

## Details of current research areas

- Design and Development of innovative products and systems for promoting renewable energy.
- Design and Development of Solar thermal application; dryers, desalination, water heating system, Distributed of energy generation, Clean energy technologies, in buildings, Heat Transfer Applications and Natural rubber sheet drying.
- Disseminating Renewable Energy Technology for students, professionals and institutions.

### ACADEMIC AWARDS & PROFESSIONAL HONOURS

- Project granted entitled “**Development of a Stand-Alone Spray Assisted Solar Thermal Desalination System**” **India-Iran Bilateral Scientific and Technological Cooperation**, DST, Govt. of India, August 2018.
- **Advisory Member**, Anchor Institute in Solar Energy, Gujarat Power Engineering and Research Institute (GPERI).
- **Rashtriya Gaurav Award 2017** from India International Friendship Society, New Delhi (India)
- **Research Excellence Award 2016**: The researcher has Top 20 Publications from the Web of Science database, honoured by **President Dr. Chusak Limsakul, Prince of Songkla University, Hat Yai, Thailand.**
- **Appreciation** for outstanding service in the reviewer’s committee and active reviewers from Elsevier.
- **Appreciation** for outstanding service in the reviewer’s committee and active reviewers during the year 2015 from International Institute of Engineers.
- **Best Paper Award** in Global Conference on Energy and Sustainable Development (GCESD 2015), February 24-26, 2015 at Coventry University Technology Park, Puma Way, Coventry, West Midlands CV1 2TT.
- **Session Chair**, Global Conference on Energy and Sustainable Development (GCESD 2015), February 24-26, 2015 at Coventry University Technology Park, Puma Way, Coventry, West Midlands CV1 2TT.
- International Travel Support Scheme (ITS) from SERB, DST, Govt. of India awarded grants for attending International conference in UK (7 SB/ITS/04898/2014-2015).
- **Appreciation** from Chairman BOG and Director, MANIT in 2015
- **Session Chair**, 2<sup>nd</sup> International Conference on Inter-Disciplinary Research in Engineering Management, Pharmacy and Science, 19-22 February 2015, Sagar Society of Interdisciplinary Research & Technology, Bhopal.
- **Session Chair**, Renewable Energy Session, Industrial, Mechanical and Production Engineering: Advancements and Current Trends, MANIT Bhopal, Bhopal, International Conference, Madhya Pradesh, November 27-29, 2014.
- **Member**, Academic Advisory Committee, Sagar Institute of Tech.-Excellence, Bhopal, since 2014.
- **Guest of Honor**, National Level Working Model Competition "Nirmaan 2k14" organised by Sagar Institute of Science & Technology (SISTec), Bhopal during 3rd & 4th April 2014, 2015.
- **Co-Chair and Guest Speaker** in International Conference on Emerging Trends in Science & Technology organised by AISECT University, Bhopal, 14-15th Feb 2014.
- **Session Chair** in International Conference on Global and Scenario in Environment and Energy, organised by Dept. of Energy & Chemical Engg, Maulana Azad National Institute of Technology (MANIT), Bhopal, during 14-16 March 2013.
- **Observer** in JEE (Mains) 2012, 2013, 2014 and 2015
- **Observer** in Pre Engineering Test, for Madhya Pradesh, May 2012.
- Selected as **Assistant Professor (AGP-8000)** in Dept. of Mech. Engg., Gautam Buddha University, NOIDA, DCE) in 2018.
- Selected under the scheme of **Early Faculty Induction Programme-2004** sponsored by AICTE and conducted by IIT Bombay.
- **Senior Research Fellowship (SRF)** Award for pursuing Ph.D. in 2001, Indian Institute of Technology, Delhi.

### EXPERIENCE (13+ Years)

University / Organisation	Designation	From	To	Total Period	Nature of Experience
Department of Mechanical Engineering, Delhi Technological University, Delhi	Associate Professor	Dec 2018	Till Date		Teaching and Research

(Formerly Delhi College of Engineering), Delhi					
Energy Centre, Maulana Azad National Institute Technology, Bhopal (INDIA)	Assistant Professor	May 2010	Dec 2018	08+ Yrs	Teaching and Research (Sustainable Development)
Dept. of Mech. Engg., University Institute of Technology, Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal Bhopal - 462 036 (INDIA)	Lecturer	August 2005	May 2010	05 Yrs	Teaching and Research (Science, Technology, Society and Sustainable Development)

### TEACHING EXPERIENCE

Post Graduate	Graduate
<ul style="list-style-type: none"> <li>○ Renewable Energy sources (RGPV, MANIT Bhopal)</li> <li>○ Energy Conservation and Management (MANIT Bhopal)</li> <li>○ Energy Environment Ecology &amp; Society (MANIT Bhopal)</li> <li>○ Solar Energy and its Utilizations (RGPV, MANIT Bhopal)</li> <li>○ Energy Economics, Policy &amp; Planning (MANIT Bhopal)</li> <li>○ Green Building (MANIT Bhopal)</li> <li>○ Energy Laboratory -I &amp; II</li> </ul>	<ul style="list-style-type: none"> <li>○ Basic Mechanical Engineering (RGPV, Bhopal)</li> <li>○ Engg. Thermodynamics (RGPV, MANIT Bhopal)</li> <li>○ Heat Transfer RGPV, MANIT Bhopal)</li> <li>○ Non-Conventional Energy Sources (RGPV, Bhopal)</li> <li>○ Energy Environment Ecology &amp; Society (RGPV, MANIT Bhopal)</li> </ul>

### RESEARCH PUBLICATIONS

Category	Published	Under Review
a. Publications in Referred journals (Int. +National)	102+02	04
b. Publications in Conferences (Int. +National)	35+09	02
c. Books and Monographs	07	02
d. Chapters in Books	16	01
e. Patent	02	00
f. Conference Proceeding	02	01

### RESEARCH PROJECT AND CONSULTANCY

Category	Completed	Ongoing
a. Research Project	04	01
b. Consultancy	05	00

### RESEARCH GUIDANCE

Level of Guidance	Completed	Ongoing
a. Doctoral Level	05	04
b. Masters Level	23	04
c. Bachelor's Level	40	00

