

Curriculum Vitae

Personal Details

Name: Abhinav Bhanawat

Gender: Male

Nationality: Indian

Date of Birth: 7th December, 1995

Email id: abhinavbhanawat7@gmail.com

Languages: English (Fluent)

Mobile No.: +91-8604918967

Hindi (Mother Tongue)



Research Interests

Solar Energy Technologies, Phase Change Heat Transfer, Water Treatment, Nanotechnology, Energy Systems, Thermochemistry

Education

Year	Degree/Certificate	Institution	CGPA
2018-2019	Master of Technology, Mechanical Engineering	Indian Institute of Technology (IIT) Kanpur, India	9.40/10
2014-2018	Bachelor of Technology, Mechanical Engineering	Indian Institute of Technology (IIT) Kanpur, India	8.73/10

Research Experience

MASTER'S THESIS

(May'18 – May'19)

Supervisor: Dr. Sameer Khandekar, Phase Change Thermal Systems Laboratory, IIT Kanpur

- **Effect of surface inclination on steam condensation heat transfer in the presence of air**

Performed an experimental study to investigate the heat transfer during steam condensation process, in the presence of air, on a test surface which is inclined from the vertical at various inclination angles

- **Steam condensation studies in the presence of Non-Condensable Gases (NCG) for nuclear containment cooling**

Conducted experiments to study the effect of various parameters like bulk pressure, air mass fraction, wall subcooling etc. on heat transfer during steam condensation process, in the presence of non-condensable gases, with applications in nuclear containment cooling

B. TECH (UNDERGRADUATE) PROJECT

(Aug'17 – Apr'18)

- **Sugarcane/ sweet-sorghum syrup making machine** (Group of three)

- Developed a thermal-based machine to convert sugarcane juice into its syrup, using waste bagasse as fuel
- Designed and fabricated a shell and tube heat exchanger to quickly cool the syrup for better taste

RESEARCH INTERNSHIP

(May'17 – Jun'17)

- **Solar water purifier: Study and documentation** (at Nimbkar Agricultural Research Institute (NARI), Phaltan, India)

- Made a CAD model of the setup using Autodesk Inventor, prepared part drawings and documented assembly details
- Recorded temperature data and analysed the daily temperature profile of the water heated by solar thermal energy

ACADEMIC PROJECT

(Jan'17 – Apr'17)

- **Design and simulation of duct network of central air conditioning system for student hostel**

Designed an appropriate duct network for chilled water type central air conditioning system taking into account variable demand during the day and the contribution of heat generation and solar irradiation to the cooling loads

Awards, Scholarships and Achievements

- 'Best Poster Award' at the 27th International Conference on Nuclear Engineering, held in Tsukuba, Japan
- One of the 15 students selected from Asia in the Student Paper Competition at the 27th International Conference on Nuclear Engineering
- 'Academic Excellence Award' (twice) for outstanding academic performance at IIT Kanpur
- MHRD, India Fellowship for pursuing Master's studies at IIT Kanpur

Conference Presentation

- **Bhanawat A., Yadav M. K., Punetha M., Khandekar S., "Effect of surface inclination on film condensation heat transfer in the presence of air", Proceedings of the 27th International Conference on Nuclear Engineering, Tsukuba, Japan, May 19-24, 2019**

Teaching Assistantship (Department of Mechanical Engineering, IIT Kanpur)

- **Course: Refrigeration and Air Conditioning**

Conducted exams and quizzes, prepared course material and evaluated performance of over 35 students

- **Course: Heat and Mass Transfer**

Conducted laboratory sessions and evaluated experiment reports of over 100 students

Relevant Graduate Level Coursework

Solar Energy Technologies and Materials
Computer Aided Design of Thermal Systems

Boiling and Condensation
Conduction and Radiation

Finite Element Method for fluid dynamics
Solar Energy Technology

Skills

- **Programming:** C, FORTRAN, MATLAB, HTML, LABVIEW
- **Graphics Editing:** ImageJ, Adobe Photoshop, Adobe Premiere Pro
- **CAD:** Autodesk Inventor, AutoCAD

Test Scores

GRE : Total – 326/340
Verbal -156/170, Quantitative -170/170, Analytical Writing – 4.0/6.0
TOEFL : Total – 114/120
Reading – 30/30, Listening – 30/30, Writing – 29/30, Speaking – 25/30