CURRICULUM VITAE

Dr. VINOD KUMAR SINGH
Faculty of Mechanical Engineering
Department of Mechanical Engineering
IIEST Shibpur, West Bengal
M. N.: +919993539637/8319043398
E-mail id: vinod.1016singh@gmail.com
Skype id: phd12120304

Career Objective:

Highly dedicated and devoted to work for achieving the proposed and desired goal. I ever excel myself by learning everything which comes in my way, which helps me to work in a challenging environment.

Personal Objective:

To attain the greatest height in my life and to give the best out of me in every endeavour.

Educational Qualifications:

Program	Institution/School	CGPA/%	Year of Completion
Ph.D. in Thermal Engineering	IIT Indore	8.33	2017
M.Tech. in Energy System and Pollution	NIT Raipur	9.49	2011
B.E. in Mechanical Engineering	Pt. R.S.S.U. Raipur	8.35	2007
XII	Bhilai Vidyalaya, Bhilai	70.2	2003
X	Bhilai Vidyalaya, Bhilai	69	2001

Major Courses taken in Ph.D. and M.Tech. Program:

- Computational Fluid Dynamics (CFD)
- Principle of Measurements
- Design of Thermal System
- Heat Exchanger Design
- Alternative Fuels and Advance in I.C. Engine
- Conventional Energy Conversion System
- Recent Advances in Heat Transfer
- Computational Numerical Methods
- Non-conventional Energy Sources
- Energy Management
- Energy Pollution and Control
- Noise and Pollution Monitoring Instrumentation

Position of Responsibility:

- **Teaching Assistant** for Heat Transfer, Basic Mechanical Engineering and Heat Transfer Lab in the Discipline of Mechanical Engineering at Indian Institute of Technology Indore. **(January 2013 to August 2017)**

Achievements:

- Received **DST Travel Support** for attending an International Conference (IMPRES 2016) held at Taormina, Sicily, Italy.
- **GATE** score card
- Secured **First Rank** in the Institute level in M.Tech. Program at NIT Raipur.
- Secured **Third Rank** in the college level in B.E. Program at RCET Bhilai.

Computing Skills:

- **Languages:** C, MATLAB,
- **Software:** AutoCAD, Polysun, COMSOL, Ansys Fluent

Technical Interests:

- **CO_2 Capture and Sequestration**
- **Solar Energy**
- **Design of Thermal Systems**
- **Adsorption based Gas Storage Systems**
- **Adsorption based Cooling Systems**
- **Thermal Energy Storage Systems**
- **Battery Thermal Management System**

Projects:

- **Ph.D. Level:** Measurement of CO_2 Adsorption Isotherms and Kinetics of Activated Carbons Suitable for the Development of CO_2 based Adsorption Cooling Systems (**January 2013 to August 2017)**
- **PG Level:** Energy and Exergy Analysis of a Steam Power Plant **(July 2010 to December 2011)**
- **UG Level:**
  - ✓ Thermodynamic Analysis of Catalytic Converter for Vehicular Emission Control of S.I. Engine. **(July 2006 to May 2007)**
  - ✓ Study of Bio-Diesel & Its Application. **(January 2006 to May 2006)**

Professional Experience: Total Teaching Experience: 7 Years

Name of Organization	Position Held	Nature/Type of Work	Period (From - To)
IIEST Shibpur	Assistant Professor (Contract)	Teaching/Research	1/02/2023 – Till date
MESCOE, Pune	Assistant Professor	Teaching/Research	29/08/2022 – 31/01/2023
NIT Goa	Assistant Professor (Contract)	Teaching/Research	27/12/2021-12/08/2022
NIT Kurukshetra	Assistant Professor (Contract)	Teaching/Research	09/08/2021-22/12/2021
MITS Madanapalle	Sr. Assistant Professor	Teaching/Research	08/01/2018 – 30/05/2021
CCET Bhilai	Assistant Professor	Teaching	03/01/2011-10/12/2012
RCET Bhilai	Lecturer	Teaching	09/08/2008-16/02/2009

Extra-Curricular Activities:

- Two weeks vocational training at "**Bhilai Steel Plant**" after 5th semester.
- One-month project-based training at "**Bhilai Steel Plant"** in 51 MW **Power Plant-I** after M.Tech. 3rd semester.

Co-Curricular Activities:

- Active member of editorial board of college magazine "**EYE**".
- Participated in Senior UN Information Test.
- Active member of organizing committee of various events at college level.

