

CURRICULUM VITAE

Name: Dr. Dulari Hansdah

Present Position: Assistant Professor

E-Mail: dhansdah.me@nitjsr.ac.in
dhansdah@gmail.com

Date of Birth: 30/05/1985

Father's Name: Late Sri Dasarath Hansdah

Present Address: MIG-96, Adityapur-2, PO-RIT Jamshedpur-831014, Jharkhand



Educational Qualification:

S. No.	Degree	Board/University	Year	CGPA
1.	Ph.D	NIT Rourkela	2015	9 (Course work)
2.	M.Tech/M.E/M.S/M.Sc	NIT Rourkela	2011	9.21
3.	B.Tech/B.E/B.Sc	IGIT, Sarang, Odisha	2008	7.38

Ph. D Thesis Topic:

Experimental Studies on Partial Substitution of Diesel with Bioethanol (Derived from Madhuca Indica Flowers) using Different Techniques

M. Tech Thesis Topic:

Effect of EGR on Performance and Emission Characteristics of Acetylene Inducted Diesel Engine

Research Interests:

Research in the field of Renewable Energy, Engine Combustion, Emissions and Control, Engine Technology for Carbon Neutral, Waste Utilisation from various Sectors.

Research Awards/Fellowships Received:

- Research paper entitled “Experimental studies on a DI diesel engine fuelled with bioethanol-diesel emulsions” was most downloaded article from science direct.
- Qualified “Graduate Aptitude Test in Engineering (GATE)” in Mechanical Engineering, 2009.
- Recipient of “Ministry of Human Resource Development Fellowship”, Govt. of India during M.Tech. at National Institute of Technology Rourkela, India, July 2009 to June 2011.
- Institute Full Time Research Scholarship Received from MHRD at National Institute of Technology Rourkela, India, July 2011 to May 2014.

Research Publications (With Full Details):

International Refereed SCI/Scopus Journals:

- Amar Kumar Das, **D. Hansdah**, Alok Kumar Mohapatra and Achyut Kumar Panda. “Energy, Exergy and Emission Analysis on a DI Single Cylinder Diesel Engine using Pyrolytic Waste Plastic Oil Diesel Blend”, Journal of the Energy Institute, 93, 1624-1633, 2020.
- **D. Hansdah** and S. Murugan, “Comparative studies of a bioethanol fuelled DI diesel engine with a cetane improver”, International Journal of Oil, Gas and Coal Technology 11 (4), 429-450, 2016. *(cited by 1)*
- **D. Hansdah** and S. Murugan, “Bioethanol fumigation in a DI diesel engine”, Fuel, 130, 324-333, 2014. *(cited by 27)*
- **D. Hansdah**, S. Murugan, and LM Das, “Experimental studies on a DI diesel engine fueled with bioethanol-diesel emulsions”, Alexandria Engineering Journal 52 (3), 267-276, 2013. *(cited by 35)*
- M Sivalingam, SS Mahapatra, **D. Hansdah**, and B Horák, “Validation of some engine combustion and emission parameters of a bioethanol fuelled DI diesel engine using theoretical modelling”, Alexandria Engineering Journal 54 (4), 993-1002, 2015. *(cited by 5)*
- **D. Hansdah**, B. Suna, and M. Sivalingam, “Experimental Analysis of Diesel Engine Fueled with E-Diesel Produced from Madhuca Indica Flowers with the Addition of an

Ignition Improver”, SAE Technical Paper 2013-01-1700, <https://doi.org/10.4271/2013-01-1700>, 2013. (*cited by 1*)

- N. Kumar, A. Behera, **D. Hansdah**, and M. Sivalingam, “Effect of Diethyl Ether (DEE) Fumigation on Engine Performance and Emissions in a Bioethanol Fueled Diesel Engine”, SAE Technical Paper 2014-01-1466, <https://doi.org/10.4271/2014-01-1466>, 2014.

