&T Engineers, June, 2012

MEMBERSHIP OF PROFESSIONAL BODIES

- Life member of ISTE (Indian Society of Technical Education)
- Life member of SESI (Solar Energy Society of India)
- Fellow of Institution of Engineers (India)

COUNTRY VISITED

- England
- Scotland
- USA
- Singapore
- Bangladesh

FOREIGN INSTITUTE AND UNIVERSITY VISITED

- University of Oxford
- University of Glasgow
- Imperial College, London
- San Diego State University, California, USA
- National University of Singapore
- Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

COMPLETE LIST OF PUBLICATIONS

JOURNALS:

1. Mandal, B. K., Datta, A., and Sarkar, A. Transient development of methane-air diffusion flame in a confined geometry with and without air-preheat. *International Journal of Energy Research*, 2005, Vol. 29, pp. 145 - 176.
2. Mandal, B. K., Datta, A., and Sarkar, A. Numerical predictions of the soot and NO formation in a confined laminar diffusion flame without and with air preheat, *Journal of Power and Energy, Proc. I. Mech. E., Part A*, 2006, Vol. 220, pp. 473-486.
3. Bijan Kumar Mandal, Amitava Datta, and Amitava Sarkar. A Computational Study of the Soot Formation in Methane-Air Diffusion Flame During Early Transience Following Ignition, *Engineering Letters*, 2008, Vol 16. Pp 746-752.
4. Bijan Kumar Mandal, Amitava Sarkar, and Amitava Datta. Transient development of flame and soot distribution in laminar diffusion flame with preheated air." *ASME Journal of Engineering and Gas Turbines Power*, 2009, Vol.131, pp.031501-9.
5. Samiddha Palit, Achin Kumar Chowdhuri and Bijan Kumar Mandal. Environmental impact of using biodiesel as fuel in transportation: a review. *International Journal of Global Warming*, 2011, Vol 3, pp. 232-256.
6. Ambarish Datta, Achin Kumar Chowdhuri, Bijan Kumar Mandal. Experimental Study on the Performances of Spark Ignition Engine with Alcohol-Gasoline Blends as Fuel, *International Journal of Energy Engineering*, 2012, Vol. 2, pp. 22-27.
7. Achinta Sarkar, Achin Kumar Chowdhuri and Bijan Kumar Mandal. Experimental Study on the Use of Gasoline-Ethanol Blends as Spark Ignition Engine Fuel, *International Journal of Earth Sciences and Engineering*, 2012, 264-270.

