

BIO-SKETCH of DR. SUNIL DHINGRA

Dr. SUNIL DHINGRA (Ph.D)

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Research interest:

Biodiesel based Diesel Engines; Renewable diesel, Optimization of I.C Engines; Statistical based tools of optimization; Genetic Algorithm; Artificial Neural networks; Solar Energy; Simulation.

QUALIFICATIONS:

Ph.D. (Title): Optimization of process parameters for Biodiesel production from various oils and their performance analysis

Department: Department of Mechanical Engineering, National Institute of Technology, Kurukshetra, Haryana, India (2015)

M.E : Mechanical Engineering
University : Punjab Engineering College (Deemed to be university), Chandigarh
College : Punjab Engineering College (PEC), Chandigarh (2006)

B.E. : Mechanical Engineering
University : Maharshi Dayanand University, Rohtak, Haryana
College : CRSCE, Murthal, Sonapat, Haryana (2004)

Schooling : Secondary from CBSE Board, New Delhi, in 1997 with
: Senior Secondary from CBSE Board New Delhi, in 1999

WORK EXPERIENCE: (14 years approx.)

WORK PROFILE: Teaching

List of Research Papers Published

S. No.	Title with name of authors as appearing in the publication	Journal, Volume, Year, Page Numbers.	ISSN/ISBN No., if any	Whether you are supervisor /corresponding author/other author.
1.	“Performance and emission parameters optimization of mahua (<i>madhuca indica</i>) based biodiesel in direct injection diesel engine using response surface methodology”	Journal of Renewable and Sustainable Energy, American Institute of	ISSN No.: 1941-7012 (online) 1.276 (Thomson Reuters SCI)	Corresponding author

	Sunil Dhingra, Gian Bhushan, and Kashyap Kumar Dubey	Physics publication , 2013, Vol. 5, 063117, DOI: 10.1063/1.4840155		
2.	“Comparative performance analysis of jatropha, karanja, mahua and polanga based biodiesel engine using hybrid genetic algorithm”. Sunil Dhingra, Gian Bhushan, and Kashyap Kumar Dubey	Journal of Renewable and Sustainable Energy, American Institute of Physics publication , 8, 013103, 2016	ISSN No.: 1941-7012 (online), 1.276 (Thomson Reuters SCI)	Corresponding author
3.	“A Polymath Approach for the Prediction of Optimized Transesterification Process Variables of Polanga Biodiesel” Sunil Dhingra, Kashyap Kumar Dubey and Gian Bhushan	Journal of the American oil Chemist’s Society, Springer publication , Vol. 91, No. 4, pp. 641-653, 2014.	ISSN No: 0003-021X (print), 1558-9331 (online) 1.421 (Thomson Reuters SCI)	Corresponding author
4.	“Validation and Enhancement of Waste Cooking Sunflower Oil based Biodiesel Production by the Trans-esterification Process” Sunil Dhingra, Gian Bhushan, and Kashyap Kumar Dubey	Energy sources, part A, Taylor & Francis publication , 2016, vol. 38, no. 10, 1448-1454	ISSN No: 1556-7036 (print), 1556-7230 (online) 0.6 (Thomson Reuters SCI)	Corresponding author
5.	“ Development of a combined approach for improvement and optimization of karanja biodiesel using response surface methodology and genetic algorithm” Sunil Dhingra, Gian Bhushan, and Kashyap Kumar Dubey	Frontiers in Energy, Springer publication , 2013. Vol. no. 7(4): 495– 505	ISSN No: 2095-1701 (print), 2095-1698 (online) 2.657 (Thomson Reuters SCI)	Corresponding author
6.	“Multi-objective optimization of combustion, performance and emission parameters in a jatropha biodiesel engine using Non-dominated sorting genetic algorithm-II.” Sunil Dhingra, Gian Bhushan, and Kashyap Kumar Dubey	Frontiers of Mechanical Engineering, Springer publication , Vol. 9, No. 1, pp. 81-94, 2014	ISSN. NO: 2095-0233 (print), 2095-0241 (online) 2.448 (Thomson Reuters SCI)	Corresponding author
7.	“Enhancement in Jatropha-based biodiesel yield by process optimization using design of experiment approach ” Sunil Dhingra, Kashyap Kumar Dubey and Gian Bhushan	International Journal of Sustainable Energy, Taylor & Francis publication , pp. 842-853, Vol. 33, Issue 4, 2014	ISSN No: 1478-6451 (print), 1478-646X (online) 1.330 (Thomson Reuters SCI)	Corresponding author
8.	“Understanding the interactions and evaluation of process factors for biodiesel production from waste cooking cottonseed oil by design of experiments through statistical approach” Sunil Dhingra, Gian Bhushan, and Kashyap Kumar Dubey	Frontiers in Energy, Springer publication , (in press)	ISSN No: 2095-1701 (print), 2095-1698 (online) 2.647 (Thomson Reuters SCI)	Corresponding author
9.	“Efficiency evaluation and comparison of different tabulator shapes in solar water heating collector system” Rohit Khargotra, Sunil Dhingra, Ranchan Chauhan, Deepak Batra & Mayank Bhardwaj	International Journal of Mechanical & Production Engineering Research and Development (IJMPERD), Vol. 8, issue 1, 2018, pp. 697-702	ISSN No.:2249-6890 (print) ISSN No.: 2249-8001 (online) Scopus	Supervisor
10.	“A Review on Effect of EDM Parameters on Die Sinking EDM” Jyoti Bhaghi, Manjeet Bohat, VP S Kalsi and Sunil Dhingra	Trends in Mechanical Engineering & Technology, Vol. 5, No. 1, pp. 26-30, 2015	ISSN No.: 2347-9965 (print) ISSN No. 2231-1793 (online)	Other Author

