

RESUME

SUNIL KUMAR SANSANIWAL

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PROFILE SUMMARY

✚ Lead with nine years of experience in research & development, scientific consultancy and academia in engineering. Extensive experience in handling government consultancy and research projects with knowledge dissemination through research trainings and scientific publications.

AWARDS/ACHIEVEMENTS/RECOGNITIONS

1. Awarded Prestigious Building Energy Efficiency Higher & Advanced Network (BHAVAN) Fellowship by Govt. of India and Indo-US Science & Technology Forum at University of Texas, Austin, USA, 2020.
2. Selected for Indo-German Research and Academic Program funded by DAAD: German Academic Exchange Service at Technical University of Applied Sciences (OTH), Amberg, Germany, 2019.
3. Outstanding Reviewer Recognition by different Reputed Journals of Elsevier i.e. Renewable Energy Focus, Solar Energy and Energy Conversion & Management, 2018.
4. Conferred with Silver Medal for securing Degree of Mechanical Engineering with distinction, 2010.
5. Meritorious award in Secondary School Examination conducted by Education Board, Haryana, 2004.
6. First place in Bhartiya Sanskriti Gyan Pariksha conducted by Shantikunj Gayatri Parivar, HW, 2004.
7. Second place in Excellent Education Competition Exam conducted at Inter-school level, Hisar, 2002.

RESEARCH FIELDS & ACTIVITIES

- Indoor environmental quality (IEQ): Thermal comfort, indoor air quality, visual & acoustic comforts.
- Human-centric control: Occupant behaviour analysis for improving indoor environment in buildings.
- Renewable energy systems: Design, development and analysis of solar thermal & bioenergy systems.

ACADEMIC QUALIFICATIONS

- Pursuing Doctor of Philosophy (Quantification of occupant's adaptive actions for improving IEQ in buildings) at Malaviya National Institute of Technology (NIT), Jaipur, India (July 2017 Onwards).
- Master of Technology in Mechanical Engineering (Thermal engineering as Major) with 73% marks from Guru Jambheshwar University of Science & Technology, Hisar, India (2012-14).
- Bachelor of Engineering in Mechanical Engineering with Distinction, securing 75% marks from Maharshi Dayanand University, Rohtak, India (2006-10).
- Senior Secondary (2005-06) and Secondary School (2003-04) Examinations conducted by Education Board, Haryana both with 82% marks.
- E-Course on Cities and Climate Change organized by UN Climate Change Learning Partnership (A collaborative initiative involving 33 multilateral organizations), 2019.

EMPLOYMENT HISTORY (Total Experience: Nine Years.....)

- * Working as **Scientific Researcher** (From 24th Jan 2018 to till date) under Indo-UK joint research project (Residential Building Energy Demand Reduction in India) at MNIT Jaipur. This job includes the field investigation of residential thermal comfort and building energy performance in Indian dwellings. Field measurements of building and indoor environment parameters, procurement of instrumentation, statistical analysis and scientific publications are the key parts of this job.
- * **Research Associate** (01st Nov 2017 to 23rd Jan 2018) under ISHRAE funded research project (Indoor Environmental Quality Standard Implementation Methodology) at MNIT Jaipur. This job deals with practical implementation of India's first IEQ standard in actual buildings. Various scientific research activities including field measurements of IEQ parameters, procurement of instrumentation, statistical analysis and scientific publications have been the parts of this job profile.
- * **Project Engineer** (06th Jun 2016 to 05th Jun 2017) under Indo-US joint research project (Centre for Building Energy Research and Development) at MNIT Jaipur. This job involves the performance investigation of solar thermal technologies particularly the scheffler dish for steam cooking applications. Scientific research activities including operation and maintenance, statistical analysis and scientific publications have been the key parts of this job profile.
- * **Senior Research Fellow** (09th Dec 2014 to 31st May 2016) under National Bioenergy Promotion Fellowship by MNRE Govt. of India at SSS-NIBE, Kapurthala. This profile deals with operation and maintenance of biomass gasification unit for sustainable development of green energy. Various activities includes under this job profile were research administration, scientific publications and writing research proposals especially on thermo-chemical biomass conversion processes.
- * **Teaching Associate** (01st Sep 2011 to 31st May 2012) in the Department of Mechanical Engineering at Guru Jambheshwar University of Science & Technology, Hisar. This job deals with professional teaching of various mechanical engineering subjects to the graduate students at university level.
- * **Lecturer** (03rd Aug 2010 to 05th May 2011) in the Department of Mechanical Engineering, Kalpana Chawla Institute of Engineering and Technology, Hisar. This job deals with professional teaching of various mechanical engineering subjects to the graduate students at college level.
- * **¹Consulting Researcher** (Jun 2018 to till date) at Basic Analysis & Design Workshop, Bhubaneswar. This profile involves the reviewing of analytical research methods and development of scientific research publications on built environment.
- * **²Technical Course Developer** (8th May 2018 to 25th Dec 2018) at Environmental Design Solutions, Delhi. It involves the development of e-learning academic courses on sustainability. Two courses on 'A Primer to Solar Power' and 'Introduction to Renewable Energy' have been developed so far.
- * **³Academic Consultant** (20th Sep. 2012 to 08th Dec. 2014) at Chegg India Private Ltd, Visakhapatnam. Major role of this profile is to provide the educational guidance and assistance to the students by providing them relevant academic solutions and courses of their interests.