National Conferences: 02

- D. Hansdah and S. Murugan, Combustion behaviour of DI diesel engine fuelled with bioethanol diesel emulsion, Published only Abstract in Book of 23rd National Conference on IC Engines and Combustion (NCICEC), The combustion Institute- Indian Section, SVNIT-Surat, Gujarat, 13-16 December, 2013, pg-94.
- D. Hansdah and S. Murugan, Performance and Emission Characteristics of Acetylene Inducted Diesel Engine with EGR, Published in Proceedings of 22nd National Conference on IC Engines and Combustion (NCICEC), The Combustion Institute- Indian Section, NIT-Calicut, Kerala, 10-13 December, 2011, pg-124.

International Conferences: 11

- D. Hansdah and S. Murugan, Study the effect of Diesel, Bioethanol and Biodiesel Blend on an Engine Oil Properties of Compression Ignition Engine for Long Term application, Proceedings of International Conference on Innovations in Thermo-Fluid Engineering and Sciences (ICITFES-2020), 10th-12th February 2020, NIT Rourkela, Odisha.
- D. Hansdah and S. Murugan, Experimental Studies of Combustion Parameters of Acetylene Inducted DI Diesel Engine with EGR, International Conference on Artificial Intelligence in Manufacturing and Renewable Energy-2019 (ICAIRE-2019), 25th to 26th October 2019, GIET, Bhubaneswar.
- A.K. Das, A. K. Panda and D. Hansdah, Valorisation of medical plastic wastes to fuel oil by thermo-catalytic degradation. International conference on green and efficient energy technology and materials, 6th-8th March 2019, Central university of Jharkhand, Ranchi, India.
- A.K. Das, A. K. Panda and D. Hansdah, Energetic and Exegetic Performance Analysis of a CI Engine Fuelled with Diesel Blended Plastic Pyrolytic Oil, International Conference

on Energy, Materials and Information Technology (ICEMIT), Amity University, Jharkhand, 23-24, December 2017, pg-2.

- D. Hansdah and S. Murugan, Performance and Emission Characteristics of a DI Diesel Engine Fueled with Bioethanol Produced from Madhuca Indica Flower, Published in the Proceedings of International Conference on Alternative Fuels for IC engines, MNIT Jaipur, 6-8 February, 2013, pp.75-80.
- D. Hansdah, Navin Kumar, Abyarth Behera and S. Murugan, Studies on Characterization and Utilization of Bioethanol in a DI Diesel Engine, Nirma University International Conference on Engineering (NUiCONE) 2013, Nirma university, Ahmedabad, 28-30 November, 2013.
- D. Hansdah, Navin Kumar, Abyarth Behera and S. Murugan, Combustion Behaviour of Bioethanol Fumigated DI Diesel Engine, International Conference on Emerging Trends in Renewable Energy (ICETRE), CV Raman college of engineering, Bhubaneswar, 27-28 December, 2013, pg-47.
- D. Hansdah and S. Murugan, Production and Utilization of Acetylene in Diesel Engine-A Review, International Conference on Renewable Energy (ICRE), University of Rajasthan, Jaipur, 17-21 January, 2011.
- Babita Singh, D. Hansdah and S. Murugan, Performance and Exhaust Emissions of a Diesel Engine using Pyrolysis Oil from Waste Frying Oil and Castor Oil Mixture, International Conference on Sustainable Mobility (ICSM), Kuala Lumpur, Malaysia, 1-3 December, 2010. *(cited by 7)*
- A.R. Patnaik, D. Hansdah and S. Murugan, Performance and Emission Characteristics of DI Diesel Engine using Orange Oil with EGR, International Conference on Sustainable Mobility (ICSM), Kuala Lumpur, Malaysia, 1-3 December, 2010.
- P. Jangde, D. Hansdah and S. Murugan, Effect of Oxygen Enriched Air and Water Injection on Performance and Emission of a DI Diesel Engine, International Conference on Sustainable Mobility (ICSM), Kuala Lumpur, Malaysia, 1-3 December, 2010.

Book chapter:

- 1) A.K. Das, A. K. Panda and D. Hansdah, Title: Energetic and Exegetic Performance Analysis of a CI Engine Fuelled with Diesel Blended Plastic Pyrolytic Oil, Book-Renewable Energy and its Innovative Technologies, pp-155-171, Springer, Singapore, 2019.
- 2) D. Hansdah, P. Chand and S. Murugan, Bioethanol operation in a DI diesel engine with DEE fumigation, Book- Alternative Fuels and Their Utilization Strategies in Internal Combustion Engines, pp-179-197, Springer, Singapore, 2020.