## PUBLICATIONS

### International Journal:

Year 2019

1. S.Phaijit, M.Suklueng, S.Marthosa, S.Niyomwas, N.Y.Voo, **A.Kumar**. Novel Micro-Solid Oxide Fuel Cell ( $\mu$ -SOFC) for Detecting Methane Content in Biogas. **Bulletin of Material Science. (Accepted)**
2. Anshika Rani, S. Suresh, **Anil Kumar**. Review on thermal modeling of solar desalination systems. **Research Journal of Chemistry and Environment..** E-ISSN No. 2278-4527. **SCOPUS and SCI Journal (Accepted)**
3. Anand Jain, Mukul Sharma, **Anil Kumar**, Atul Sharma and Arkom. Palamaint. Computational fluid dynamics simulation and energy analysis of domestic direct type multi-shelf solar dryer. **Journal of Thermal Analysis and Calorimetry.** DOI: 10.1007/s10973-018-7973-5. (Online)
4. Racha Dejchanchaiwong, **Anil Kumar** and Perapong Tekasakul. Performance and Economic Analysis of Natural Convection based Rubber Smoking Room for Rubber Cooperatives in Thailand. **Renewable Energy-Elsevier** 132 (2019) 233-242. <https://doi.org/10.1016/j.renene.2018.07.145>.

5. Anshika Rani, S. Suresh, **Anil Kumar**. Different techniques for separation of sea-water. **Asian Journal of Chemistry**; Vol. 31, No. 1 (2019), 9-17. <https://doi.org/10.14233/ajchem.2019.21614>. SCOPUS

#### Year 2018

6. Prashant Singh Chauhan, **Anil Kumar**, Chayut Nuntadusit and Shyam Sunder Mishra. Drying Kinetics, Quality Assessment, and Economic Analysis of Bitter Gourd Flakes Drying Inside Forced Convection Greenhouse Dryer. **Journal of Solar Energy Engineering: Including Wind Energy and Building Energy Conservation (ASME)**. 2018, Vol. 140(5), 051001 Transactions of the ASME. [doi:10.1115/1.4039891](https://doi.org/10.1115/1.4039891).
7. A. M. Abdel-Ghany, I. M. Al-Helal, **Anil Kumar**, A. A. Alsadon, M. R. Shady, A. A. Ibrahim. Effect of Aging on the Spectral Radiative Properties of Plastic Film-Covered Greenhouse under Arid Conditions. **International Journal of Thermophysics** (2018) 39:115 <https://doi.org/10.1007/s10765-018-2434-8>. **SCI Impact Factor 0.829**
8. Uday Raj Singh and **Anil Kumar**. Review on Solar Stirling Engine: Development and Performance. **Thermal Science and Engineering Progress-Elsevier** Volume 8, 2018, Pages 244-256. <https://doi.org/10.1016/j.tsep.2018.08.016>
9. Dang Nguyen Thoai, Chakrit Tongurai, Kulchanat Prasertsit, **Anil Kumar**. Predictive capability evaluation of RSM and ANN in modeling and optimization of biodiesel production from palm (*Elaeisguineensis*) oil. **International Journal of Applied Engineering Research (IJAER)**.. ISSN 0973-4562, Vol. 13, Number 10 (2018) pp. 7529-7540. **SCOPUS**
10. Geetam Richhariya and **Anil Kumar**. Fabrication and characterization of mixed dye: Natural and Synthetic organic dye. **Optical Materials-Elsevier** Volume 79, May 2018, Pages 296-301. **SCI Impact Factor: 2.572**. <https://doi.org/10.1016/j.optmat.2018.03.056>
11. Anand Jain, Atul Sharma and **Anil Kumar**. Development of binary mixtures of palmitic acid, stearic acid and acetamide for heat storage in solar dryers. **International Journal of Applied Engineering Research (IJAER)**.. ISSN 0973-4562, ISSN 0973-4562 Volume 13, Number 11 (2018) pp. 9460-9467. **SCOPUS**
12. Mukul Sharma, **Anil Kumar**. Promising biomass materials for biofuels in India's context. **Materials Letters- Elsevier**, 220 (2018) 175-177. **SCI Impact Factor: 2.572**. <https://doi.org/10.1016/j.matlet.2018.03.034>
13. Prashant Singh Chauhan, **Anil Kumar** and Chayut Nuntadusit. Thermo-environmental and drying kinetics of bitter gourd flakes drying under north wall insulated greenhouse dryer. **Solar Energy- Elsevier** Volume 162 (2018) Pages 205-216, **SCI Impact Factor: 4.018**. <https://doi.org/10.1016/j.solener.2018.01.023>
14. **Anil Kumar**, Om Prakash & Akarshi Dube. A Review on Technology and Promotional Initiatives for Concentrated Solar Power in World. **International Journal of Ambient Energy** (2018) Vol. 39, Issue 3, pp 297-316. <https://doi.org/10.1080/01430750.2017.1298058>. **SCOPUS**
15. Prashant Singh Chauhan and **Anil Kumar**. Thermal analysis of insulated north-wall greenhouse with solar collector under passive mode. **International Journal of Sustainable Energy, Taylor & Francis** (2018) Vol. 37, No. 4, 325-339, <https://doi.org/10.1080/14786451.2016.1261866> **SCOPUS**
16. Prashant Singh Chauhan, **Anil Kumar**, and Chayut Nuntadusit. Heat transfer analysis of PV integrated modified greenhouse dryer. **Renewable Energy- Elsevier** **121** (2018) 53-65. **SCI Impact Factor: 4.357**. <https://doi.org/10.1016/j.renene.2018.01.017>
17. Prashant Singh Chauhan, **Anil Kumar**, Chayut Nuntadusit and Jan Banout. Thermal modeling and drying kinetics of bitter gourd flakes drying in modified greenhouse dryer. **Renewable Energy- Elsevier** **118** (2018) 799-813. **SCI Impact Factor: 4.357** <https://doi.org/10.1016/j.renene.2017.11.069>
18. Prashant Singh Chauhan, **Anil Kumar**. Thermal modeling and drying kinetics of gooseberry drying inside north wall insulated greenhouse dryer. **Applied Thermal Engineering- Elsevier**, Vol. **130**, **5** (2018), Pages 587-597. (**SCI Impact Factor: 3.043**). <https://doi.org/10.1016/j.applthermaleng.2017.11.028>
19. Ranjan Chauhan, Tej Singh, N.S. Thakur, Raj Kumar and **Anil Kumar**. Heat transfer augmentation in solar thermal collectors using impinging air jets: a comprehensive review. **Renewable & Sustainable Energy Reviews**. **82** (2018) 3179-3190. <https://doi.org/10.1016/j.rser.2017.10.025>