8. K. Chowdhuri, A. J. Bhowal, S. Chakrabarti and B.K. Mandal. Numerical Simulation of Laminar Diffusion Flame with Finite rate Chemistry and Variable Property Formulation, *Computational Thermal Sciences*, 2012, Vol. 4, 67-76.
9. Arindam Mitra, Subal Kumar, Ambarish Datta, Achin Kumar Chowdhuri and Bijan Kumar Mandal. An Experimental Study on the Performance and Emission Characteristics of a Stationary Petrol Engine using EGR, *International Journal of Earth Sciences and Engineering*, 2012, pp. 245-248.
10. Ambarish Datta and Bijan Kumar Mandal. Biodiesel Production and its Emissions and Performance: A Review, *International Journal of Scientific & Engineering Research*, 2012, Vol. 3, pp. 1-5.
11. K Sadhukhan, A. K. Chowdhuri and B. K. Mandal, Computer Based Thermodynamic Properties of Ammonia-Water Mixture for the Analysis of Power and Refrigeration Cycle, *International Journal of Thermodynamics*, 2012, Vol.15, pp. 133-139.
12. Achinta Sarkar, Achin Kumar Chowdhuri, Arup Jyoti Bhowal and Bijan Kumar Mandal. The Performance and Emission Characteristics of SI Engine Running on Different Ethanol Gasoline Blends, *International Journal of Scientific & Engineering Research*, 1012, Vol. 3, pp. 1-7.
13. Ambarish Datta, Bijoy Das, Achin Kumar Chowdhuri, Bijan Kumar Mandal. Experimental Study on the Performance of Biodiesel Fuelled CI Engine Using Exhaust Gas Recirculation, *International Journal of Emerging Technology and Advanced Engineering*, 2013, Vol. 3, pp. 89-95.
14. Achinta Sarkar, Ambarish Datta, Bijan Kumar Mandal. Performance Characteristics of Spark Ignition Engine Using Ethanol as Fuel at Different Operating Conditions *International Journal of Emerging Technology and Advanced Engineering*, 2013, Vol. 3, pp. 96-100.
15. Pratibhu Roy, Indranil Sinha, Bijan Kumar Mandal, Achin Kumar Chowdhuri. The Effect of Exhaust Gas Recirculation (EGR) In Compression Ignition Engine, *International Journal of Emerging Technology and Advanced Engineering*, 2013, Vol. 3, pp.106-111.
16. Pratibhu Roy, Ranendra Roy and Bijan Kumar Mandal. Performance and Emission Characteristics of Methanol and Di-Methyl Ether as Spark Ignition Engine Fuel: A Review, *International Journal of Scientific & Engineering Research*, 2013, Vol. 4, Issue 12, pp. 38-43.
17. Indranil Ray, Tanuj Chakraborty, Debapriya Roy, Ambarish Datta, Bijan Kumar Mandal. Production, Storage and Properties of Hydrogen as Internal Combustion Engine Fuel: A Critical Review, *International Journal of Emerging Technology and Advanced Engineering*, 2013, Vol. 3, pp. 119-125.
