BIO-DATA

Dr. Tapan Kumar Gogoi
Professor, Deptt.of Mech. Engg.
Tezpur University, Assam
Email:tapan_g@tezu.ernet.in
Phone: Extn. 5854

Specialization: Thermal, Energy & Environmental Engg.

Positions held:	Period
Head of the Department Mech. Engg., Tezpur University	23rd August, 2007 to 22nd August-2010
Head of the Department Mech. Engg., Tezpur University	6th June, 2015 to 5th June, 2016
Head of the Department Mech. Engg., Tezpur University	6th June, 2019 to 28th August, 2022

Education:

B.E., Mechanical Engineering, Assam Engg. College, Guwahati
M.Tech.,Mechanical Engineering, IIT, Kharagpur
Ph.D., School of Engineering, Tezpur University

Number of Ph D students guided:

Completed	5
Thesis Submitted	Nil
Ongoing	3

Doctoral Theses Guided

- Energy, Exergy, Exergoeconomic and Environmental (4E) Analyses and Multi-objective Opti- mization of Gas Turbine-based Trigeneration Systems
  Tezpur University, Joy Nondy, 2023
- Exergetic Performance Analysis of MHD (Magnetohydrodynamics) and MHD integrated Gas Turbine Power Plant
  Tezpur University, Prabin Haloi, 2022
- Performance evaluation of single and double effect H_2O-LiCl vapour absorption

cooling sys- tems through exergy analysis and optimization.
Tezpur University, Dwipen Konwar, 2020

- Performance analysis of Solid oxide fuel cell (SOFC) integrated combined power cycles and parameter estimation using inverse method
Tezpur University, Pranjal Sarmah, 2018

- Thermodynamic modeling and analysis of steam turbine based cogeneration systems with single and double effect absorption cooling as bottoming cycles
Tezpur University, Kamaljyoti Talukdar, 2018

Book Chapters:

a. T.K.Gogoi, U.S. Dixit, Basics and Applications of Thermal Engineering, Introduction to Mechanical Engineering, (2018) 137-178, Springer Nature
b. P. Haloi, T.K. Gogoi, Performance Analysis of Coal-Fired Open Cycle MHD plant at Constant Subsonic Inlet Nozzle Mach Number with Variation in Nozzle-Area Ratio, Advances in Mechanical Engineering, Lecture Notes in Mechanical Engineering (2020),709-716, Springer Nature
c. P. Haloi, T.K. Gogoi, Exergy Modelling of a Coal-Fired MHD Power Plant, Advances in Mechanical Engineering, Lecture Notes in Mechanical Engineering (2020), 81-89, Springer Nature
d. J. Nondy, T.K. Gogoi, Energy and Exergy Analyses of a Gas Turbine and Reheat-Regenerative Steam Turbine Integrated Combined Cycle Power Plant. In: Mahanta P., Kalita P., Paul A., Banerjee A. (eds) Advances in Thermofluids and Renewable Energy. Lecture Notes in Mechanical Engineering (2021), 233- 248, Springer, Singapore.
e. J. Nondy, T.K. Gogoi, Trigeneration system: exergoeconomic and environmental analysis, In: Shukla A.K., Singh O., Sharm M., Phanden R.K., Davim J.P. (eds) Hybrid power cycle arrangements for lower emissions (2022), 219-238, CRC Press.
f. Nondy, J., Gogoi, T.K., Shukla, A.K. (2023). 4E Analyses and Tri-objective Optimization of a Gas Turbine-Based Combined Heat and Power System. In: Shukla, A.K., Sharma, B.P., Arabkoohsar, A., Kumar, P. (eds) Recent Advances in Mechanical Engineering. FLAME 2022. Lecture Notes in Mechanical Engineering. Springer, Singapore\
g. Nondy, J., Gogoi, T.K. Tri-objective optimization of a hydrogen-fueled hybrid power generation system, Prospects of Hydrogen Fueled Power Generation, 2023, pp. 53–79

Journal publications:

Year 2024-2025	
1.	T.K. Gogoi, P. Kamble, B. Deka, D. Konwar, Performance Analysis of a Combined Thermoelectric Generator, Organic Rankine, and Absorption Refrigeration Cycle. Journal of Thermophysics and Heat Transfer. 39 (3) (2025) 638-652
2.	A. Goswami A., A. Sarmah, J. Nondy, T.K. Gogoi, Proposal for a combined supercritical CO2 and organic Rankine Cycle: System design and exergoeconomic analysis. Thermal Science and Engineering Progress 62 (2025) 103644
Year 2023-2024	
3.	A. Goswami, T.K. Gogoi, Design of components of a steam power plant and its

	exergoeconomic performance analysis, Thermal Science and Engineering Progress, 2024, 47, 102276
4.	J. Nondy, T.K. Gogoi, Exergoeconomic and environmental optimization of gas turbine-based CCHP systems: A comprehensive study with multi-objective optimization and decision making, International Journal of Thermofluids, 2024, 23, 100821
Year 2022-2023	
5.	J. Nondy, T.K. Gogoi, Tri-objective optimization of two recuperative gas turbine-based CCHP systems and 4E analyses at optimal conditions, Applied Energy 323 (2022) 119582
6.	J. Nondy, T.K. Gogoi, Proposal of a proton exchange membrane fuel cell-based hybrid system: Energy, exergy and economic analyses and tri-objective optimization, International Journal of Hydrogen Energy, 52(2024) 767-786.
7.	V. K. Nema, A. Singh, P. K. Chaurasiya, T. K. Gogoi, T. N. Verma, D. Tiwari, Combustion, performance, and emission behavior of a CI engine fueled with different biodiesels: A modelling, forecasting and experimental study, Fuel, 339 (2023) 126976
8.	J. Nondy, T.K. Gogoi, 4E analyses of an intercooled-recuperative gas turbine-based CCHP system: Parametric analysis and tri-objective optimization, Thermal Science and Engineering Progress, 39 (2023) 101719
9.	T.K. Gogoi, Dibyani Lahon , J. Nondy Energy, exergy and exergoeconomic (3E) analyses of an organic Rankine cycle integrated combined cycle power plant, Thermal Science and Engineering Progress 41 (2023) 101849
Year 2021-2022	
10.	F. Musharavati, S. Khanmohammadi, J. Nondy, T.K. Gogoi, Proposal of a new low-temperature thermodynamic cycle: 3E analysis and optimization of a solar pond integrated with fuel cell and thermoelectric generator, Journal of Cleaner Production, 2021, 129908, https://doi.org/10.1016/j.jclepro.2021.129908
11.	J. Nondy, T.K. Gogoi, Exergoeconomic investigation and multi-objective optimization of different ORC configurations for waste heat recovery: A comparative study, Energy Conversion and Management, 245 (2021) 114593
12.	Haloi P., T.K. Gogoi, Effects of Partially Ionized Combustion Products on the Performance of a Magneto Hydrodynamics (MHD) Gas Turbine (GT) Combined Power Plant, Part 1: Exergy Analysis, Iran J Sci Technol Trans Mech Eng (2021). https://doi.org/10.1007/s40997-021-00456-y
13.	Gogoi, T.K., & Dutta, U.K., Performance of a combined power and cooling system under solar, solar storage and storage mode of operations. Journal of Energy Systems 2022; *6*(1): 18-32, DOI: 10.30521/jes.952032
Year 2020-2021	
14.	J. Nondy, T.K. Gogoi, Performance comparison of multi-objective evolutionary algorithms for exergetic and exergoenvironomic optimization of a benchmark combined heat and power system, Energy 233 (2021) 121135
15.	T.K. Gogoi, P. Hazarika, Comparative assessment of four novel solar based triple effect absorption refrigeration systems integrated with organic Rankine and Kalina cycles, Energy Conversion and Management, 226 (2020) 113561
16.	J. Nondy, T.K. Gogoi, A comparative study of metaheuristic techniques for the thermoenvironomic optimization of a gas turbine-based benchmark combined heat and power system, ASME J. of Energy Resources Technology, 143 (2021) 062104