20. Pushpendra Singh, Vipin Shrivastava, **Anil Kumar**. Recent Developments in Greenhouse Solar Drying: A Review. **Renewable & Sustainable Energy Reviews**. 82 (2018) 3250–3262 <https://doi.org/10.1016/j.rser.2017.10.020>

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21. Prashant V Baredar, Anand Singh, Bhupendra Gupta, **Anil Kumar**. Optimization of biomass gasifier and solar PV hybrid renewable energy systems for rural electrification in India. **Frontiers in Materials (Accepted)**. doi: [10.3389/fmats.2017.00028](https://doi.org/10.3389/fmats.2017.00028). (ESCI)
22. Vijayan Selvaraj, Arjunan Thottipalayam Vellingri, **Anil Kumar**. Thin Layer Drying Characteristics of Curry Leaves (*Murraya Koenigii*) in an Indirect Solar Dryer. **Thermal Science Journal** (ISSN 2334-7163) Vol. 21, Suppl. 2, pp. S359-S367 (2017). SCOPUS. <https://doi.org/10.2298/TSCI17S2359V>
23. Dang Nguyen Thoai, Songtham Photaworn, **Anil Kumar**, Kulchanat Prasertsit and Chakrit Tongurai. A Novel Chemical Method for Determining Ester Content in Biodiesel (EGYPRO32779). **Energy Procedia** 138, 536-543 (2017). DOI: [10.1016/j.egypro.2017.10.156](https://doi.org/10.1016/j.egypro.2017.10.156)
24. Dang Nguyen Thoai, **Anil Kumar**, Kulchanat Prasertsit and Chakrit Tongurai. Evaluation of Biodiesel Production Process by the Determining of the Total Glycerol Content in Biodiesel (EGYPRO32780). **Energy Procedia** 138, 544-551 (2017). DOI: [10.1016/j.egypro.2017.10.157](https://doi.org/10.1016/j.egypro.2017.10.157)
25. Dang Nguyen Thoai, Chakrit Tongurai, Kulchanat Prasertsit, **Anil Kumar**. A novel two-step transesterification process catalyzed by homogeneous base catalyst in the first step and heterogeneous acid catalyst in the second step. **Fuel Processing Technology-Elsevier**. Vol. 168 (2017) 97-104 **SCI Impact Factor: 3.752**. <http://dx.doi.org/10.1016/j.fuproc.2017.08.014>
26. Vipin Shrivastava, **Anil Kumar**, Prashant Baredar. Kinetics of Fenugreek Drying in an Indirect Solar Dryer. **Heat Transfer Research**. Vol. 48 Issue 9: 787-797 (2017), (ISSN Print: 1064-2285). (**SCI Impact Factor: 0.4930**). DOI: [10.1615/HeatTransRes.2016011738](https://doi.org/10.1615/HeatTransRes.2016011738)
27. C Ajani, **A Kumar**, S Curcio and P Tekasakul. Parametric study and shrinkage modelling of natural rubber sheet drying using COMSOL multiphysics. IOP Conf. Series: **Materials Science and Engineering** 243 (2017) 012012 doi:[10.1088/1757-899X/243/1/012012](https://doi.org/10.1088/1757-899X/243/1/012012)
28. Tej Singh, Ranchan Chauhan, Amar Patnaik, Brijesh Gangil, Ramesh Nain, **Anil Kumar**. Parametric Study and Optimization of Multiwalled Carbon Nanotube Filled Friction Composite Materials Using Taguchi Method. **Polymer Composites – 2017**, Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: [10.1002/pc.24576](https://doi.org/10.1002/pc.24576). **Impact Factor: 2.324 May 2018 Volume39, Issue S 2 Pages E1109-E1117 May 2018**
29. Om Prakash, **Anil Kumar**, Perapong Tekasakul, Ahmed M Abdel-Ghany and I. M. Al-Helal. Environomical analysis and mathematical modelling of potato chips drying in modified solar greenhouse dryer. **Heat Transfer Research**. Volume 48 (16): 1497-1514 (2017). **SCI Impact Factor: 0.930 DOI: [10.1615/HeatTransRes.2017012421](https://doi.org/10.1615/HeatTransRes.2017012421)**.
30. Racha Dejchanchaiwong, Yutthana Tirawanichakul, Supawan Tirawanichakul, **Anil Kumar**, Perapong Tekasakul. Techno-Economic Assessment of Forced Convection Rubber Smoking Room for Rubber Cooperatives, **Energy-Elsevier**, Volume 137, Pages 152-159, October 2017, doi: [10.1016/j.energy.2017.06.161](https://doi.org/10.1016/j.energy.2017.06.161). **SCI Impact Factor: 4.520**.
31. Bhupendra Gupta, **Anil Kumar**, Prashant V Baredar. Experimental Investigation on Modified Solar Still Using Nano Particles and Water Sprinkler Attachment. **Frontiers in Materials** Volume 4, Article 23, August 2017. doi: [10.3389/fmats.2017.00023](https://doi.org/10.3389/fmats.2017.00023) (ESCI)
32. **Anil Kumar**, Om Prakash, and Ajay Kumar Kaviti. A Comprehensive Review of Scheffler Solar Collector. **Renewable & Sustainable Energy Reviews** Volume 77, 2017, 890–898. <http://doi.org/10.1016/j.rser.2017.03.044>
33. **Anil Kumar** Om Prakash, and Akarshi Dube. A Review on Progress of Concentrated Solar Power in India. **Renewable & Sustainable Energy Reviews**. Volume 79, 2017, 304–307. <https://doi.org/10.1016/j.rser.2017.05.086>
34. Prashant Singh Chauhan, **Anil Kumar** and Bhupendra Gupta. A Review on Thermal Models for Greenhouse Dryers. **Renewable and Sustainable Energy Reviews** 75 (2017) 548–558. **SCI Impact Factor: 8.05**. <http://dx.doi.org/10.1016/j.rser.2016.11.023>
35. Hardik Naik, Prashant Baredar and **Anil Kumar**. Medium Temperature Applications of Concentrated Solar Thermal Technology: Indian Perspective. **Renewable and Sustainable**