18. Achin Kumar Chowdhuri, Somnath Chakrabarti and Bijan Kumar Mandal. Numerical Study of Radiation and Airpreheating Effect on the Velocity, Temperature and Species Distribution in a Confined Laminar Coflow Diffusion Flame, *Computational Thermal Sciences*, 2013, Vol. 5, pp. 425-440.
19. Achin Kumar Chowdhuri, Arindam Mitra, Bijan Kumar Mandal and Somnath Chakraborti. Numerical Prediction of Fuel Dilution Effect on the Flame Structure and Temperature Distribution in Diffusion Flame, *International Journal of Emerging Technology and Advanced Engineering*, 2013, Vol. 3, pp. 139-145.
20. Arup Jyoti Bhowal and Bijan Kumar Mandal, Numerical Study of Gravity Effect on the Nitric Oxide Formation in Co-Flow Methane -Air Diffusion Flame, *International Journal of Emerging Technology and Advanced Engineering*, 2013, Vol. 3, pp. 146-152.
21. Sudipta Paul, Achinta Sarkar, Bijan Kumar Mandal. Environmental Impacts of Halogenated Refrigerants and Their Alternatives: Recent Developments, *International Journal of Emerging Technology and Advanced Engineering*, 2013, Vol. 3, pp.400-409
22. Ranendra Roy and Bijan Kumar Mandal. First Law and Second law Analysis of mechanical Vapour Compression Refrigeration System using Refrigerants CFC12, R134a and R290, *International Journal of Current Engineering and Technology*, 2014, Special Issue-3, pp. 191-196.
23. Gaurav Paul, Ambarish Datta and Bijan Kumar Mandal. Numerical Investigation of the Performance and Emission Characteristics of a CI engine using Diesel and its blends with Ethanol and Jatropa Biodiesel, *International Journal of Current Engineering and Technology*, 2014, Special Issue-3, pp. 5-9.
24. Gaurav Paul, Ambarish Datta and Bijan Kumar Mandal. Numerical Simulation of CI Engine Characteristics Fueled with Soyabean Biodiesel and its Blends, *Engineering Sciences International Research Journal*, 2014, Vol. 2, pp. 159-162.
25. Ranendra Roy and Bijan Kumar Mandal. Computer Based Thermodynamic Properties of Alternative Refrigerant R-134A, *Engineering Sciences International Research Journal*, 2014, Vol. 2, pp. 163-169.
26. Ambarish Datta and Bijan Kumar Mandal, Effect of Injection Pressure on the Performance and Emissions of Biodiesel Fueled CI Engine, *Engineering Sciences International Research Journal*, 2014, Vol. 2, pp. 217-220.
27. Ambarish Datta, Samidhdha Palit and Bijan Kumar Mandal. An Experimental Study on the Performance and Emission Characteristics of a CI Engine Fueled with Jatropa Biodiesel and its Blends with Diesel, *Journal of Mechanical Science and Technology*, 2014, Vol. 28, issue 5, pp.1961-1966.

