

# Dr. Roshan Raman

Department of Mechanical Engineering

The NorthCap University

Gurugram

Haryana 122017

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## PRESENT POSITION

Assistant Professor

Department of Mechanical Engineering

## EDUCATION

Degree	Institute	Year	Percentage/ CGPA
Ph.D, Mechanical Engineering	Delhi Technological University New Delhi, India	May 2020 Thesis Submitted	7.5
M.E, Thermal and Design Engg	IET DAVV Indore	June 2015	82.4
B.Tech, Mechanical Engineering	Dronacharya College of Engineering (UPTU) Greater Noida, Uttar Pradesh, India	June 2011	69.8
Intermediate (10+2)	Sarvodaya Inetermediate College, (UP Board) Uttar Pradesh, India	March 2007	66.4

## EXPERIENCE

Nature of work	Place	Year	Duration
Assistant Professor	The NorthCap University, Gurugram	July 2017 - Present	2 years 10 months
Senior Content Developer (Engineering)	Extramarks, Noida	July 2016- April 2016	9 months
Assistant Professor	GL Bajaj Inst. of Technology and Mgmt.	July 2015- July 2016	1 year
M.Tech Research Scholar Thermal and Deisgn	Institute of Engg and Technology, DAVV, Indore M.P, India	July 2013- July 2015	2 years
Assistant Professor	Sarvottam Institute of Tech. & Mgmt. Greater Noida	Sept 2011-June 2013	1 years 9 months

## **GRANTS AND HONORS**

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- MHRD fellowship, Government of India(GATE) July 2013 – June 2015
- Highest marks in University-PG section I sem, M.E.
- 4 Times GATE Qualified (2012, 2013, 2015, 2016)

## **SKILLS**

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- Proficient in Optimization software like Design of expert for conducting performance analysis of IC engine.
- Proficient in engine testing with various bio-fuels as well as with gaseous fuels.
- Proficient in utilization of biodiesel from various feed stocks.
- Basic operation of Mat lab to analyze predictive analysis.
- Familiar to ASC software to produce Time table.
- Proficient in MS Office suite(Doc, Excel)
- Basic operation of 3D Solid Modelling, Auto CAD, CATIA design software.

## **INSTITUTE SERVICES AND AFFILIATIONS**

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- Time table co-ordinator for Department of Mechanical Engineering at The NorthCap University.
- Student Co-ordinator in IEI 2015, conducted by Department of Mechanical Engineering, IET Indore.
- Student co-ordinator and organizer in NFEST Conference 2018 in Department of Mechanical Engineering, DTU Delhi
- Teaching Assistant for
  - Energy Conversion , RAC, ICEGT (UG Level Course 90 Students)
- Training and Placement Class representative during B.Tech (2007-2011).
- Class representative during B.Tech (2007-2011).

## **COURSES TAUGHT (UG and PG level)**

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IC Engine and Gas Turbine, Automobile Engineering, Vehicle safety and Maintenance Engineering, Mechatronics and Robotics, Renewable Energy Resources, Basics of Mechanical Engineering, Advanced Thermodynamics ,Fluid Machinery, TOM, MD, Project Management, Vibration and Noise Engineering.

## RESEARCH EXPERIENCE

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**Doctoral Research:** Department of Mechanical Engineering, Delhi Technological University, 2016-Present (Advisors: Prof. Naveen Kumar)

Dissertation Title: **“Comparative Assessment of the performance of dual fuelled CI Engine.”**

- Development of test rig, Investigation of engine Characteristics.
- Comparative study with available feed stock.

**Post-Graduate Research:** Department of Mechanical Engineering, IET, Indore – June 2015(Advisor: Prof. Govind Maheshwari)

Dissertation Title: **“Thermodynamic Modelling and Performance Analyses of Atkinson cycle using WCF criterion.”**

- Numerical analysis of an Atkinson cycle using work criterion functions by the help of MathCad software.
- Optimizing the performance and comparative study with existing criteria.

**Graduate Research:** Department of Mechanical Engineering, Dronacharya college of Engineering, Greater Noida. June 2007 – June 2010 (Advisor: Mr. Brijesh Verma)

Dissertation Title: **“Fabrication of Mechanical Robot using 4 bar mechanism.”**

Developed and demonstrated a mechanical robot using 4 bar mechanism. It is useful for pick and place the object while climbing terrain.