17.	J. Nondy, T.K. Gogoi, Comparative performance analysis of four different combined power and cooling systems integrated with a topping gas turbine plant, Energy Conversion and Management, 223 (2020) 113242
Year 2019-2020	
18.	T.K. Gogoi, S. Saikia, Performance analysis of a solar heat driven organic Rankine cycle and absorption cooling system, Thermal Science and Engineering Progress, 13 (2019) 100372
19.	D. Konwar, T.K. Gogoi, A.J. Das, Multi-objective optimization of double effect series and parallel flowwater–lithium chloride and water–lithium bromide absorption refrigerationsystems, Energy Conversion and Management 180 (2019) 425–441.
20.	D. Konwar, T. K. Gogoi, A.J. Das, "Reply to Comment on Multi-objective optimization of double effect series and parallel flow water-lithium chloride and water-lithium bromide absorption refrigeration systems", Energy Conversion and Management, 185: 938-941,2019
21.	P. Haloi, T.K. Gogoi, Energy analysis of a coal-fired MHD power plant, Int. J. of Recent Technology and Engineering, 8 (2019) 281–285
Year 2018-2019	
22.	D. Konwar, T.K. Gogoi, Performance of double effect H_2O–LiCl absorption refrigeration systems and comparison with H2O–LiBr systems, Part 1: Energy Analysis, Thermal Science &Engg. Progress, 8 (2018) 184-203
23.	D. Konwar, T.K. Gogoi, Performance of double effect H_2O–LiCl absorption refrigeration systems and comparison with H2O–LiBr systems, Part 2: Exergy Analysis, Thermal Science &Engg. Progress, 8 (2018) 171-183.
24.	R. Das, K. Singh, B. Akay and T.K. Gogoi, Application of artificial bee colony algorithm for maximizing heat transfer in a perforated fin, Proceedings of IMechE, Part E: Journal of Process Mechanical Engineering 232 (2018) 38-48
Year 2017-2018	
25.	P. Sarmah, T.K. Gogoi, R. Das, Estimation of operating parameters of a SOFC integrated combined power cycle using differential evolution based inverse method, Applied Thermal Engineering 119 (2017) 98–107
26.	J. Kakati, T.K. Gogoi, K. Pakshirajan, Production of biodiesel from Amari (AmooraWallichii King) tree seeds using optimum process parameters and its characterization, Energy Conversion and Management 135 (2017) 281–290.
27.	PranjalSarmah, T. K. Gogoi, Performance comparison of SOFC integrated combined power systems with three different bottoming steam turbine cycles, Energy Conversion and Management 132 (2017) 91–101.
Year 2016-2017	
28.	K. Trinavee, T.K. Gogoi, M. Pandey, Laminar convective heat transfer characteristic of Al_2O_3/water nanofluid in a circular microchannel, Journal of Physics: Conference Series 759 (2016) 012088
29.	R. Das, K. Singh and T.K. Gogoi, Estimation of critical dimensions for a trapezoidal-shaped steel fin using hybrid differential evolution algorithm, Neural Computing and Applications, (2016) pp 1-11; DOI 10.1007/s00521-015-2155-x
30.	J. Kakati, T.K. Gogoi, Biodiesel Production from Kutkura (MeynaspinosaRoxb. Ex.) Fruit seed oil: its characterization and engine performance evaluation with 10% and 20% blends, Energy Conversion and Management 121 (2016) 152–161