28. Ambarish Datta and Bijan Kumar Mandal, 2014, Prospects and Threats to Jatropha Biodiesel as the Future Sustainable Fuel of India, *Energy Technology & Policy*, 2014, Vol.1, pp. 8-14.
29. Gaurav Paul, Ambarish Datta and Bijan Kumar Mandal 2014. An Experimental and Numerical Investigation of the Performance, Combustion and Emission Characteristics of a Diesel Engine fueled with Jatropha Biodiesel, *Energy Procedia*, 2014, Vol. 54, pp. 455-467.
30. Bibekananda Nayak, Bijan Kumar Mandal, Effect of generator, condenser and evaporator Temperature on the Performance of Ejector Refrigeration System (ERS), *Journal of Basic and Applied Scientific Research*, 2014, Vol. 1, pp. 4-9
31. Aritra Chatterjee, Suhail Dutta, Bijan Kumar Mandal, Combustion, Performance and emission Characteristics of Hydrogen as an Internal Combustion Engine fuel, *Journal of Aeronautical and Automotive Engineering*, 2014, Vol. 1, pp. 1-6.
32. Mukul Bisoi, Gaurav Paul, Achin Kumar Chowdhuri and Bijan Kumar Mandal. Numerical simulation of natural convection in a square enclosure for different Rayleigh numbers, *International Journal of Energy & Technology*, 2014, Vol. 6, pp. 1-9.
33. Ambarish Datta, Suhail Dutta, Bijan Kumar Mandal, Effect of Methanol Addition to Diesel on the Performance and Emission Characteristics of a CI Engine, *Journal of Basic and Applied Scientific Research*, 2014, Vol. 1, No. 3, pp. 8-13.
34. Achin Kumar Chowdhuri, Somnath Chakrabarti and Bijan Kumar Mandal, Numerical Prediction of Radiation and Air Preheating Effects on the Soot Formation in a Confined Laminar Co-Flow Diffusion Flame, *International Journal of Thermodynamics*.
35. Arup Jyoti Bhowal and Bijan Kumar Mandal, Numerical Investigation of the Effect of Reduced Gravity and Radiation on Temperature and NO Formation in Diffusion Flame, *International Journal of Heat and Mass Transfer* , DOI: 10.1007/s00231-015-1552-0.
36. Ambarish Datta and Bijan Kumar Mandal, Effect of Injection Timing on the Performance and Emission Characteristics of a CI Engine Using Diesel and Methyl Soyate, *Biofuels*, DOI: 10.1080/17597269.2015.1100039.
37. Ambarish Datta and Bijan Kumar Mandal, Numerical investigation of the performance and emission parameters of a diesel engine fuelled with diesel - biodiesel - methanol blends, *Journal of Mechanical Science and Technology*, 30(4), 1923-1929, 2016, DOI: 10.1007/s12206-016-0351-y.
38. Ambarish Datta and Bijan Kumar Mandal, A comprehensive review of biodiesel as an alternative fuel for compression ignition engine, *Renewable and Sustainable Energy Reviews*, 57:799-821, 2016 DOI: 10.1016/j.rser.2015.12.170.
39. Ambarish Datta and Bijan Kumar Mandal, Impact of alcohol addition to diesel on the performance combustion and emissions of a compression ignition engine, *Applied Thermal Engineering*, 98:670-682, 2016, DOI: 10.1016/j.applthermaleng.2015.12.047.
40. Arup Jyoti Bhowal and Bijan Kumar Mandal, A Computational Study of Soot Formation in Methane Air Co-Flow Diffusion Flame Under Microgravity Conditions, DOI: 10.1007/s12217-016-9489-6.
41. Ambarish Datta and Bijan Kumar Mandal, A numerical study on the performance, combustion and emission parameters of a compression ignition engine fuelled with diesel - palm stearin biodiesel and alcohol blends, *Clean Technologies and Environmental Policy*, DOI: 10.1007/s10098-016-1202-3.
42. Madhu Sruthi Emani, Ranendra Roy and Bijan Kumar Mandal, Performance evaluation of alternative refrigerants, *International Journal of Advance Research in Science and Engineering*, 2016, Vol. 5, Issue 08, pp. 232 - 241.
43. Ambarish Datta and Bijan Kumar Mandal, Engine performance, combustion and emission characteristics of a compression ignition engine operating on different biodiesel-alcohol blends, *Energy*, 2017, Vol. 125, pp. 470-483.
44. Ranendra Roy and Bijan Kumar Mandal, Thermodynamic Analysis of Modified Vapour Compression Refrigeration System Using R-134a, *Energy Procedia*, 2017, Vol. 109, pp. 227 - 234.
45. Ankit Kumar, Ankit Singhania, Abhishek Kumar Sharma, Ranendra Roy and Bijan Kumar Mandal, Thermodynamic Analysis of Gas Turbine Power Plant, *International Journal of Innovative Research in Engineering & Management*, 2017, Vol. 4, Issue 3, pp. 648 - 654.
46. Abhishek Kumar Sharma, Ankit Singhania, Ankit Kumar, Ranendra Roy and Bijan Kumar Mandal, Improvement of Gas Turbine Power Plant Performance: A Review, *International Journal of Innovative Research in Engineering & Management*, 2017, Vol. 4, Issue 3, pp. 658 - 663.