Publications:

	Published
International Journals (SCI/Scopus)	**8**
International Conferences	**9**
Workshops/Seminars	**9**

Journals: **(January 2013 to Till date)**

1. **Vinod Kumar Singh**, E. Anil Kumar, Measurement and analysis of adsorption isotherms of CO_2 on activated carbon, ***Applied Thermal Engineering*** 97 (2016) 77-86. (I.F. - 4.725)
2. **Vinod Kumar Singh**, E. Anil Kumar, Measurement of CO_2 adsorption kinetics on activated carbons suitable for gas storage systems, ***Greenhouse Gases: Science and Technology*** 7 (1) (2017) 182-201. (I.F. - 1.979)
3. **Vinod Kumar Singh**, E. Anil Kumar, Experimental investigation and thermodynamic analysis of CO_2 adsorption on activated carbons for cooling system, ***Journal of CO_2 Utilization*** 17 (2017) 290-304. (I.F. - 5.993)
4. **Vinod Kumar Singh,** E. Anil Kumar, Thermodynamic analysis of single-stage and single-effect two-stage adsorption cooling cycles using indigenous coconut shell based activated carbon-CO_2 pair, ***International Journal of Refrigeration*** 84 (2017) 238-252. (I.F. - 3.461)

5. **Vinod Kumar Singh,** E. Anil Kumar, B.B. Saha, Measurement of adsorption isotherms, kinetics and thermodynamic simulation of CO_2-CSAC pair for cooling application, ***Energy*** 160 (2018) 1158-1173**.** (I.F. - 6.082)

Scopus/Conference Proceedings:

1. **Vinod Kumar Singh**, E. Anil Kumar, Comparative studies on CO_2 adsorption kinetics by solid adsorbents, ***Energy Procedia*** 90 (2016) 316-325.
2. Reema Saxena, **Vinod Kumar Singh**, E. Anil Kumar, Carbon dioxide capture and sequestration by adsorption on activated carbon, ***Energy Procedia*** 54 (2014) 320-329.
3. **Vinod Kumar Singh**, E. Anil Kumar, Comparative studies on CO_2 adsorption isotherms by solid adsorbents, ***Materials Today Proceedings*** 5 (11) (2018) 23033-23042.

International Conferences:

1. **Vinod Kumar Singh,** E. Anil Kumar, B.B. Saha, Performance evaluation of adsorption cooling system: A comparative study, ICP 2019, Kyushu University, 15^{th}-17^{th} May 2019, Japan.
2. **Vinod Kumar Singh**, E. Anil Kumar, Estimation of thermodynamic properties of CO_2 adsorption on activated carbon, ***6th International Conference on Advances in Energy Research (ICAER 2017)***, IIT Bombay, 12^{th}-14^{th} December 2017, Mumbai, India.
3. **Vinod Kumar Singh**, E. Anil Kumar, Characterization of carbon dioxide adsorption isotherms and kinetics on activated carbon for cooling system, ***IVth International Symposium on Innovative Materials for Processes in Energy Systems 2016 (IMPRES 2016)***, Hotel Villa Diodoro, Taormina, 23^{rd}-26^{th} October 2016, Sicily, Italy.
4. **Vinod Kumar Singh**, E. Anil Kumar, Comparative studies on CO_2 adsorption kinetics by solid adsorbents, ***5th International Conference on Advances in Energy Research (ICAER 2015)***, IIT Bombay, pp. 968-975, 15^{th}-17^{th} December 2015, Mumbai, India.
5. **Vinod Kumar Singh**, E. Anil Kumar, Comparative studies on CO_2 adsorption isotherms by solid adsorbents, ***5th International Conference on Advances in Energy Research (ICAER 2015)***, IIT Bombay, pp. 959-967, 15^{th}-17^{th} December 2015, Mumbai, India.
6. **Vinod Kumar Singh**, E. Anil Kumar, Studies on adsorption isotherm and kinetics of CO_2 by activated carbon, ***International Conference on Polygeneration (ICP 2015)***, Anna University, 18^{th}-20^{th} February 2015, Chennai, India.

7. **Vinod Kumar Singh**, E. Anil Kumar, Studies on CO_2 adsorption by activated carbon, ***International Conference on Environment and Energy (ICEE 2014)***, JNTU Hyderabad, 15th-17th December 2014, Hyderabad, India. (ISBN: 978-93-81212-96-7).
8. Reema Saxena, **Vinod Kumar Singh**, E. Anil Kumar, Carbon dioxide capture and sequestration by adsorption on activated carbon, ***4th International Conference on Advances in Energy Research (ICAER 2013)***, IIT Bombay, pp. 785-793, 10th-12th December 2013, Mumbai, India. (ISBN: 978-81-928795-0-5)
9. **Vinod Kumar Singh**, Rahul Salhotra, Energy and exergy analysis of a 36 MW thermal power plant, ***1st International Conference on Mechanical Engineering: Emerging Trends for Sustainability***, MANIT Bhopal, pp. 1069-1077, 29th-31st January 2014, Bhopal, India.