31.	T.K. Gogoi, D. Konwar, Exergy analysis of a H_2O-LiCl absorption refrigeration system with operating temperatures estimated though inverse analysis, Energy Conversion and Management, 110 (2016) 436-447; DOI:10.1016/j.enconman.2015.12.037
32.	K. Talukdar, T.K. Gogoi, Exergy analysis of a combined vapor power cycle and boiler flue gas driven double effect water-LiBr absorption refrigeration system, Energy Conversion and Management 108 (2016), 468-477 DOI: 10.1016/j.enconman.2015.11.020
33.	T. K. Gogoi, Estimation of Operating Parameters of a Water–LiBr Vapor Absorption Refrigeration System Through Inverse Analysis, ASME J. of Energy Resources Technology, 138 (2) (2016), 022002 Paper No: JERT-14-1402. DOI: 10.1115/1.4031833
Year 2015-2016	
34.	T.K. Gogoi, M. Pandey, and R. Das, Estimation of operating parameters of a reheat regenerative power cycle using simplex search and differential evolution based inverse methods, Energy Conversion and Management , 91 (2015) 204–218.
Year 2014-2015	
35.	T.K. Gogoi, P. Sarmah, D. Deb Nath, Energy and exergy based performance analyses of a solid oxide fuel cell integrated combined cycle power plant, Energy Conversion and Management, 86 (2014) 507–519.
36.	T.K. Gogoi, K. Talukdar, Thermodynamic analysis of a combined reheat regenerative thermal power plant and water-LiBrvapour absorption refrigeration system, Energy Conversion and Management 78 (2014) 595–610
37.	T.K. Gogoi, K. Talukdar, Exergy based parametric analysis of a combined reheat regenerativethermal power plant and water–LiBr vapor absorption refrigeration system, Energy Conversion and Management 83 (2014) 119–132.
38.	T. K. Gogoi, A Combined Cycle Plant with air and fuel recuperator for Captive power application, Part 1: Performance analysis and comparison with non -recuperated and gas turbine cycle with air recuperator, Energy Conversion and Management 79 (2014) 771–777.
39.	T. K. Gogoi, R. Das, A Combined Cycle Plant with air and fuel recuperator for Captive power application, Part 2: Inverse analysis and parameter estimation, Energy Conversion and Management 79 (2014) 778–789.
Year 2013-2014	
40.	T. K. Gogoi, R. Das, Inverse analysis of an internal reforming solid oxide fuel cell system using simplex search method, Applied Mathematical Modelling 37 (2013) 6994–7015.
41.	T.K. Gogoi, Exergy Analysis of A Diesel Engine Operated with Koroch Seed Oil Methyl Ester and Its Diesel Fuel Blends, Int. J. of Exergy, 12 (2013) 183–204.
42.	T.K. Gogoi, S. Sarma and S. Borthakur, Simulation of a hybrid solid oxide fuel cell -gas turbine system, International Journal of Emerging Technology and Advanced Engineering, 3 (3) (2013) 250-258.
43.	M. Pandey and T.K. Gogoi, Energy and exergy analysis of reheat regenerative vapour power cycle, International Journal of Emerging Technology and Advanced Engineering, 3 (3) (2013) 427-434.

44.	T.K. Gogoi, N.KSarma, A.A. Choudhury and T. Talukdar, First law analysis of Diesel engine performance using diesel and biodiesel fuel, International Journal of Emerging Technology and Advanced Engineering, 3 (3) (2013) 421-426.
45.	T.K. Gogoi, A.K.Sarma, P.S. Misra, Syed T. Haque, Combustion analysis of jatropha methyl ester and its ethanol and acetone blends in a diesel engine, International Journal of Emerging Technology and Advanced Engineering, 3 (3) (2013) 51-57
Year 2011-2012	
46.	T.K. Gogoi, D.C. Baruah, The use of Koroch seed oil methyl ester blends as fuel in a diesel engine, Applied Energy, 88 (2011) 2713-2725.
47.	T.K. Gogoi, D.C. Baruah, Performance and energy analyses of a diesel engine fuelled with Koroch seed oil methyl ester and its diesel fuel blends, Int. J. Energy Technology and Policy, 7 (5/6) (2011) 433-454.
Year 2010-2011	
48.	T.K. Gogoi, D. C. Baruah, A Cycle Simulation Model for Predicting Performance of a Diesel Engine Fuelled by Diesel and Bio-diesel Blends, Energy 35 (2010) 1317–1323.

Conference Papers:

1.	Goswami, A., Gogoi, T.K., Performance Analysis of a Regenerative Rankine Cycle with Emphasis on Component Level Design, Lecture Notes in Mechanical Engineering, 2024, pp. 329–343, in the 3rd International Conference on Recent Advancements in Mechanical Engineering, ICRAME 2022, NIT Silchar
2.	Prabir Barooah, Jie Cai, Tapan K. Gogoi, Sizing and Control Design of Solar Thermal Absorption Refrigeration for Horticultural Cold Storage in Hot-Humid Climates. 2024 Herrick Conferences, 2024 Conference Proceedings on Purdue E-Pubs, International Refrigeration and Air Conditioning Conference, 2024.
3.	Kakati J., Gogoi T.K., Pal S., Saha U.K., Potentiality of Yellow Oleander (*ThevetiaPeruviana*) seed oil as an alternative diesel fuel in compression ignition engines, Proceedings of the ASME 2021 The Internal Combustion Engine Fall Conference ICEF2021 October 13 – 15, 2021
4.	T.K. Gogoi, U. K. Dutta,Performance of a combined power and cooling system under solar, solarstorage and storage mode of operations, *9th Eur. Conf. Ren. Energy Sys.21-23 April 2021, Istanbul, Turkey*
5.	Nondy J., Gogoi T.K. (2022) Energy and Exergy Analyses of a Gas Turbine and Reheat-Regenerative Steam Turbine Integrated Combined Cycle Power Plant. In: Mahanta P., Kalita P., Paul A., Banerjee A. (eds) Advances in Thermofluids and Renewable Energy. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-16-3497-0_18
6.	T.K. Gogoi, U. Gauatam, Performance Evaluation of a Gas and Steam Turbine Based Cogeneration Plant: A Case Study, GTINDIA2019-2358, V001T02A003
7.	J. Nondy, T. K. Gogoi, Exergy Analysis of a Combined Gas Turbine and Organic Rankine Cycle Based Power and Absorption Cooling Systems, GTINDIA2019-2351, V001T02A002

8.	P. Bhuyan, P. Borah. T.K. Gogoi, Energetic and Exergetic Performance Comparison of a Hybrid Solar Kalina Cycle at Solar and Solar Storage Mode of Operations,7th International Conference on Advances in Energy Research, 10–12 December 2019, , IIT Bombay.
9.	J. Kakati, T.K. Gogoi, Combustion analysis of a diesel engine fuelled with 10% and 20% blending of Terminalia seed oil based biodiesel with conventional diesel, in the Proceedings of the ISME, held during 23-25th February, 2017 at NIT Warangal, India
10.	M.P. Boruah, T.K. Gogoi, Thermal performance of tapered microchannel heat sink using Al_2O_3/water nanofluid, in the Proceedings of the SMETB,2017 held during 25-26th March, 2016 at Tezpur University, Assam, India
11.	K. Talukdar, T.K. Gogoi, Performance of a combined power and cooling system with vapour compression and absorption refrigeration system as bottoming cycle: a comparative study, in the Proceedings of the SMETB,2017 held during 25-26th March, 2016 at Tezpur University, Assam, India
12.	D. Konwar, T.K. Gogoi, Exergy based parametric analysis of a water-LiClvapour absorption refrigeration system, in the Proceedings of the SMETB,2017 held during 25-
	26th March, 2016 at Tezpur University, Assam, India
13.	A. Bora, M. Saikia, S. Anand, T.K. Gogoi, Exergy analysis of a reheat regeneration vapour power cycle with a number of feed water heaters, in the Proceedings of the SMETB,2017 held during 25-26th March, 2016 at Tezpur University, Assam, India
14.	J. Kakati, T. K. Gogoi, Performance Comparison of a Diesel Engine Fuelled withNahar and Jatropha Based Biodiesel with NRL Diesel, in the Proceedings of the SMETB,2017 held during 25-26th March, 2016 at Tezpur University, Assam, India
15.	T.K. Gogoi, J. Kakati, Characterization of biodiesel produced from Terminalia seed oil and engine performance evaluation with 10% and 20% blending, in the Proceedings of the IMECE,2016 held during 11-17th November, 2016 at Phoenix, Arizona, USA.
16.	K. Talukdar, T.K. Gogoi, Comparative analysis of performance of a combined power and cooling system with vapor compression and absorption refrigeration system as bottoming cycle, in the Proceedings of the COMET,16 held during 15-17th January, 2016 at IIT BHU.
17.	K. Talukdar, T.K. Gogoi, Thermodynamic analysis of a combined vapor power cycle and absorption refrigeration system, in the proceedings of Global conference on Renewable energy held in NIT Patna, 4-6th March, 2016.
18.	K. Trinavee, T.K. Gogoi, Flow and heat transfer analysis of AlO3-water and Cu-water Nanofluid in a circular micro-channel, in the Proceedings of ETIE 2016 held during April 28-29, 2016 at Royal School of Engineering and Technology, Guwahati.
19.	K. Trinavee, T.K. Gogoi, M. Pandey, Flow and Heat transfer analysis in a circular microchannel with alumina based nanofluid, in the book of abstracts of XXVII IUPAP Conference on Computational physics, December 2-5, 2015 at IIT Guwahati
20.	P. Sarmah and T.K. Gogoi, Exergy analysis of a solid oxide fuel cell (sofc) integrated combined power cycle, in the Proceedings of the 17th ISME Conference on Advances in Mechanical Engineering held during October 3-4, 2015 at IIT Delhi, New Delhi.
21.	U. Gautam, S. Das, S. Das and T.K. Gogoi, A parametric study on the effect of varying open water heater pressure on thermodynamic performance of a combined cycle power plant, in the Proceedings of the 17th ISME Conference on Advances in Mechanical Engineering held during October 3-4, 2015 at IIT Delhi, New Delhi.