CONFERENCE PROCEEDINGS:

- 1) Mandal, B.K., and Mandal, D. K. . An approach to use ash as an energy saving insulant over steam pipe. *2nd All India People's Technology Congress*, 12-14th February, 1999, Science City, Calcutta, India
- 2) Mandal, B.K. , and Chowdhuri, A.K. Comparative study of the performance of promising alternative refrigerants. *All India Seminar on Refrigeration and Air-Conditioning*, 30 – 31 October, 1999, The Institution of Engineers (India), Aurangabad, India.
- 3) Mandal, B.K., and Chowdhuri, A.K. Development of a computer code for the determination of the thermodynamic properties of refrigerant R-12. *National Conference on Emerging Trends in Mechanical Engineering*, 10-12th September, 2004. Verna , Goa, India
- 4) Mandal, B.K., Datta, A., and Sarkar, A. Transient development of flow and temperature fields of a confined methane-air diffusion flame. *31st National Conference on Fluid Mechanics and Fluid Power*, 16-18 December, 2004, Kolkata, India.
- 5) Mandal, B.K., and Datta, A. Effects of fuel and air stream dilution on soot formation in a laminar diffusion flame. *XIX National Conference on IC Engines and Combustion*, 21- 23rd December, 2005, Annamalai University, Annamalainagar, India.
- 6) Mandal, B.K., Datta, A., and Sarkar, A. Effects of air preheating on the soot and NO formation in confined laminar diffusion flame. *18th National & 7th ISHMT-ASME Heat and Mass Transfer Conference*, January 4 - 6, 2006, IIT Guwahati, India.
- 7) Mandal, B.K., and Datta, A. Air-preheating effect on the steady state distribution of velocity and temperature of a diffusion flame with variable formulation. *National Conference on Emerging Trends in Mechanical Engineering*, 10-11 February, 2006, B.M.S College of Engineering, Bangalore, India.
- 8) Bijan Kumar Mandal, Amitava Datta, and Amitava Sarkar. Numerical Prediction of Air-preheating Effect on Soot Formation in Diffusion Flame During Early Transience Following Ignition. *World Congress on Engineering 2007*, London, UK, 2-4 July, 2007.
- 9) Samiddha Palit, Bijan Kumar Mandal, Sudip Ghosh, and Arup Jyoti Bhowal. Performance and Emission Characteristics of Bio-Diesel as an Alternative Diesel Engine Fuel, *ASME 2008 2nd International Conference on Energy Sustainability, Volume 1*, August 10–14, 2008, Jacksonville, Florida, USA
- 10) Bijan Kumar Mandal, Kousik Sadhukhan, Achin Kumar Chowdhuri, and Arup Jyoti Bhowal. Analysis of a Combined Power and Refrigeration Cycle Working on Solar Energy. *ASME 2008 2nd International Conference on Energy Sustainability, Volume 1*. August 10–14, 2008, Jacksonville, Florida, USA
- 11) Samiddha Palit, Bijan Kumar Mandal, Sudip Ghosh, and Arup Jyoti Bhowal, An Experimental Study on the Performance and Emission Characteristics of Jatropha Biodiesel Fuelled CI Engine, *ASME 2009 3rd International Conference on Energy Sustainability*, Volume 1, ASME 2009 3rd International Conference on Energy Sustainability collocated with the Heat Transfer and InterPACK09 Conferences (ES2009) July 19–23, 2009, San Francisco, California, USA
- 12) A.K. Chowdhuri, A. J. Bhowal, B. K. Mandal, Transient Modelling of Soot Formation and its Burnout in Methane-Air Diffusion Flame. *International Conference on Advances in Mechanical Engineering (ICAME-2009)*, 3 – 5 August 2009, Department of Mechanical Engineering Sardar Vallabhbhai National Institute of Technology Surat – 395 007 Gujarat State, India.
- 13) K.K.Datta Gupta, Samir Chakravarti ,B.K.Mandal, A.K.Chowdhuri and S.Ghosh, Performance Assessment of a Solar Powered Lithium Bromide-Water Absorption Cooling System with Flat-Plate Collectors. *International Conference on Advances in Mechanical Engineering (ICAME-2009)*, 3 – 5 August 2009, Department of Mechanical Engineering Sardar Vallabhbhai National Institute of Technology Surat – 395 007 Gujarat State, India.
- 14) Manjula Das (Ghatak), Sujoy Kumar Mukherjea, Bijan Kumar Mandal. Numerical Prediction of Velocity and Temperature Distributions in a Diffusion Flame under Reduced Gravity Conditions. *Proc. of the International Conference on Advances in Mechanical Engineering*, August 3-5, 2009. S.V. National Institute of Technology, Surat – 395 007, Gujarat, India.
- 15) Bijan Kumar Mandal, Sujoy Kumar Mukherjea, Manjula Das(Ghatak), Simulation of Confined Co-Flow Methane-Air Diffusion Flame Under Microgravity Condition With Variable Property Formulation, *ASME Turbo Expo 2011*, June 6-10, 2011, Vancouver, Canada (Accepted for presentation and publication in the proceedings).
- 16) Bijan Kumar Mandal, Samidha Palit and Sudip Ghosh. An Experimental Investigation into the Energetic and Environmental Performances of a CI Engine Running on Biodiesel-Petrodiesel Blends, International Conference on Clean Energy Technologies and Energy Efficiency for Sustainable Development, December 27-29, 2010, Dehradun, India.
- 17) Achinta Sarkar, Achin Kumar Chowdhuri and Bijan Kumar Mandal, Performance and Emission Characteristics of a Variable Compression SI Engine Using Ethanol Gasoline Blends as Fuel, Proceedings of the International Conference on Mechanical Engineering 2011 (ICME2011) 18-20 December 2011, Dhaka, Bangladesh.