Citations:

	Google Scholar	Scopus
Total Citations	**458**	**420**
h-Index	**8**	**7**
i10-Index	**8**	**7**

Workshops/Seminars/Short term Courses:

1. Delivered Webinar on "Development of CO_2 based Adsorption Cooling Systems" during 2nd June 2020 at 11:00 AM organized by Department of Mechanical Engineering, Sagar Group of Institution Bhopal.
2. Attended two days International workshop on "**Materials for Energy Conversion and Storage**" during 24th to 25th December 2019 organized by Department of Mechanical Engineering, IIT Tirupati, Tirupati, India.
3. Attended one-week Workshop on "**Electronic Systems for Mechanical Automation & Robotic Technology (eSMART 2019)**" during 20th to 24th May 2019 organized by Department of Mechanical Engineering, NIT Silchar, Silchar, India.
4. Attended one-week Quality Improvement Programme on "**Instructional Design and Delivery System**" during 25th to 29th June 2018 organized by Department of Mechanical Engineering, MITS Madanapalle and NITTTR Chennai, Madanapalle, India.
5. Attended one-week GIAN Course on "**Fundamentals and Applications of Absorption Heat Pumps and Refrigeration Systems**" during 14th to 19th December 2017 organized by Department of Mechanical Engineering, IIT Indore, Indore, India.

6. Attended two-week GIAN Course on "**Adsorption Science and Technology for Cooling and Desalination Applications**" during 11th to 21st September 2017 organized by Department of Mechanical Engineering, IIT Indore, Indore, India.
7. Attended one-week GIAN Course on "**Introduction to Thermal Systems Design**" during 11th to 15th September 2017 organized by Department of Mechanical Engineering, IIT Indore, Indore, India.
8. Attended one-week GIAN Course on "**Second Law Analysis of Thermal Energy Storage Systems**" during 17th to 22nd July 2017 organized by Department of Mechanical Engineering, IIT Indore, Indore, India.
9. Attended two-week GIAN Course on "**Introduction to Heat Pipe Science and Technology**" during 6th to 19nd December 2016 organized by Department of Mechanical Engineering, IIT Indore, Indore, India.

Project:

Project Title: Experimental and theoretical assessment of figures of merit and development of framework for the optimization of modified microencapsulated organic Phase Change Materials (**Submitted**)

Funding Agency: DST Govt. of India (Indo-Israel Collaboration)

Amount: INR 10750000/-

Duration: 2 Years

Designation: Co-PI's

Personal Profile:

Name:	**Vinod Kumar Singh**
Father's Name:	Mr. Gokaran Singh
Mother's Name:	Smt. Prema Devi
Date of Birth:	16th April, 1986
Gender:	Male
Marital Status:	Married
Languages Known:	English, Hindi
Contact Address:	Orchid 18, Chouhan Green Valley, Nearby Shri Shankaracharya College of Engineering and Technology, Junwani Road, Bhilai, Dist.- Durg, State: Chhattisgarh, Pin:490020
Email-id:	vinod.1016singh@gmail.com
Mobile No.:	+919993539637

References:

1. **Dr. E. Anil Kumar**
   Associate Professor
   Department of Mechanical Engineering
   Indian Institute of Technology Tirupati
   Email-id: anil@iittp.ac.in
   Mobile No.: 7879779188

2. **Dr. Santosh K. Sahu**
   Associate Professor
   Discipline of Mechanical Engineering
   Indian Institute of Technology Indore
   Email-id: sksahu@iiti.ac.in
   Mobile No.: 9589116530

3. **Dr. Devendra Deshmukh**
   Associate Professor
   Discipline of Mechanical Engineering
   Indian Institute of Technology Indore
   Email-id: dldeshmukh@iiti.ac.in
   Mobile No.: 9407156827

4. **Prof. Bidyut Baran Saha**
   Professor and Principal Investigator,
   Thermal Science and Engineering Division
   International Institute for Carbon-Neutral Energy Research (WPI-I2CNER)
   Professor, Mechanical Engineering Department Kyushu University
   Adjunct Professor, Kyushu University Program for Leading Graduate School, Green Asia Education Center
   Email-id: saha.baran.bidyut.213@m.kyushu-u.ac.jp
   Tel. No.: +81-92-583-7903

Declaration of Authenticity:

I declare hereby, that the information furnished above is true to the best of my knowledge and belief.

Place: Shibpur

Date: 08/05/2023

VINOD KUMAR SINGH