<http://dx.doi.org/10.1016/j.rser.2017.03.014>

36. Vipin Shrivastava and Anil Kumar. Embodied energy analysis of the indirect solar drying unit. **International Journal of Ambient Energy** (Taylor & Francis), 2017, Vol. 38, No. 3, 280–285. <http://dx.doi.org/10.1080/01430750.2015.1092471>
37. Anil Kumar, Ranchan Chauhan, Raj Kumar, Tej Singh, Muneesh Sethi, Anil Kumar, Ashutosh Sharma. Developing heat transfer and pressure loss in an air passage with multi discrete V-blockages. **Experimental Thermal and Fluid Science** 84 (2017) 266–278 DOI: <http://dx.doi.org/10.1016/j.expthermflusci.2017.02.017> SCI Impact Factor: 2.830
38. Prashant Singh Chauhan and Anil Kumar. Heat Transfer Analysis of North Wall Insulated Greenhouse Dryer under Natural Convection Mode. **Energy-Elsevier**. 118 (2017) 1264–1274. SCI Impact Factor: 4.292. <http://dx.doi.org/10.1016/j.energy.2016.11.006>
39. Ashutosh Sharma, Ranchan Chauhan, Tej Singh, Anil Kumar, Raj Kumar, Anil Kumar, Muneesh Sethi. Optimizing discrete V obstacle parameters using a novel Entropy-VIKOR approach in a solar air flow channel. **Renewable Energy-Elsevier** 106 (2017) 310–320, doi: [10.1016/j.renene.2017.01.010](http://dx.doi.org/10.1016/j.renene.2017.01.010) SCI Impact factor: 4.357
40. Perapong Tekasakul, Anil Kumar, Chalad Yuenyao, Pairoj Kirirat, Gumpon Prateepchaikul. Assessment of sensible heat storage and fuel utilization efficiency enhancement in rubber sheet drying. **Journal of Energy Storage-Elsevier** 10 (2017) 67–74. <http://dx.doi.org/10.1016/j.est.2017.01.002>.
41. Geetam Richhariya Anil Kumar, Perapong Tekasakul and Bhupendra Gupta. Natural Dyes for Dye Sensitized Solar Cell: A Review. **Renewable & Sustainable Energy Reviews** 69 (2017) 705–718. SCI Impact Factor: 6.798. DOI: [10.1016/j.rser.2016.11.198](http://dx.doi.org/10.1016/j.rser.2016.11.198)
42. Racha Dejchanchaiwong, Yutthana Tirawanichakul, Supawan Tirawanichakul, Anil Kumar and Perapong Tekasakul. Conjugate Heat and Mass Transfer Modeling of a New Rubber Smoking Room and Experimental Validation. **Applied Thermal Engineering**. 112 (2017) 761–770. (SCI Impact Factor: 3.356). <http://dx.doi.org/10.1016/j.applthermaleng.2016.10.108>

#### Year 2016

43. Om Prakash, Anil Kumar and Yahya I. Sharaf-Eldeen. Review on Indian Solar Drying Status. **Journal: Current Sustainable/Renewable Energy Reports** (2016) 3:113–120. DOI: 10.1007/s40518-016-0058-9.
44. Racha Dejchanchaiwong, Auk Arkasuwan, Anil Kumar and Perapong Tekasakul. Mathematical Modeling and Performance Investigation of Mixed-Mode and Indirect Solar Dryers for Natural Rubber Sheet Drying. **Energy for Sustainable Development** 34 (2016) 44–53 (DOI: [10.1016/j.esd.2016.07.003](http://dx.doi.org/10.1016/j.esd.2016.07.003)). SCI Impact Factor: 2.379.
45. Om Prakash, Anil Kumar and Vinod Laguri. Performance of Modified Greenhouse Dryer with Thermal Energy Storage. **Energy Reports** 2 (2016) 155–162. <https://doi.org/10.1016/j.egyr.2016.06.003>
46. S.Vijayan, T.V.Arjunan and Anil Kumar. Mathematical modeling and performance analysis of thin layer drying of bitter gourd in sensible storage based indirect solar dryer. **Innovative Food Science and Emerging Technologies** 36 (2016) 59–67. doi: 10.1016/j.ifset.2016.05.014. SCI Impact Factor: 3.273.
47. Prashant Singh Chauhan and Anil Kumar. Performance analysis of greenhouse dryer by using insulated north-wall under natural convection mode. **Energy Reports** 2 (2016) 107–116. <https://doi.org/10.1016/j.egyr.2016.05.004>
48. Om Prakash, Vinod Laguri, Anukul Pandey, Anil Kumar, Arbind Kumar. Review on various modelling techniques for the solar dryers. **Renewable and Sustainable Energy Reviews**. Volume 62, September 2016, Pages 396–417. SCI Impact Factor: 8.05. <https://doi.org/10.1016/j.rser.2016.04.028>
49. Sonthawi Sonthikun, Phaochinnawat Chairat, Kitti Fardsin, Pairoj Kirirat, Anil Kumar and Perapong Tekasakul. Computational Fluid Dynamic Analysis of Innovative Design of Solar-Biomass Hybrid Dryer: An Experimental Validation. **Renewable Energy: An International Journal**. Vol. 92 Pages 185–191, July 2016. ISSN: 0960-1481, SCI Impact Factor: 3.476. <https://doi.org/10.1016/j.renene.2016.01.095>

50. Karunesh Kant, A. Shukla, Atul Sharma, **Anil Kumar** and Anand Jain. Thermal Energy storage based solar drying systems: A review. **Innovative Food Science and Emerging Technologies**. 2016. Vol. 34 Pages 86-99. ISSN: 1466-8564, SCI Impact Factor: 3.273. <https://doi.org/10.1016/j.ifset.2016.01.007>
51. Vipin Shrivastava, **Anil Kumar**. Experimental Investigation on the Comparison of Fenugreek Drying in an Indirect Solar Dryer and under Open Sun. **Heat and Mass Transfer (2016) 52 (09): 1963-1972** (ISSN: 0947-7411) Springer. (Impact Factor 0.946). DOI 10.1007/s00231-015-1721-1.