- 18) Achinta Sarkar, Partha Pratim Dey and Bijan Kumar Mandal, Experimental Investigation of Spark Ignition Engine Using Gasoline-Ethanol Blends as Fuel under Moderate Compression Ratio, Proceedings of the International Conference in Engineering, Technology and Management 2012 (ICETM 2012) Puducherry, India.
- 19) Ambarish Datta, Partha Pratim Dey and Bijan Kumar Mandal, Effect of Injection Timing on the Performance and Emissions of Biodiesel fueled CI Engine, Proceedings of the International Conference in Engineering, Technology and Management 2012 (ICETM 2012) Puducherry, India.
- 20) Indranil Sinha, Achin Kumar Chowdhuri and Bijan Kumar Mandal, Experimental Study on the Performance of a Petrol Engine Using Preheated Inlet Air, Proceedings of the International Conference in Engineering, Technology and Management 2012 (ICETM 2012) Puducherry, India.
- 21) Achinta Sarkar, Achin Kumar Chowdhuri and Bijan Kumar Mandal, Simulation of a Two-Stage R-22 Refrigeration System with Flash Intercooler, Proceedings of the International Conference on Advances in Mechanical Engineering & its Interdisciplinary Areas, (ICAMEI 2012) Kolaghat, India.
- 22) Ambarish Datta and Bijan Kumar Mandal, Effect of Ethanol Addition to Diesel and Biodiesel Mixture on the Performance and Emissions of Compression Ignition Engine: A Review, Proceedings of the International Conference on Advances in Mechanical Engineering & its Interdisciplinary Areas, (ICAMEI 2012) Kolaghat, India.
- 23) Indranil Ray, Soumyabrata Maiti, Achinta Sarkar and Bijan Kumar Mandal, Progress in the Numerical Investigation of Heat Transfer within a Cavity with Some Simulation Results, Proceedings of the International Conference on Advances in Mechanical Engineering & its Interdisciplinary Areas, (ICAMEI 2012) Kolaghat, India.
- 24) Achin Kumar Chowdhuri, Arindam Mitra, Somnath Chakrabarti and Bijan Kumar Mandal, Computational Study of Fuel Dilution Effect on the Soot Formation in Methane-Air Laminar Confined Diffusion Flame, Proceedings of the ASME 2013 7th International Mechanical Engineering Congress & Exposition, IMECE2013, November 15-21, San Diego, CA, USA.
- 25) Ambarish Datta and Bijan Kumar Mandal, Production, Performance and Emissions of Biodiesel as Compression Ignition Engine Fuel, Proceedings of the ASME 2013 7th International Mechanical Engineering Congress & Exposition, IMECE2013, November 15-21, San Diego, CA, USA.
- 26) Gaurav Paul, Ambarish Datta, Bijan Kumar Mandal. Effect of Injection Timing on the Performance and Emission Characteristics of a CI Engine using Diesel and Methyl Soyate, Proceedings of National Conference on Recent Advances in Mechanical Engineering (NCRAME) 2013, Nerist, Nirjuli.
- 27) Gaurav Paul, Ambarish Datta and Bijan Kumar Mandal, An Experimental and Numerical Investigation of the Performance and Emission Characteristics of a Diesel Engine fueled with Jatropha Biodiesel, IVth International Conference on Advances in Energy Research, December 10-12, 2013, Indian Institute of Technology Bombay, Mumbai
- 28) Gaurav Paul, Ambarish Datta and Bijan Kumar Mandal, Numerical Investigation of Performance and Emission Characteristics of Biodiesels as Compression Ignition Engine Fuels, International Conference on Emerging Trends in Renewable Energy (ICETRE 2013), December 27-28, 2013, Bhubaneswar, India.
- 29) Pratibhu Roy, Ranendra Roy and Bijan Kumar Mandal, Performance and Emission Characteristics of Methanol and Di-Methyl Ether as Spark Ignition Engine Fuel: A Review, International Conference on Emerging Trends in Renewable Energy (ICETRE 2013), December 27-28, 2013, Bhubaneswar, India.
- 30) Pratibhu Roy, Ambarish Datta and Bijan Kumar Mandal, Experimental Study on the Performance and Emission Characteristics of a SI Engine Using Methanol as Fuel, Proceedings of the 22th National and 11th International ISHMT-ASME Heat and Mass Transfer Conference, December 28-31, 2013, IIT Kharagpur, India.
- 31) Ranendra Roy, Gaurav Paul and Bijan Kumar Mandal, Thermodynamic Property formulation of Halogenated Hydrocarbon refrigerant Using Virial Coefficient Type Equation of State, Proceedings of the 22th National and 11th International ISHMT-ASME Heat and Mass Transfer Conference, December 28-31, 2013, IIT Kharagpur, India.
- 32) Bijan Kumar Mandal and Arup Jyoti Bhowal, Numerical Study of the Radiation Effect on Thermal NO Formation in Diffusion Flame under Reduced Gravity Conditions, Proceedings of the 22th National and 11th International ISHMT-ASME Heat and Mass Transfer Conference, December 28-31, 2013, IIT Kharagpur, India.
- 33) Arup Jyoti Bhowal and Bijan Kumar Mandal, Numerical investigation of gravity effect on the temperature and flow fields in a methane air diffusion flame, Proceedings of the International Conference on Mechanical Engineering 2013 (ICME2013) 20 – 21 June, 2014, Dhaka, Bangladesh.