			Peer Reviewed	
11.	Performance Investigation and comparison of different turbulator shapes in solar water heating collector system Rohit Kharghotra, Ranchan Chauhan and Sunil Dhingra	American Institute of Physics Publications Conference Proceedings 1953, 130029 (2018)	Referred and Indexed	Other Author
12.	Thermal performance of a vapour adsorption refrigeration system: an overview Sohan Singh and Sunil Dhingra	Journal of Physics:1240 (2019) 012024 doi: 10.1088/1742-6596/1240/1/012024	Refereed & Indexed	Supervisor

Papers Presented/published/Invited talks/session chair in National conferences/courses:

1. Gurjeet singh, Russi Kamboj, S K Soni, Sunil Dhingra (2014): ‘CFD simulation of heat transfer enhancement by plain and curved delta winglet type vortex generators. National conference on advancements and futuristic trends in Mechanical Engineering, 17-18th October 2014, PEC University of Technology, **Chandigarh**.
2. Nitin Gehlot, Dinesh Kumar, Gurjeet Singh, Sunil Dhingra (2014): Optimization of Hardness of Weld Bead in TIG Welding using Taguchi Methods”. National conference on advancements and futuristic trends in Mechanical Engineering, 17-18th October 2014, PEC University of Technology, **Chandigarh**.
3. Sunil Dhingra (2015): National conference on Recent Developments in Mechanical Engineering, 20-21 November 2015 organized by Department of Mechanical Engineering, UIET, MDU, **Rohtak**, Haryana-124001 [**Technical Session chair**].
4. Sunil Dhingra (2019): Expert Lecture on Optimization Techniques, TEQIP-III sponsored STC on Analysis and Optimization of 5G wireless Communication Networks, September 17th -21st, 2018, ECE Department, UIET, KUK.

Papers Presented/published/Invited talks/session chair in International meetings:

1. Gian Bhushan, Sunil dhingra and Kashyap Kumar Dubey (2016): “Performance evaluation of Karanja oil based biodiesel engine using modified genetic algorithm”. International conference on Mechatronics, Electrical and Mechanical Engineering, **18-19th August 2016**, World Academy of Science, Engineering and Technology (WASET), **Kuala lumpur Malaysia**.
2. Vinay, Bhupender Singh, Sunil Dhingra (2017): ‘A Review paper on Biodiesel Production using trans-esterification process and its performance on CI engines’. International Conference on Quality, Productivity, Reliability, Optimization & Modeling (ICQPROM 2017), **5th-7th January 2017**, Manav Rachna International University, **Faridabad, Haryana, India**.
3. Sunil Dhingra (2017): “Experimental Investigation of Sunflower oil based biodiesel in a single cylinder CI engine”. International conference of European Materials Research Society, spring meeting 2017, 22-26th May 2017 held at **Strasbourg, France [Poster Presentation]**.
4. Sunil Dhingra (2017): “Biodiesel based Engines; Future Scope”. International conference on Innovative Research in Engineering and Science (IRES 2017), **16-17 June 2017** organized by

foundation of Innovative and research at Asian institute of Technology Conference Center, **Pathum Thani, Thailand [Technical Session Chair and Invited Talk]**.

5. Sunil Dhingra (2019): 2nd International Conference on New Frontiers in Engineering, Science & technology, February 18-22, 2019., NIT, Kurukshetra, Haryana [Session Chair]
6. Sunil Dhingra (2018): International Conference on Computational Methods, Simulation and optimization, June 22-24, 2018, Universal Research Foundation at Asian Institute of Technology, Bangkok, Thailand [Invited Speaker and Session Chairperson].
7. Sunil Dhingra (2019): International Conference on Computational Modeling, Simulation and Optimization, June 27-29, 2019, Innovative Research Foundation at National University of Singapore, SINGAPORE [Session Chair].