1,2 and 3 are the consultancy profiles

POSITION OF RESPONSIBILITY

- ❖ Member, Organizing Committee for Industry-Academia Conclave on Energy Storage jointly organized by DST-Govt. of India and MNIT, Jaipur (30th Nov, 2019).
- ❖ Member, Organizing Committee for International Conference & Exhibition on Green Buildings organized by Confederation of Indian Industry at Jaipur (04-07th Oct, 2017).
- ❖ Member, Organizing Committee for International Conferences on Recent Advances on Bio-energy Research organized by SSS-NIBE, Kapurthala (2015-16).
- ❖ Member, Organizing Committee for the first Research Advisory Committee meeting organized by SSS-NIBE, Kapurthala (22nd June, 2015).

EXTRACURRICULAR ACTIVITY

- ✓ Blood Donation Camp organized by Rotary Club, New Delhi, India.
- ✓ Intellectual Based Quiz Contest organized by Gayatri Pariwar, Haridwar, India.
- ✓ First Aid Training Camp organized by the Red Cross Society, Hisar, India.

COMPUTER PROFICIENCY

Computer Basics, Microsoft Word/Excel, AutoCAD (Basic), SPSS (Basic) and DesignBuilder (Basic)

PERSONAL INFORMATION

- Date of Birth : 03rd August, 1989
- Father's Name : Late Sh. Ramesh Kumar
- Mother's Name : Smt. Kamla Devi
- Marital Status : Married
- Linguistic Proficiency : English, Hindi
- Passport No. : M6532712
- Nationality : Indian
- Hobbies : Work out @ Gym and Travelling

CONFERENCE/WORKSHOP/TRAINING ATTENDED

- A. One day industry and academia amalgamation named 2nd PAN India Research Network Meet jointly organized by National Institute of Wind Energy, Chennai and CEE, MNIT Jaipur (06th Jan, 2020).
- B. One day Industry-Academia Conclave on Energy Storage organized by Department of Science and Technology, Govt. of India at MNIT Jaipur (30th Nov, 2019).
- C. Two days regional workshop on Energy Efficiency in Residential Buildings organized by Bureau of Energy Efficiency, Ministry of Power in association with RRECL at Jaipur (05-06th Nov 2019).
- D. One-week academic workshop on 'Energy Storage: The Future of Energy' under AICTE Training and Learning (ATAL) scheme organized by MNIT, Jaipur, India (11-15th Mar 2019).
- E. South Asia's Largest Exhibition on Refrigeration & Cold Chain, Air Conditioning, Ventilation and Intelligent Buildings organized by Indian Society of Heating, Refrigerating and Air Conditioning Engineers at BEC, Mumbai, India (28th Feb to 2nd Mar 2019).