Research Projects/Consultancy Projects:

- 1) Title: Development and Installation of Biogas Digester (ongoing project)
Funded by National Initiative for Design Innovation (NID) Project
As PI
Amount: 03 Lacs
Period: 01 year
- 2) Title: Comparative analysis of TEG and WHR system used for energy harvesting from engines
As PI
Funded by Science and engineering board (SERB), DST
Amount: 21.28 Lakhs
Period: 03 years
- 3) Title: Studies on the improvement of engine performance, emission and combustion characteristics of CI engine using plastic oil blended diesel

As Co-PI
Funded by Collaborative Research and Innovation Scheme, TEQIP-III, BPUT

Amount: 2.5 Lakhs
Period: 01 years
- 4) Title: Design and validation of DI diesel engine fueled with vegetable oil from an emission analysis.

As Co-PI
Funded by Collaborative Research and Innovation Scheme, TEQIP-III, BPUT

Amount: 2.92 Lakhs
Period: 01 years

Teaching Experience:

Position Held	Institution	From	To	Nature of Job
Assistant Professor	NIT, Jamshedpur	06-06-2018	continuing	Teaching
Assistant Professor	VSSUT Burla, Sambalpur	13-06-2014	30-05-2018	Teaching

Awards, Honours & Recognitions:

- Recipient of Certificate of Merit during M.Tech

Reviewer of International Journals and Books:

- Fuel journal, Elsevier
- Biocatalysis and Agricultural Biotechnology, Elsevier
- Progress in Industrial Ecology (PIE), An International Journal of Inderscience Publishers
- International Journal of Ambient Energy, Taylor & Francis
- International Journal of Automotive and Mechanical Engineering (IJAME)

Member of Professional Academic Bodies: Society of Automotive Engineers

Invited Talks/Seminars Given:

- Presented seminar on “Advance Mechanism in Automotive Industry” in TEQIP-III Sponsored 6-Days Short Term Course on “**Machines and Mechanism**” which was held on June 17-22, 2019 in NIT Jamshedpur.

Any Other Information:

M.Tech Thesis Supervised:

- **Title:** Experimental Analysis of Heat Transfer Characteristics and Development of a New Correlation for Shower of Water Drops against *Variable Height*, 2016, ME (HPE Specialization), VSSUT Burla.
Submitted by: Vikash Kumar Singh Chauhan
- **Title:** Experimental analysis of Heat Transfer characteristics and Development of a new correlation for shower of water Drops against *Variable initial temperature*, 2016, ME (HPE Specialization), VSSUT Burla.
Submitted by: Subhasisha Behera

- **Title:** Experimental Investigation on Oxidation Stability of Jatropha Biodiesel, 2016, ME (HPE Specialization), VSSUT Burla.
Submitted by: Purna Chandra Marndi
- **Title:** Analysis of blended fuel properties and engine performance with biodiesel-diesel blended fuel, 2017, ME (HPE Specialization), VSSUT Burla. (Co-guide: Prof. P.Nanda)
Submitted by: Shashwat Anand
- **Title:** Exhaust heat recovery from IC engines using thermo-electric generators, 2018, ME (HPE Specialization), VSSUT Burla.
Submitted by: Bikash Kumar
- **Title:** Theoretical analysis of mixing process of DEE at intake manifold of DI diesel engine, 2018, ME (HPE Specialization), VSSUT Burla.
Submitted by: Yehlana Hau

B.Tech Thesis Supervised:

- **Title:** Cold flow analysis of four stroke engine, 2015, ME, VSSUT Burla.
Group: Sribatsa Kumar Pradhan, Laba Hansdah, Ashish Khamari
- **Title:** Energy and exergy balance in IC engines and exhaust heat recovery using biodiesel blends, 2016, ME, VSSUT Burla.
Group: Deepayan Pattnaik, Abhishek Barun Swain, Suraj Kumar Panda, Sibasish Panda
- **Title:** Production of gas from waste rice husk using fabricated down draft gasifier, 2017, ME, VSSUT Burla.
Group: Shilpa Shrivastva, Suprava Sohela, Prativarani Bhue
- **Title:** Design and analysis of brake disc, 2018, ME, VSSUT Burla.
Group: Satyabrata Rout, Praleen Mishra, Sidhant Ray, Rishab Dev Gupta, Mahaveer Partha Sarathi Samal, Suraj Kumar Rout
- **Title:** Effect of Inclusion of Ribs in Water Channels to Reduce Bore Distortion using Fluid Flow Analysis, 2019, ME, NIT Jamshedpur

Group: Bipul Chakraborty (2015UGME043)
Kundan Prasad Sah (2015 UGME041)
Shubham Gupta (2015 UGME040)

Responsibilities:

- PI of thermodynamics lab from Date 11. 07.2019 to Till date
- Faculty Advisor of B.Tech-2017 Batch from Date 07.06.18 to Till date
- PI of applied thermodynamics lab from Date 18.06.2018 to Till date
- Member of Departmental Selection Committee for Ph.D. Programme (Autumn Semester 2018-2019), Department of Metallurgy, NIT Jamshedpur
- Member of Scrutiny Committee for Ph.D. Programme (Autumn Semester 2018-2019), Department of Mechanical, NIT Jamshedpur
- Professor in charge of Heat Power and RAC Lab, from dt 13.07.2015 to dt 30.05.2018, VSSUT, Burla.
- Faculty Advisor of Mechanical Engineering Society, from dt.10.10.2015 to dt 30.05.2018, VSSUT, Burla.
- Judged in Idea presentation event during INNOVA-15, held on 27th-28th March, 2015, at VSSUT, Burla.
- Faculty in charge of registration in convocation-2015, at VSSUT, Burla.

Short Term Course/ Workshop/ FDP Participated:

- Two weeks online STC on “Green Energy Technologies for Sustainable Development”, Jointly Organized by National Institute of Technology, Kurukshetra and Government Engineering College, Bikaner from 11 – 20 June, 2020 under TEQIP-III.
- Five Days Online Short-Term Training Program on “Bio-Energy: Technologies & Transitions”, Jointly Organized by National Institute of Technology, Kurukshetra and Government Engineering College, Bikaner from 18 - 22 May, 2020 under TEQIP-III. (online mode)
- 2nd summer school in automotive technology, 11th -14th Jun 2019, IOCL R&D Center, Faridabad, Organisers-SAE India, iCAT, IOCL R&D, Maruti Suzuki.
- AICTE QIP Short Term Course on Materials, Manufacturing and Management (MMM-2018), 14th-26th May 2018, VSSUT, Burla.
- Short Term Course on Numerical Modeling of Heat Transfer and Fluid Flow Using OpenFOAM (NMHTFF), 26th-31st Mar 2018, VSSUT, Burla.
- Short Term Course on Processing and Characterisation of Materials, 24th -29th Apr 2017, TEQIP, VSSUT, Burla.

- Workshop on Quality of Higher and Technical Education in India-Role of Universities, 20th Feb 2017, TEQIP, VSSUT, Burla.
- Workshop on Recent Trends in Industrial & Mechanical Engineering, 12th -13th Mar 2016, VSSUT, Burla.
- Workshop on Management Capacity Enhancement – A Technical Education Perspective, 29th-30th Jan 2016, TEQIP, VSSUT, Burla.
- Workshop on Advances in Mechanical Engineering, 10th -11th Jul 2015, VSSUT, Burla.
- Short Term Course on Recent Advancement in Material Sciences, 14th -15th Nov 2015, VSSUT, Burla.
- Staff Development Programme on Engine Electronics and Alternate Fuels, 16th -29th May 2011, AICTE Sponsored, Annamalai University, Tamil Nadu.
- 23rd Natinal Symposium on Cryogenics, 28th -30th Oct 2010, NIT Rourkela, Rourkela.
- Workshop on Cryogenics in Biology and Medicine, 18th -19th Jun 2010, NIT Rourkela, Rourkela.

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