TITLE OF PROJECTS/DISSERTATION SUPERVISED At Post-Graduate Level –
M.Tech Dissertations supervised: 39 completed

S. No.	Roll No.	Award year	Name	Topic of Dissertation
1.	8002	8004	Amit Kumar	Use of GRA and Taguchi method to optimize multi machining characteristics in wire EDM of tungsten carbide composite
2.	8004	2011	Naresh kumar	Thermal analysis of regenerator for pulse tube cryocooler
3.	8014	2011	Sandeep Kumar	Use of Design of Experiments to optimize the process variables in wire EDM
4.	1135913151	2011	Sandeep Kumar	Optimization of MRR and KERF in WEDM of WC composite using Taguchi method
5.	2511635	2013	Manish Sanserwal	Heat transfer Augmentation using flat spring turbulator in cross flow heat exchanger
6.	2511642	2013	Mayank Bhardwaj	Heat transfer augmentation using convergent divergent spring turbulator in cross flow heat exchanger
7.	2611645	2013	Ajay Singh	Optimization of biodiesel synthesis from waste cooking oil and its performance characteristics in a single cylinder direct injection diesel engine
8.	2511634	2013	Vinay	Study on biodiesel production and its effect on a 4 stroke compression ignition engine for performance and emission characteristics of biodiesel extracted from soybean and karanja oil
9.	2511641	2013	Sanjeev kumar	Biodiesel production from jatropa & ricebran oils with their performance and emission studies on diesel engine using response surface methodology
10.	2512637	2014	Russi Lal	Enhancement in overall heat transfer rate through numerical investigation of plane and curved winglet type vortex generator
11.	2512639	2014	Sumit	Experimental investigation of the performance of flat plate solar air collector using double glazing with PCM as thermal storage unit
12.	2512640	2014	Amit Garg	Enhancement in heat transfer of triangular ribbed channel type

				heat exchanger through CFD analysis
13.	2512641	2014	Manoj Kumar	CFD analysis of heat transfer augmentation in rectangular channel using four triangular prism arranged in staggerd manner
14.	2512642	2014	Sitender Dahiya	CFD analysis of flow structure of dynamic turbulent flow field through a channel provide with baffles in staggered manner
15.	2512632	2016	Kashmir Singh	Experimental Investigation of the performance of the flat plate solar air collector using single glazing with PCM as storage unit
16.	2513637	2015	Rinku Jangra	Performance of double pipe heat exchanger with convergent-convergent spring turbulators and its analysis
17.	2513638	2015	Balram	Comparative performance analysis of double pipe heat exchanger from spring turbulator with plain tube
18.	2513639	2015	Ayush	Performance analysis of double pipe heat exchanger through hybrid turbulators
19.	2513641	2015	BrijMohan	Experimental investigation of double pipe heat exchanger through spring turbulator and its performance analysis
20.	2513642	2015	Amit Rajotiya	Performance analysis of double pipe heat exchanger through hybrid spring turbulators
21.	2513648	2015	Navdeep Sandhu	Performance analysis of double pipe heat exchanger through hybrid divergent-divergent convergent turbulator
22.	2514632	2016	Nirmal Singh	Numerical Simulation of heat transfer enhancement by curved single winglet pair type vortex generators with punched holes
23.	2514635	2016	Sachin Kumar	Performance analysis of double pipe heat exchanger using convergent-plain spring turbulators
24.	2514638	2016	Rinku	Heat transfer augmentation using rod fitted with divergent-plain convergent spring turbulators as inserts
25.	2514642	2016	Arvind pal	Heat transfer enhancement in double pipe heat exchanger using plain convergent spring turbulators
26.	2514648	2016	Karan Gopal	Experimental investigation of double pipe heat exchanger using divergent plain spring turbulators at variable length ratio
27.	251555001	2017	Sumit Kumar	Experimental Investigation of three fueled SI engines using Response Surface Methodology
28.	251555004	2017	Anuj Kumar	Performance Analysis of dual fueled SI engine using Response Surface Methodology
29.	251555010	2017	Deepak Batra	Experimental Investigation of Flat Plate Solar water collector using heat transfer enhancer in absorber tube
30.	251555017	2017	Rohit Khargotra	Enhancement of heat transfer rate using flat plate solar water heater based on coil spring turbulator
31.	251555006	2017	Hari Chaman	Performance analysis of dual fueled petrol engine using design of experiment approach
32.	251555016	2017	Sangeeta	Experimental analysis of heat transfer Augmentation in solar flat plate collector based on water heater using the effect of coupled turbulator
33.	251655001	2018	Ravi Nandal	Experimental Investigation on performance and emission characteristics of SI engine fuelled with butanol and gasoline blends

34.	251655005	2018	Himanshu Rajput	Experimental analysis of ternery blends of Karanja and Mahua oil based biodiesel on 4-stroke CI engine
35.	251655010	2019	Naveen Bharat Kashyap	Performance analysis of blended green fuel diesel in four stroke engine using response surface methodology
36.	251655011	2018	Ankit Singla	Performance analysis of ternery blends of polanga and karanja biodiesel on 4-stroke CI engine
37.	251655016	2018	Netan Vashisht	Optimization of parameters in three cylinder SI engine running through various blends of Iso butanol and gasoline
38.	251755001	2019	Ankit Tyagi	Performance analysis of motor cycle using methanol blend with and without HHO generator
39.	251755006	2019	Kamal Kant	Analysis of exhaust emission and performance of motor cycle by using ethanol gasoline blend and optimization using design expert

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