- 34) Achin Kumar Chowdhuri, Somnath Chakrabarti, Bijan Kumar Mandal, A computational study of the effect of fuel dilution and air-preheating on soot formation in diffusion flame, Proceedings of the International Conference on Mechanical Engineering 2013 (ICME2013) 20 – 21 June, 2014, Dhaka, Bangladesh.
- 35) Gaurav Paul, Ambarish Datta and Bijan Kumar Mandal, Numerical Simulation of CI Engine Characteristics Fueled with Soyabean Biodiesel and its Blends, Proceedings of the International Conference on Mathematics & Engineering Sciences – 2014 (ICMES-2014), Chitkara University, Himachal Pradesh, India.
- 36) Ambarish Datta and Bijan Kumar Mandal, Effect of Injection Pressure on the Performance and Emissions of Biodiesel Fueled CI Engine, Proceedings of the International Conference on Mathematics & Engineering Sciences – 2014 (ICMES-2014), Chitkara University, Himachal Pradesh, India.
- 37) Ambarish Datta and Bijan Kumar Mandal, Effect of Methanol Addition to Diesel and Biodiesel Blend on the Performance and Emission of Diesel Engine, Proceedings of the International Conference on Advanced Materials and Energy Technology – 2014 (ICAMET-2014), Indian Institute of Engineering Science and Technology, Shibpur, West Bengal, India.
- 38) Ranendra Roy and Bijan Kumar Mandal, Numerical Simulation of Vapour Compression Refrigeration System Using Refrigerant R152A, R404A, R507 and R600A, Proceedings of the 2nd International Conference on Advances in Mechanical Engineering and Its Interdisciplinary Areas (ICAMEI-2015), Kolaghat, West Bengal, India.
- 39) Ambarish Datta and Bijan Kumar Mandal, Numerical Investigation on the Effects of EGR on CI Engine Characteristics Using Soyabean Biodiesel, 11th International Conference on Mechanical Engineering (ICME2015), BUET Dhaka, Bangladesh.
- 40) Ambarish Datta and Bijan Kumar Mandal, Effect of Compression Ratio on the Performance, Combustion and Emission from a Diesel Engine Using Palm Biodiesel, 11th International Conference on Mechanical Engineering (ICME2015), BUET Dhaka, Bangladesh.
- 41) Arup Jyoti Bhowal and Bijan Kumar Mandal, A Computational Study of Radiation and Gravity Effect on Temperature and Soot Formation in a Methane Air Co-Flow Diffusion Flame, 11th International Conference on Mechanical Engineering (ICME2015), BUET Dhaka, Bangladesh.
- 42) Avik Ray, Arup Jyoti Bhowal and Bijan Kumar Mandal, A Comprehensive Review of Soot Formation in Diffusion Flame at Microgravity Conditions, 11th International Conference on Mechanical Engineering (ICME2015), BUET Dhaka, Bangladesh.
- 43) Aritra Chatterjee and Bijan Kumar Mandal, Computational Study of Natural Convection in Square Cavity Filled with Water and Heated from the Bottom, 11th International Conference on Mechanical Engineering (ICME2015), BUET Dhaka, Bangladesh.
- 44) Madhu Sruthi Emani, Ranendra Roy and Bijan Kumar Mandal, Energy and Exergy Analysis of Vapour Compression Refrigeration System Using Alternative Refrigerants, International Conference on New and Renewable Energy Resources for Sustainable Future (ICONRER-2017), Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur, India.
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