#### Year 2015

52. Om Prakash, **Anil Kumar**, Anukul Pandey, Arbind Kumar, Vinod Laguri. A Review on Biogas Plant. *International Journal of New Technologies in Science and Engineering*, Vol. 2, Issue 4, October 2015, 84-93. ISSN 2349-0780.
53. Prashant Singh Chauhan **Anil Kumar** and Perapong Tekasakul. Applications of software in solar drying systems: A review. **Renewable and Sustainable Energy Reviews** 51 (2015) 1326-1337. SCI Impact Factor: 8.05. <https://doi.org/10.1016/j.rser.2015.07.025>
54. Om Prakash, **Anil Kumar**, Ajay Kumar Kaviti, and P. Vishwanath Kumar. Prediction of The Rate of Moisture Evaporation from Jaggery in Greenhouse Drying using the Fuzzy Logic. **Heat Transfer Research**. 46(10), 923-935 (2015) (ISSN Print: 1064-2285). (SCI Impact Factor: 0.930). DOI: 10.1615/HeatTransRes.2015007463
55. P. Vishwanath Kumar **Anil Kumar**, Om Prakash and Ajay Kumar Kaviti. Solar stills system design: A review. **Renewable and Sustainable Energy Reviews** 51 (2015) 153-181. SCI Impact Factor: 8.05 <https://doi.org/10.1016/j.rser.2015.04.103>
56. Anushka Pradhan, Prashant Baredar and **Anil Kumar**. Syngas as an Alternative Fuel Used in Internal Combustion Engines: A Review. *Journal of Pure and Applied Science & Technology*. Vol. 5(2), Jul 2015, pp. 51-66
57. Om Prakash and **Anil Kumar**. Annual Performance of Modified Greenhouse Dryer under Passive Mode in No-Load Conditions. **International Journal of Green Energy (Taylor & Francis)**. 12, Issue 11, 2015 pages 1091-1099. DOI:10.1080/15435075.2014.961461. Impact Factor: 1.469
58. **Anil Kumar**, Nitin Kumar, Prashant Baredar, Ashish Shukla. A Review on Biomass Energy Resources, Potential, Conversion and Policy in India. **Renewable and Sustainable Energy Reviews**. Volume 45, May 2015, Pages 530-539. SCI Impact Factor: 8.05 <https://doi.org/10.1016/j.rser.2015.02.007>
59. Trilok Singh Bisoniya, **Anil Kumar**, Prashant Baredar. Energy Metrics of Earth-Air Heat Exchanger System for Hot and Dry Climatic Conditions of India. **Energy and Buildings** 86 (2015) 214-221 (ISSN: 0378-7788). (SCI Impact Factor 4.067) <https://doi.org/10.1016/j.enbuild.2014.10.012>
60. **Anil Kumar**, Prashant Baredar, Uzma Qureshi. Historical and Recent Development of Photovoltaic Thermal (PV-T) Technologies. **Renewable and Sustainable Energy Reviews** 42 (2015) 1428-1436. SCI Impact Factor: 8.05. <https://doi.org/10.1016/j.rser.2014.11.044>
61. Trilok Singh Bisoniya, **Anil Kumar** and Prashant Baredar. Heating potential evaluation of earth-air heat exchanger system for winter season. **Journal of Building Physics**. 2015, Vol. 39(3): 242-260. DOI: 10.1177/1744259114542403. (SCI Impact Factor: 1.419).

#### Year 2014

62. R. Singh, NH Mohan. A. Bhatia, A. Shukla, M. Srivastava, and **Anil Kumar**. Sources and strategies for reducing ammonia emission from pig farms. **International Journal of Frontier in Technology** Vol 1. No.2, Sept. 2014, 1-12. (ISSN No. ISSN 2350-0344).
63. Vipin Shrivastava, **Anil Kumar**, Prashant Baredar. Development and Performance Evaluation of modified Solar Air Heater Integrated with drying Chamber. **International Journal of Mechanical Engineering Research** 3(2): 96-104 (ISSN: 2277-8128)
64. Om Prakash and **Anil Kumar**. Environmental Analysis and Mathematical Modelling for Tomato Flakes Drying in Modified Greenhouse Dryer under Active Mode. **International Journal of Food Engineering (IJFE)** 2014 (SCI Impact Factor: 0.683). 10 (4); 669-681. doi 10.1515/ijfe-2013-0063.

65. **Anil Kumar**, Renu Singh, Om Prakash, Ashutosh. Review on Global Solar Drying Status. **Agric Eng Int: CIGR Journal** (ISSN: 16821130) Vol.16 No.4; 161-177 (2014).
66. A.S. Chandel, Prabhash Jain and **Anil Kumar**. Case study on cold air distribution of Data Centre. *International research Journal of Engineering & Applied Science*. Vol.02, Issue 04 (2014). ISSN 2322-082.
67. Om Prakash and **Anil Kumar**. Application of artificial neural network for the prediction of jaggery mass during drying inside the natural convection greenhouse dryer. **International Journal of Ambient Energy**. Volume 35, Issue 4, 2014 pages 186-192, ISSN 0143-0750 (Print). (Taylor & Francis) <http://dx.doi.org/10.1080/01430750.2013.793455>
68. Vipin Shrivastava, **Anil Kumar**, Prashant Baredar. Developments in Indirect Solar Dryer: A Review (ID: IJWRE-4103). **International Journal of Wind and Renewable Energy** 3(4), 67-74. (ISSN: 2277-3975).
69. **Anil Kumar**, Biswajit Mandal, Prashant Baredar and S. Suresh. Effect of Process Parameters on Biogas Production from Floating Drum Digester. **International Journal of Frontier in Technology** Vol 1. (01), Sept. 2014, 8-14. (ISSN No. ISSN 2350-0344)
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## CONFERENCE/SEMINAR PROCEEDING