- F. One-week short term course on Research Methods and Data Analysis Using SPSS organized by NIT Jalandhar, India (20-24th Jan 2019).
- G. Three days' workshop on Building Performance Evaluation (under initiative of UK-India Learn-BPE project) at Manipal University, Jaipur, India (11-13th Oct 2018).
- H. One DL program on ASHRAE 90.1 organized by ASHRAE Jaipur Section in association with ISHRAE Jaipur Chapter at Hotel Leisure Inn Grand Chanakya, Jaipur, India (23rd Aug 2018).
- I. One day SVAGRIHA Training Program organised by Green Rating for Integrated Habitat Assessment at MNIT, Jaipur, India (03rd Aug 2018).
- J. South Asia's Largest Exhibition on Refrigeration & Cold Chain, Air Conditioning, Ventilation and Intelligent Buildings organized by Indian Society of Heating, Refrigerating and Air Conditioning Engineers at BIEC, Bangalore, India (22-24th Feb 2018).
- K. One-week short term course on Building Energy Simulation for ECBC 2017 organized by Indian Institute of Information Technology, Hyderabad, India (12-16th Feb 2018).
- L. One-day Thought Provoking Workshop on Pertinent Issues Related to Air Quality in India, organized by Civil Engineering Department, MNIT, Jaipur, India (20th Jan 2018).
- M. One-week short term course on Recent Advances in PCM based Cooling Technology organized by IIT Bhubanewar (India) under GIAN scheme (11-15th Dec, 2017).
- N. Five days National Workshop on Performance Evaluation and O&M of Solar Thermal Systems organized by National Institute of Solar Energy under MNRE, India (20-24th April, 2017).
- O. One-day National Workshop on Concentrated Solar Technologies organised by Rajasthan Renewable Energy Corporation Limited at Bhiwadi, Rajasthan, India (2nd March, 2017).
- P. International Conference on New and Renewable Energy Resources for Sustainable Future organized by SKIT, Jagatpura, Jaipur, India (2-4th Feb, 2017).
- Q. Second International Conference on Recent Advances on Bio-energy Research organized by SSS-NIBE, Kapurthala, India (25-27th Feb, 2016).
- R. International Conference & Exhibition on Cutting Edge Technological Challenges in Mechanical Engineering organized by NIET, Greater Noida, India (21-22nd March, 2015).
- S. First International Conference on Recent Advances on Bio-energy Research organized by SSS-NIBE, Kapurthala, India (14-17th March, 2015).
- T. National Conference on Research Methodology and Advancement in Engineering and Science organized by Shanti Niketan College of Engineering, Hisar, India (24th April, 2013).
- U. Three days National Workshop on Designing of Concentrated Solar Thermal & Solar Water Heating System organized by National Institute of Solar Energy, Gurgaon, India (08-10th August, 2016).
- V. One-week National Training Program on Biofuel Production and Its Characterization organized by SSS-NIBE, India (30th Nov-04th Dec, 2015).
- W. Three days National Training Program on Biofuel Production and Catalysis organized by SSS-NIBE, India (19-21st Jan, 2015).

LIST OF PUBLICATIONS (TOTAL IMPACT: 56.12)

1. **Sansaniwal SK**, Tewari P, Kumar S, Mathur J and Mathur S. Impact assessment of air velocity on thermal comfort in composite climate of India (Submitted in Journal of Science & Technology for the Built Environment, 2019) **(IF: 1.2, Taylor and Francis, Status: Under Review)**.
2. **Sansaniwal SK**, Mathur J and Mathur S. Review of practices for human thermal comfort in buildings: Present and future perspectives. International Journal of Ambient Energy, 2019. DOI: 10.1080/01430750.2020.1725629 **(Scopus Indexed, Taylor & Francis)**.
3. **Sansaniwal SK**, Mathur J, Garg V and Gupta R. Review of studies on thermal comfort in Indian residential buildings. Journal of Science & Technology for Built Environment 2020; 26(6):727-748. **(IF: 1.2, Taylor and Francis)**.
4. **Sansaniwal SK**, Kumar S, Jain N, Mathur J, Mathur S. Implementation aspects of indoor environmental quality (IEQ) standard in buildings: a pilot study (Submitted in Building Services Engineering Research and Technology, 2020) **(IF: 1.34, Status: Under Review)**.
5. **Sansaniwal SK**, Mathur J and Mathur S. Understanding of occupant's behaviour for improving indoor environment and energy performance in buildings (To be submitted in Building and Environment, 2019) **(IF: 4.82, Elsevier)**.
6. **Sansaniwal SK**. Advances and challenges in solar-powered wastewater treatment technologies for sustainable development: an overview. International Journal of Ambient Energy, 2019. DOI: 10.1080/01430750.2019.1682038 **(Scopus Indexed, Taylor & Francis)**.
7. **Sansaniwal SK**, Sharma V, Mathur J. Energy and exergy analyses of various typical solar energy applications: a comprehensive review. Renewable & Sustainable Energy Reviews 2018; 82 (1):1576-1601 **(IF: 10.55, Elsevier)**.
8. **Sansaniwal SK**, Rosen MA, Tyagi SK. Global challenges in the sustainable development of biomass gasification: an overview. Renewable and Sustainable Energy Reviews 2017;80:23-43 **(IF: 10.55, Elsevier)**.
9. **Sansaniwal SK**, Rosen MA, Tyagi SK. Recent advances in the developments of biomass gasification technology: a comprehensive review. Renewable and Sustainable Energy Reviews 2017;72:363-84 **(IF: 10.55, Elsevier)**.
10. Kumar M, **Sansaniwal SK**, Khatak P. Progress in solar dryers for drying various commodities. Renewable and Sustainable Energy Reviews 2016; 55:346-60 **(IF: 10.55, Elsevier)**.
11. **Sansaniwal SK**, Kumar M. Analysis of ginger drying inside a natural convection indirect solar dryer: An experimental study. Journal of Mechanical Engineering & Sciences 2015; 9:1671-85 **(IF: 1.86, Scopus Indexed Journal)**.
12. **Sansaniwal SK**, Kumar M, Kaushal R, Kumar V. Investigation of indirect solar drying of ginger rhizomes (*Zingiber officinale*): a comparative study. Journal of Engineering Science & Technology 2017; 12(7):1956-71 **(Scopus Indexed Journal)**.
13. **Sansaniwal SK**, Bhutani V. Recent advances in the developments of pool boiling systems for food processing. Journal of Biofuel and Bioenergy 2016; 2(1):44-51.