## JOURNAL PUBLICATIONS

(ORCID iD: <https://orcid.org/0000-0002-8567-4412>)

(Mendley ID: <https://www.mendeley.com/authors/57210530861/>)

Scopus ID: 57210530861

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- “Performance Analysis of Diesel Cycle under Efficient Power Density Condition with Variable Specific Heat of Working Fluid”, **Roshan Raman**, Naveen Kumar: J. Non-Equilib. Thermodyn. 2019; aop, DOI:10.1515/jnet-2019-0020. **Impact Factor: 2.08(SCI)**
- “The utilization of n-butanol/diesel blends in Acetylene Dual Fuel Engine”, **Roshan Raman**, Naveen Kumar: Energy Reports, 2019; DOI: 10.1016/j.egyr.2019.08.005. **Impact Factor : 3.85(SCI)**

- “Experimental investigation to analyze the effect of induction length of diesel-acetylene dual fuel engine”, **Roshan Raman**, Naveen Kumar: Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 2019, DOI:10.1080/15567036.2019.1663314 .**Impact Factor: 0.9(SCI)**
- “Performance analysis of a generalised radiative heat engine based on new maximum efficient power density approach”, **Roshan Raman**, G Maheshwari :International Journal of Ambient Energy, 2017 **Impact Factor : 0.3(SCI)**
- “Experimental Studies to Evaluate the Combustion, Performance and Emission characteristics of Acetylene fuelled CI Engine”, **Roshan Raman**, Naveen Kumar: International Journal of Ambient Energy, 2019 **Impact Factor : 0.3(SCI)**
- “Performance and Emission Analyses of Acetylene Dual Fuel Engine”, **Roshan Raman**, Naveen Kumar, Ankit Lather, Aditya Panjeta: International Journal of Recent Technology and Engineering (IJRTE), 2019 **Impact Factor : 0.1(Scopus)**
- “Thermodynamic Modeling and Performance Analysis of an Atkinson cycle under Efficient Power Density Condition” **Roshan Raman**, G Maheshwari : International Journal of Thermal Technologies, Vol.5,No.3 (Sept-2015) (**Google Scholar, Cross ref**)
- “The Sinuous History behind the Origin of Efficiency at Maximum Power Criteria for Heat Engine” **Roshan Raman**, Singh B Agarwal A : IJSRD-International Journal for Scientific Research & Development,(Vol. 3, pp. 2321–0613) 2015, (**Google Scholar**)
- “Some investigation on Design Analysis and Fabrication of Automated Metal Sheet Cutting Machine”, **Roshan Raman**, Mohit Gupta, Krishan Dagar and Abhishek Kaushik: IJSRD-International Journal for Scientific Research & Development, Vol. 7, Issue 02, 2019, (**Google Scholar**)
- “Some Studies on the Design Analysis and Fabrication of Wheat Cutting Machine” **Roshan Raman**, Gaurav Sharma, Akshay Kumar and Manjeet Yadav: International Journal of Current Engineering and Technology, DOI: <https://doi.org/10.14741/ijcet/v.9.3.1>, 2019 (**Google Scholar, Cross ref**)

## CONFERENCE PUBLICATIONS

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- “A Comprehensive review of the utilization of Di-Methyl Ether as an alternative fuel in CI engines, **Roshan Raman**, Naveen Kumar ICETMIE-2017, at The NorthCap University, Gurugram, India.
- “The utilization of MOME in CI Engine as an alternative fuel, **Roshan Raman**, Naveen Kumar, NFEST-2018.DTU, New Delhi, India.
- "Performance and Emission Analyses of Acetylene Dual Fuel Engine" **Roshan Raman**, Naveen Kumar, WCASET-2019.Singapore.
- “Predicting the performance and emissions of acetylene DFE using ANN technique”, **Roshan Raman**, Naveen Kumar, ICETMIE- 2019, at The NorthCap University, Gurugram, India.

## REVIEWER

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- Biofuels (<https://www.tandfonline.com/toc/tbfu20/current>)
- WCX SAE World Congress  
2020(<https://www.sae.org/calendar/techsess/237384.pdf>)
- EAME2020, Beijing, China (<http://www.4th-eame.org/>)
- ICETMIE2017, India
- ICETMIE2019, India

## UG PROJECT GUIDED

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- Ten Project guided and two ongoing projects.
- One course developed for UG students.
- Labs Coordinator (IC Engine, FM and TOM Lab)

## OBJECTIVE

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- Develop and implement innovative instructional methods.
- Guide, lead and mentor students in research projects.
- Evaluate, monitor and mentor student academic progress.
- Create, innovate and implement career-enhancement programs and activities.

- Supervise and support teaching assistants.
- Participate in departmental and college activities.
- Serve and support functional activities of departmental committees.
- Assess, review and evaluate student activities and progress.
- Assist and support senior professors in their day-to-day tasks and functions.

## **PERSONAL INFORMATION**

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Date of Birth : **28 Novmber 1987**

Sex : **Male**

Marital Status : **Married**

Nationality : **Indian**

Languages Known : **English, Hindi, Maithili and Nepali,**