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4. Om Prakash **Anil Kumar**, and Atul Kumar. Chapter 11: **Solar Drying**, Geothermal, Wind and Solar Energy Applications in Agriculture and Aquaculture Sustainable Energy Developments Editors: Jochen Bundschuh, Guangnan Chen, D. Chandrasekharam, Janusz Piechocki, Publisher: **CRC Press, 2017**, ISBN: 135165814X, 9781351658140
5. **Anil Kumar**, Harsh Deep, Om Prakash\*, O. V. Ekechukwu, Chapter: **Advancement in Greenhouse Drying System**, Book entitled "Solar Drying Technology: concept design testing modeling economics and the environment" published by Springer Singapore in 2017. Series Title: Green Energy and Technology, eBook ISBN 978-981-10-3833-4, Hardcover ISBN 978-981-10-3832-7, Series ISSN 1865-3529.
6. **Anil Kumar**, Saurabh Ranjan, Om Prakash\*, Ashish Shukla. Chapter: **Exergy Analysis of Solar Dryer**. a book entitled "Solar Drying Technology: concept design testing modeling economics and the environment" published by Springer Singapore in 2017. Series Title: Green Energy and Technology, eBook ISBN 978-981-10-3833-4, Hardcover ISBN 978-981-10-3832-7, Series ISSN 1865-3529, Chapter 8. (2017)
7. Om Prakash, Saurabh Ranjan, **Anil Kumar\***, P. P. Tripathy. Chapter: **Applications of Soft Computing in Solar Drying Systems**. A book entitled "Solar Drying Technology: concept design testing modeling economics and the environment" published by Springer Singapore in 2017. Series Title: Green Energy and Technology, eBook ISBN 978-981-10-3833-4, Hardcover ISBN 978-981-10-3832-7, Series ISSN 1865-3529, Chapter 14. (2017)
8. Om Prakash, Saurabh Ranjan, **Anil Kumar**, Ravi Gupta. **Economic Analysis of Various Developed Solar Dryers**. Book entitled "Solar Drying Technology: concept design testing modeling economics and the environment" published by Springer Singapore in 2017. Series Title: Green Energy and Technology, eBook ISBN 978-981-10-3833-4, Hardcover ISBN 978-981-10-3832-7, Series ISSN 1865-3529, Chapter 17. (2017)
9. Om Prakash, **Anil Kumar**, Prashant Singh Chauhan, Daniel I. Onwude. **Energy Analysis of the Direct/Indirect Solar Drying System**, a book entitled "Solar Drying Technology: concept design testing modeling economics and the environment" published by Springer Singapore in 2017. Series Title: Green Energy and Technology, eBook ISBN 978-981-10-3833-4, Hardcover ISBN 978-981-10-3832-7, Series ISSN 1865-3529. (2017)
10. **Anil Kumar**, Tekasakul Perapong, Prashant Singh Chauhan. **Application of Nano Particle/Fluid in Performance Enhancement of Solar Still: A Review** In Springer Proceedings in Energy, G. Anand et al. (eds.), Nanotechnology for Energy and Water, Springer International Publishing AG, [DOI 10.1007/978-3-319-63085-4\\_1](https://doi.org/10.1007/978-3-319-63085-4_1). (2017).
11. Anshika Rani, S. Suresh, **Anil Kumar**. **A Review on Application of Integrated Solar and Bioenergy Based Technology** (Pages 33-39), Biofuels and Bioenergy (BICE2016), International Conference, Bhopal, India, 23-25 February 2016; Editors S. Suresh, Anil Kumar, Ashish Shukla, Renu Singh and C.M. Krishna. Print ISBN 978-3-319-47255-3, DOI 10.1007/978-3-319-47257-7. (2016)
12. Om Prakash, Saket Pratap, and **Anil Kumar**. Chapter 10: **Energy Security and Sustainability through Wind Energy**. *Energy Security and Sustainability* Edited by Amritanshu Shukla Atul Sharma Taylor & Francis Group, CRC Press Print ISBN: 978-1-4987-5443-9, eBook ISBN: 978-1-4987-5444-6. (2016)
13. Geetam Richhariya and **Anil Kumar**. Chapter 4: **Review on Performance Affected Parameters for Dye Sensitized Solar Cell**. *Energy Security and Sustainability* Edited by Amritanshu Shukla Atul Sharma Taylor & Francis Group, CRC Press Print ISBN: 978-1-4987-5443-9, eBook ISBN: 978-1-4987-5444-6. (2016)
14. **Anil Kumar**, Biswajit Mandal, Atul Sharma. Chapter: **Advancement in Biogas Digester**. *Energy Sustainability Through Green Energy*, edited by Atul Sharma, Sanjay Kumar Kar, 04/2015: chapter 14: pages 351-382; Springer, ISBN: 978-81-322-2336-8. (2015). DOI [978-81-322-2337-5\\_14](https://doi.org/10.1007/978-81-322-2337-5_14)
15. **Anil Kumar**, Geetam Richhariya, Atul Sharma. Chapter: **Solar Photovoltaic Technology and Its Sustainability**. *Energy Sustainability Through Green Energy*, edited by Atul Sharma, Sanjay

Kumar Kar, 04/2015: chapter 1: pages 3-25; Springer, ISBN: 978-81-322-2336-8. (2015). DOI 978-81-322-2337-5\_1

16. Atul Sharma, Jaya Srivastava, Anil Kumar. **A comprehensive overview of renewable energy status in India**. In "Environmental Sustainability - Role of green technologies". Eds. P. Thangavel, G.Sridevi. Springer India. ISBN: 978-81-322-2055-8. Pages 91-105 (2015). DOI 978-81-322-2056-5\_5

#### PATENT

1. Patent entitled "**Modified Greenhouse Dryer**", Anil Kumar and Om Prakash (2013), Application No.: 783/MUM/2013 A, Official Journal of the Patent Office Issue No. 36/2013 date 06/09/2013, International Classification F26B19/00. (Revised and Replied comments in Sept 2018).
2. Patent entitled "**A Solar Photovoltaic System**", Anil Kumar, Uzma Qureshi and Mohammed Amaan. Application No.: 3350/MUM/2014A, Official Journal of the Patent Office Issue No. 45/2014 date 07/11/2014, International Classification G05F1/67.