22.	P. Sarmah and T. K. Gogoi, Parametric analysis of a hybrid solid oxide fuel cell –gas turbine plant, in the proceedings of International Symposium on Aspects of Mechanical Engineering & Technology for Industry held in NERIST, Arunachal Pradesh, during 6-8th December, 2014
23.	N. Koushik, S. Bhuyan and T.K. Gogoi, A model for diesel fuel droplet evaporation and parametric analaysis of evaporation rate, in the proceedings of International Symposium on Aspects of Mechanical Engineering & Technology for Industry held in NERIST, Arunachal Pradesh, during 6-8th December, 2014.
24.	S.Z. Hoque and T.K. Gogoi, Thermodynamic analysis of a cascaded vapour compression refrigeration system through exergy, in the proceedings of International Symposium on Aspects of Mechanical Engineering & Technology for Industry held in NERIST, Arunachal Pradesh, during 6-8th December, 2014.
25.	T.K. Gogoi and M. Pandey, Performance analysis of a reheat regenerative thermal power plant with solid biomass fuels and coal of various compositions, in the proceedings of International conference on advanced materials and Energy technology (ICAMET) held in IIEST Shibpur, Kolkata during 17-19th December,

	2014.
26.	T.K. Gogoi and P. Sarmah, Exergy analysis of a hybrid solid oxide fuel cell–gas turbine configuration, in the proceedings of International Conference on Environment and Energy (ICEE) held in IJNTUH, Kukatpally, Hyderabad during 15-17th December, 2014.
27.	T.K. Gogoi, S. Sarma and S. Borthakur, Simulation of a hybrid solid oxide fuel cell-gas turbine system, in the proceedings of International Conference on Energy Resources Technologies for Sustainable Development (ICERTSD-2013), held in BESU during 7-9th February,2013
28.	M. Pandey and T.K. Gogoi, Energy and exergy analysis of reheat regenerative vapour power cycle, in the proceedings of International Conference on Energy Resources Technologies for Sustainable Development (ICERTSD-2013), held in BESU during 7-9th February,2013
29.	T.K. Gogoi, N.KSarma, A.A. Choudhury and T. Talukdar, First law analysis of Diesel engine performance using diesel and biodiesel fuel, in the proceedings of International Conference on Energy Resources Technologies for Sustainable Development (ICERTSD-2013), held in BESU during 7-9th February,2013.
30.	T.K. Gogoi, A.K.Sarma, P.S. Misra, Syed T. Haque, Combustion analysis of jatropha methyl ester and its ethanol and acetone blends in a diesel engine, in the proceedings of International Conference on Energy Resources Technologies for Sustainable Development (ICERTSD-2013), held in BESU during 7-9th February,2013
31.	T.K. Gogoi, D.C. Baruah, Energetic Performance Analysis of a Diesel Engine Fuelled With Koroch Seed Oil Methyl Ester and Its Diesel Blends, in the proceedings of International Conference on Thermal Energy and Environment (INCOTEE), held in Kalasalingam University, Tamilnadu during 24-26th March, 2011.
32.	T.K. Gogoi, S. Talukdar, D.C. Barauah, Comparative Analysis of Performance and Combustion of Koroch Seed Oil and Jatropha Methyl Ester blends in a Diesel Engine, in the proceedings of World Renewable Energy Congress (WREC) 2011 held in Linkoping,Sweden during 8-13th May, 2011.
33.	T.K. Gogoi, D.C. Baruah, Study of Performance and Combustion in a small DI diesel engine fuelled with biodiesel and its diesel blends, in the proceedings of National Conference on Renewable Energy organized by Deptt. of Energy, Tezpur University during 23–25 March 2010.
34.	T.K. Gogoi, D.C. Baruah, Development of a cycle simulation model for predicting performance of a Diesel Engine fuelled by diesel and bio-disel blends". In the proceedings of CAMSCM, 2009 organized in NERIST, Nirjuli, Arunachal Pradesh

