

Curriculum Vitae

Dr. HARENDER

Assistant Professor

Department of Mechanical Engineering

School of Engineering

Shiv Nadar University

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OBJECTIVE

To make the most of my potential and discover new horizons in the field of teaching and research. To utilize my perfect blend of 10 years' active experience and creativity, those enable me to perform in the best possible way for many years.

EDUCATION

- Ph. D (Wave Energy) Indian Institute of Technology Madras, India (2009-2013)
- Master of Technology (Thermal Engg.), Rajasthan Technical University, (2006-2009)
- Bachelor of Engineering (Mechanical), MDU, Rohtak, India (1999-2003)

DOCTORAL DETAILS

Title of Thesis: **Power generation using Mechanical Wave Energy Converter.**

Thesis Supervisor: **Prof. Srinivasan Chandrasekaran**, Indian Institute of Technology Madras, India.

SCHOLASTIC ACHIEVEMENT

- Awarded Merit Scholarship by Government of Haryana for obtaining 83% marks in class 10th State board exam.
- State rank 129.
- Submitted Ph. D thesis in shortest time in Ocean Engineering Department.

EXTRA-CURRICULAR ACTIVITIES

- Physical fitness (Yoga, Zym).
- Reading Books (On self-Improvement).

RESEARCH INTERESTS

- Solar Energy
- Power Tower Plants
- Solar Stills
- Water Desalination
- Alternative Fuels

TEACHING AND RESEARCH EXPERIENCE

10 years of teaching & research experience in the area of Mechanical Engineering and renewable energy.

- Currently working as an Assistant Professor in the department of Mechanical Engineering, Shiv Nadar University, Greater Noida. (22.07.2013-till date)
- Worked as Senior Project Officer in IIT Madras under IITM-NIOT cell. (October 01, 2012- July 15, 2013).
- Worked as lecturer in Mechanical & Automation Engineering Department, Amity University, Noida (Delhi) (Sept.01, 2007- 24 December 2009).
- Worked as a lecturer in Mechanical & Automation Engineering Department, Amity University, Rajasthan (5 December 2005 – 31 August 2007).
- Worked as a lecturer in Mechanical Engineering Department, Shobhit University (Deemed University), Meerut (20 July 2003- 5 December 2005).

List of Publications

International Journals

1. Rakesh Singhai, Nitin D Banker, **Harender Sinhmar**, Sarthak Jain, and Shikhar Kulshresth, 2020, Effect of aspect ratio of heliostats on the optical efficiency of solar tower power plant—an experimental analysis, Energy Resources Part A: Recovery, Utilization and Environmental Effects, Taylor & Francis- <https://doi.org/10.1080/15567036.2020.1751745>
2. Rakesh Singhai, **Harender Sinhmar** & N. D. Banker (2019),” Effect of Aspect Ratio of Heliostat on Cost of Energy from Solar Power Tower Plants” Arabian Journal for Science and Engineering (**Springer**), 45, 877–890. (**IF:1.7**)

3. Ashok Kumar Singh, D. B. Singh, Ashis Mallick, **Harender** , Sanjeev Kumar Sharma, Navneet Kumar, and V. K. Dwivedi, “Performance analysis of specially designed single basin passive solar distillers incorporated with novel solar desalting stills: A review” *Solar Energy* 185 (2019) 146–164). (IF:4.37)
4. D.B. Singh, N. Kumar; **Harender**, Satish Kumar; and Sanjeev Sharma, “Effect of depth of water on various efficiencies and productivity of N identical partially covered PVT collectors incorporated single slope solar distiller unit” *Desalination and Water Treatment*, **138**, (2019), 99-112. (IF:1.63)
5. Rakesh Singhai, **Harender** and Nitin Banker,” Theoretical Investigation of Aspect Ratio of Heliostat to Minimize Capital Cost of Solar Tower Plant" *International Journal of Applied Engineering Research*, 13, (2018) 13652-13659.
6. S. Chandrasekaran and **Harender**, “Failure mode and effects analysis of a Mechanical Wave Energy Converter.” *International Journal of Intelligent Engineering Informatics*” Vol. 3, No. 1, 2015.
7. Amar Karthick, Srinivasan Chandrasekaran, Karuppan Sivakumar and **Harender Sinhmar** (2012), “Laboratory experiments on non-floating body to generate electric energy from ocean waves.” *Frontiers in Energy*, 6, 361-365. (IF:0.72)
8. S. Chandrasekaran and **Harender** (2012), “Power generation using Mechanical Wave Energy Converter” *International Journal of ocean and climate systems*, **3**, 57-70.

Conference Paper

1. **Harender Sinhmar**, Jitendra Bhati, and Ritanshu Bhati, “Experimental Investigation of Solar Still With Varying Pressure” *Proceedings of the ASME 2019 Gas Turbine India*, (December 5-6, 2019, **IIT Madras, India**)
2. **Harender Sinhmar**, Neelansh Kulshreshtha, Siddharth Jhavar, and V Abhishek Menon, “Improvement in Efficiency of Ocean Thermal Energy Conversion (OTEC) Cycle Using Heliostats” 11th International Exergy, Energy and Environment Symposium, SRM Chennai, 14 - 18, July 2019.
3. Rakesh Singhai, Nitin D Banker, and **Harender Sinhmar***, “Experimental Investigation of Wind Loads Acting on the Heliostats of Solar Power Tower Plant and Its Variation with Varying Aspect Ratios” 8th Global Conference on Global Warming (April 22 – 25, 2019, **Doha, Qatar**).
4. Nitin D. Banker, Rohit Pilligundla, Harshil Negi, Bhanu Prakash Reddy Bysani, and **Harender Sinhmar***, “Thermodynamic investigation of a cogeneration system: a

- combination of concentrated PV/Thermal and an adsorption refrigeration system” 8th Global Conference on Global Warming (April 22 – 25, 2019, **Doha, Qatar**).
5. Rakesh Singhai, N. D. Banker, and **Harender**, “Heliostat Design for Low Wind Terrain” 12th International Conference on Thermal Engineering: Theory and Application February 23-26, 2019, PDPU Gandhinagar, India.
 6. **Harender**, Dhruv Mittal, Deepank Deo, S.Aditya and Arvind Kumar, “Computational Analysis of Active and Passive Evacuated Tube Solar Collector” 1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018) October 3rd – 5th , 2018, Amity University, India.
 7. Arvind Kumar, Shiv Lal and Harender, “Thermodynamic analysis of factors affecting performance of solar collectors” International conference on “Advances in power generation from renewable energy sources” (APGRES 2017), December 22-23 2017, at Govt. Engineering College Banswara, Rajasthan India
 8. **Harender**, Shiv Lal, Ashok Kumar, Vijay Kumar and Pallav Koirala, “A comparative study of Diesel, Karanja and Cotton Seed Biodiesel” International conference on “Advances in power generation from renewable energy sources” (APGRES 2015), June 15-16, 2015, at Rajasthan Technical University, Kota, India-324010.
 9. Srinivasan Chandrasekaran and **Harender**, “Design and efficiency analysis of Mechanical Wave Energy Converter” **Proceedings of the ASME** 2011 30th International Conference on Ocean, Offshore and Arctic Engineering, June 19-24, 2011, **Rotterdam, Netherlands**.
 10. Shiv Lal and **Harender**, "A comparative study of karanja and soyabean biodiesel." Proceedings of Ist International conference on "New Frontiers in Biofuels" January 18-19, 2010, New Delhi, India.

REFERENCES

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