#### SPONSORED RESEARCH & INDUSTRIAL CONSULTANCY

<i>Projects</i>		
<b>Project Title</b>	<b>Sponsor, Period</b>	<b>Investigators</b>
Experimental thermal performance analysis of Earth Air Heat Exchanger for hot and dry. <b>Amount of grant: 05.96 Lakhs (INR)</b>	MHRD-MANIT Scheme July 2011- July 2013	Anil Kumar
Installation of Pyranometer for study on Diffuse Solar Radiation in Bhopal Climatic Conditions. <b>Amount of grant: 07.00 Lakhs (INR)</b>	TEQIP, MANIT-Bhopal July 2014- Feb 2015	Anil Kumar
Development of High Efficiency Ribbed Smoked Sheet Rubber Production Using Renewable Energy for Small Entrepreneurs in All Regions <b>Amount of grant: 2,516,000 Thai Baht</b>	National Research Project, Thailand Oct 2010- Oct2015	Anil Kumar (Student Mentor)
A Heat-Recirculating Combined-Energy- Source Banana Dryer <b>Amount of grant: 473,000 Thai Baht</b>	Annual Government Research Fund through University, Hat Yai, Thailand Oct 2015- Dec 2016	Anil Kumar (Team Member)
Optimization of operating parameters for rubber sheet fast drying <b>Amount of grant: 440,000 Thai Baht</b>	National Research University Grant, Thailand Year: March 2016- Dec 2017	PI Prof. Perapong Tekasakul, CO-PI, Dr. Anil Kumar
Development of a Stand-Alone Spray Assisted Solar Thermal Desalination System <b>Amount of grant: 21.45 Lac</b>	<b>India-Iran Bilateral Scientific And Technological Cooperation, DST, Govt. of India</b> August 2018	PI, Dr. Anil Kumar

<i>Consultancy</i>			
<b>Name of firm</b>	<b>Title of consultancy</b>	<b>Amount</b>	<b>Coordinator/Co-coordinator</b>
M/S Laxmi Construction	Checking and approval of design and drawing of 14 MLD design of sewage treatment plant	Rs.59,000/-	Dr. Prashant Baredar Dr. Anil Kumar
M/S LC Infra Projects Pvt Ltd Dewas	Checking and approval of design and drawing of pumping machinery and	Rs.59,000/-	Dr. Prashant Baredar Dr. Anil Kumar

	rising main for sewage treatment plant and disbursement note.		
M/S LC Infra Projects Pvt Ltd Dewas	Checking and approval of Electro Mechanical Equipment for sewage treatment plant Dewas municipal corporation, Dewas, M.P	Rs.1,18,000/-	Dr. Prashant Baredar Dr. Anil Kumar
MP Urja Vikas Nigam, Bhopal April 2011 to June 2011	Investment Grade Energy Audit of Rajgarh Collectorate	Rs.25,000/-	Anil Kumar and Others
Sriram Deo & Company, Bhopal November 2012	Testing of Thermal Efficiency of Biomass Stove	Rs.2,000/-	Dr. Prashant Baredar Dr. Anil Kumar

## CONFERENCES & WORKSHOPS ORGANISED

1. **Co-Coordinator**, "Global Conference on Renewable Energy" (GCRE-2015) 04-06 March, 2016 organised by National Institute of Technology Patna. NIT, Patna in collaboration with CESD-Net.
2. **Coordinator**, Bio-Fuels and Bio-Energy: An International Conference and Exhibition (BICE-2016) 23-25, February 2016 organised by Chemical Engineering Department, MANIT-Bhopal in collaboration with World Energy and Environment Technology Limited (**WEENTECH**), **United Kingdom** in M.A.N.I.T, Bhopal.
3. **Coordinator**, *self-sponsored* One week STTP on **Recent Trends in Solar and Wind Energy** (RTSWE-2015) from 13-17- Feb 2015, Organized at Dept. of Mechanical Engineering, MANIT, Bhopal.
4. **Coordinator**, *self sponsored* Two Days **International Workshop on Physics of Passive House Design** during 24-25<sup>th</sup> December 2014, Organized Jointly with WEENTECH. Ltd, UK and Energy Centre MANIT, Bhopal, MANIT, Bhopal.
5. **Coordinator**, *self-sponsored* One Week Short Term Training Programme on **Energy Conversion Systems-Fundamentals and Applications** during 26-30<sup>th</sup> May 2014, Organized at Energy Centre, MANIT, Bhopal.
6. **Coordinator**, one-week Short Term Training Programme on **Bio-Energy Conversion Technologies** during 24-28<sup>th</sup> December 2013, Organized at Dept. of Chemical Engg., MANIT, Bhopal.
7. **Coordinator**, one-week Short Term Training Programme on **Recent Advances in Renewable Energy System** during 21-25<sup>th</sup> October 2013, Organized at Dept. of Energy, M.A.N.I.T., Bhopal.
8. **Coordinator**, Tatkal Bhashad Pratiyogita organized for contract teachers, under Rajya Bhasha Karayavan Simiti, MANIT, Bhopal on 19<sup>th</sup> Sept. 2013.
9. **Coordinator**, one-week Short Term Training Programme on **Solar Energy and its Applications** during 24-28<sup>th</sup> June 2013, Organized at Dept. of Energy and Mechanical Engineering, M.A.N.I.T., Bhopal.
10. **Coordinator** Two Days National Workshop on **Emerging Technologies for Conversion of Biomass to Bio-fuel** during 22-23 September, 2012, Dept. of Energy, M.A.N.I.T., Bhopal.
11. **Coordinator**, Poster Competition of National Science Day Celebrations 2012 on **Clean Energy Options & Nuclear Safety** organized by Dept. of Energy, MANIT, Bhopal on 26<sup>th</sup> March 2012.
12. **Coordinator**, Slogan Competition of National Science Day Celebrations 2012 on **Clean Energy Options & Nuclear Safety** organized by Dept. of Energy, MANIT, Bhopal on 26<sup>th</sup> March 2012.
13. **Coordinator**, Two Days National Seminar on **Energy, Environment and Sustainability** during 01-02 March, 2012, Dept. of Energy, M.A.N.I.T., Bhopal.

## LECTURES DELIVERED IN SHORT TERM COURSES/FACULTY DEVELOPMENT PROGRAMMES

1. **Keynote Speaker** in "International workshop on "Challenges and issues in the development of distributed solar and wind energy systems" and "Fourth International Conference on Energy