14. Pal K, **Sansaniwal SK**, Tyagi SK. An assessment to the biomass-based combustion systems. Journal of Biofuel and Bioenergy 2016; 2(2):102-21.
15. **Sansaniwal SK**, Kaushal R. Biomass pyrolysis for sustainable developments of bio-products. 1st International Conference on New Frontiers in Engineering, Science & Technology, New Delhi, India, Jan 8-12, 2018, 656-63.
16. Two chapters on biomass gasification and pyrolysis have been submitted in a consultancy project on Training Module for Trainees in Bioenergy (Funded by MNRE, Govt. of India).

STUDENT GUIDED /SUPERVISED

- Guided four students of Mechanical Engineering for final year major project (Field Assessment of IEQ in Residential Buildings during Winter Season of Jaipur) as part of their course curriculum.

PROJECT/PROPOSAL PREPARED

- R&D project on Biomass Gasifier Testing, Certification and R&D Centre at SSS-NIBE, Kapurthala (Submitted to MNRE, Govt. of India).
- Proposal for training of participants from government bodies (Submitted to MNRE, Govt. of India).
- Proposal for training of participants from ASEAN member States on Bio-Energy Technology (Submitted to MNRE, Govt. of India).
- Proposal for training of participants in the domain area of bioenergy (Submitted to Ministry of Skill Development and Vocational Training, Govt. of India).

MEMBERSHIP OF PROFESSIONAL BODIES

- ⌘ The Asia Society of Researchers (ASR Senior Member: R219042002)
- ⌘ Chartered Institution of Building Services Engineers (Reg. No. 058034)
- ⌘ Teaching & Education Research Association (Reg. No. M19101178)
- ⌘ Institution of Mechanical Engineers (Reg. No. 80181805)
- ⌘ International Association of Engineers (Reg. No. 246519)
- ⌘ Indian Society of Heating, Refrigerating & Air Conditioning Engineers (Reg. No. S00079280)
- ⌘ ASHRAE Technical Committee (T-TAC-TC01.01; T-TAC-TC02.01 and T-TAC-TRG4.IAQP)

REVIEWER TO JOURNALS

- ❖ Applied Energy # Applied Water Science # Energy Conversion & Management # Energy # Heliyon # International Journal of Ambient Energy # International Journal of Energy Research # Journal of Engineering Science & Technology # Journal of Thermal Analysis & Calorimetry # Lawrence Press # Renewable Energy Focus # Scientific Nature Reports # Solar Energy # Ingeniería e Investigación

INTERNATIONAL VISITS & TOURS

- 🌐 University of Applied Sciences, Amberg (Germany); Amsterdam (Netherland); Brussels (Belgium) and Paris (France)

(Sunil K. Sansaniwal)