Guided M.Tech.projects:

1. Performance of a combined power and cooling system under solar, solar storage and storage mode of operations
2. Thermofluidic and Irreversibility Analyses of Laminar Pulsatile flow through a Baffled Backward Facing Step Channel
3. Energy, exergy and exergoeconomic (3E) analyses of an organic Rankine cycle

integrated combined cycle power plant

4. Numerical Simulation of Thermal Autofrettage Process
5. Cooling load calculation and proposition of a solar cooling system for Tezpur, Assam, India
6. A theoretical analysis of Multi-Effect Desalination System
7. Energetic and Exergetic Performance Comparison of a Hybrid Solar Kalina Cycle at Solar and Solar Storage Mode of Operations
8. Performance analysis of a solar hybrid combined triple effect absorption cooling system and Organic Rankine cycle and comparison with Kalina cycle integrated system.
9. Performance analysis of a solar heat driven Organic Rankine cycle and absorption cooling system.
10. Multi-objective optimization of a steam power plant and performance analysis of boiler flue gas driven double effect absorption cooling systems
11. Thermo-Hydraulic Performance of a Tapered Microchannel Heat Sink with Al_2O_3-water Nanofluids.
12. Numerical study of laminar forced convection of some selected nanofluids in a circular microchannel with and without magnetic field effect.
13. Inverse estimation of Prandtl and Reynolds number in a hydrodynamically developed and thermally developing flow through a square duct

Guided B.Tech.projects:

1. Exergy analysis of a Combined Power Cycle at optimal operating conditions of the bottoming vapor power cycle
2. Laminar Fluid Flow And Convective Heat Transfer Over A Wedge: Steady And Transient Analysis
3. Design of a mobile bakery unit, modification and automation of dough mixer
4. Numerical study of laminar natural convection over a vertical flat plate with different boundary conditions

5. Engine performance and combustion analysis with biodiesels obtained from waste cooking oil

6. Exergy analysis of a reheat regeneration vapour power cycle with a number of feed water heaters

7. Exergy analysis of single and double effect ammonia water absorption refrigeration systems

8. Exergy analysis and thermo-economic optimization of a cascaded vapor compression refrigeration system

9. Exergy analysis of the captive power plant of Numaligarh Refinery limited, Golaghat, Assam

10. Numerical Simulation of a Hybrid Solid Oxide Fuel Cell (SOFC) –Gas turbine (GT) system

11. Study of performance of a reheat regenerative thermal power plant fueled with solid biomass and coal of various compositions: A theoretical study

12. Modeling of Fuel Injection system of a Diesel Engine

13. Numerical Analysis of Lid driven flow in a square cavity at low Reynolds Number

14. Numerical simulation of heat transfer in thermally and simultaneously developing flows in a circular pipe

15. Performance and Heat Release Analysis of a diesel engine fuelled with diesel and biodiesel blends.

16. Combustion and performance evaluation of a diesel engine fuelled with biodiesel produced from Koroch seed and Jatropha Curcus Oil

17. Numerical Solution of One dimensional transient heat conduction equation

18. Energy and Exergy Analyses of Diesel Engine Processes Using Bio-diesel Blends

19. Experimental investigation on performance, Combustion and emission characteristics of a single cylinder direct injection diesel engine fuelled with biodiesel

20. Modeling of heating and evaporation of fuel droplets: A numerical analysis

21. Performance and Combustion analysis of Jatropha methyl ester and its ethanol and acetone blends in a diesel engine