- Systems and Developments 2017" organised by KJEI'S Trinity College of Engineering and Research, Pune from February 20-24, 2017, Pune, India.
2. **Keynote Speaker** in National Conference on "Advances in Renewable and Sustainable Energy-2015(ARSE-2015)" March 18-20, 2015 at Jai Narain College of Technology (JNCT), Bhopal (M.P.)
  3. **Key Note Address** in 2nd International Conference on Emerging Trends in Agriculture, Horticulture and Environmental Engineering Conference, 15th to 17th November 2014, Bhopal, Madhya Pradesh, India.
  4. Two days National Seminar on **Green Manufacturing** Organized by Department of Mech. Engg., IES College of Technology, Bhopal (India) during 13-14<sup>th</sup> October 2014.
  5. National workshop on **Green Chemistry and Green Engineering for Sustainable Environment** Organised by Department of Chemical Engineering, Institute of Engineering & Science, IPS Academy, Indore (India) during 21-22 Aug 2014.
  6. Short Term Training Program on **Power Electronics Applications in Renewable Energy Sources (PARES 2014)** Organised by Department of Electrical Engineering of Maulana Azad National Institute of Technology, Bhopal from 30<sup>th</sup> June - 4<sup>th</sup> July 2014.
  7. Short Term Training Programme on **Green Chemistry and Engineering: Past, Present and Future** Organised by Department of Chemical Engineering, M.A.N.I.T., Bhopal from 30<sup>th</sup> June-4<sup>th</sup> July 2014.
  8. Faculty Development Program on **Advanced Technologies adopted in Renewable Energy Sources** organized at Barkatullah University Institute of Technology (BUIIT) from June 23<sup>rd</sup>-27<sup>th</sup>, 2014.
  9. Short Term Course on **Ordinary and Partial Differential Equation: Analysis and Applications** organized at Department of Mathematics & Computer Applications during 27-31 May, 2014.
  10. Faculty Development Programme on **Recent Advances in Renewable Energy & its Application Including Automobile Industries** sponsored by Indian Society of Technical Education(ISTE) & Punjab Technical University(PTU) organized by Prestige Institute of Engineering & Science, Indore from 5<sup>th</sup> -9<sup>th</sup> May, 2014.
  11. Short Term Course on **Recent Trends in Solar and Wind Energy** organised by Dept. of Mech. Engg, at Maulana Azad National Institute of Technology (MANIT), Bhopal, during 07-11 Feb, 2014.
  12. Short Term Training Programme on **Emerging Trends in Electric Power and Energy Systems (ETEPES-2014)** organised by Department of Electrical Engineering of Maulana Azad National Institute of Technology, Bhopal from 1-5 Jan'14.
  13. Short Term Course on **Advances in Heat and Mass Transfer** organised by Dept. of Mech. & Chemical Engg, at Maulana Azad National Institute of Technology (MANIT), Bhopal, during 03-07 June, 2013.

#### ATTENDED SHORT TERM COURSES / QIP PROGRAMMES / FP PROGRAMMES

1. Participated in (i) **The 4th Prince of Songkla University-Kanazawa University Joint Workshop**, (ii) **The 3rd Workshop on East Asia Nanoparticle Monitoring Network** (iii) **The 3rd Workshop on Environmental Issue Related to Agriculture and Agro-Industries in South East Asia** from 8-9 December 2015 at Prince of Songkla University, Hat Yai-Thailand.
2. Participated in Training Programme on "**Energy Conservation and Management in Industries**", organised by PHD Chambers of Commerce and Industry of India and Konard-Agenauer -Stiftung on 31 March 2015.
3. Participated in Short Term Course on **Mathematical Modeling, MATLAB Programming and their Applications in Engineering and Sciences**, organised by Department of Mathematics of Malaviya National Institute of technology Jaipur, during 19-23 January, 2015 (**One week**).
4. Participated in International Workshop on **Design of sub-systems for Concentrated Solar Power (CSP) Technologies**. Organised by Center for Solar Energy Technologies (CSET), Indian Institute of Technology Jodhpur during 19-22 December, 2013.
5. Participated in National Seminar on **Recent Trends in Alternative Automotive Fuels**, organised by Dept. of Mech. Engg. UIT, RGPV, Bhopal during 04-05 October, 2013.
6. Participated in Workshop on **Academic Workshop on Design and Management of Change** 24<sup>th</sup> August, 2013, organised by Maulana Azad National Institute of Technology (MANIT), Bhopal.

7. Participated in Short Term Course on **Advances in Heat and Mass Transfer** organised by Dept. of Mech. & Chemical Engg, at Maulana Azad National Institute of Technology (MANIT), Bhopal, during 03-07 JUNE, 2013. **(One week)**.
8. Participated in Conference on **“Renewable Energy in Madhya Pradesh-Investment Opportunities in Solar, Wind & Biomass Energy”**, organised by The Associated Chambers of Commerce and Industry of India (ASSOCHAM), at Noor Us-Sabah Place, Bhopal held on 09 May, 2013.
9. Participated in National Workshop on **“Advanced Tools for Material Characterizations (ATMC-2013)”**,organised by Department of Chemical Engineering with Department of MSME, at Maulana Azad National Institute of Technology (MANIT), Bhopal, during 01-05 April, 2013.
10. Participated in Short Term Course on **Small Hydropower Development**, organised by AHEC, IIT Roorkee, during Feb 18-22, 2013. **(One week)**.
11. Participated in Short Term Course on **Simulation and Modeling by using MATLAB**, organised by Dept. of Mech. Engg., National Institute of Teachers Training and Research, Chandigarh, during January 14-18, 2013. **(One week)**.
12. Participated in Short Term Course on **MATLAB**, organised by Dept. of Electrical Engg., M.A.N.I.T., Bhopal and sponsored by TEQIP – II, during January 07-11, 2013. **(One week)**.
13. Participated in Short term course on *Applications of Solar Energy and Photovoltaics* under Quality Improvement Program organised by Centre for Energy Studies, Indian Institute of Technology Delhi, New Delhi (INDIA) during December 12-18, 2012. **(One week)**.
14. Participated in Seminar on *Clean Energy Options & Nuclear Safety* organized by Dept. of Energy, MANIT, Bhopal on 27<sup>th</sup> March 2012. **(One day)**.
15. Participated in workshop on **Green Technologies towards Low Carbon Society** organized by Dept. of Energy, MANIT, Bhopal on 30<sup>th</sup> March 2011. **(One day)**.
16. Participated in workshop on **Regulatory and Policy Framework for Market Development for Renewable Energy** organized by World Institute of Sustainable Energy, at Bhopal during 16- 17 September, 2010. **(Two days)**
17. Participate in workshop on *Computer Modeling and Simulation* on 12<sup>th</sup> April 2010, Dept. of Mechanical Engg., Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal. **(One day)**.
18. Participate in Short Term Course on *Alternative Sources of Energy'* under Quality Improvement Programme, during February 04-10, 2010 at Centre for Energy Studies, IIT Delhi. **(One weeks)**
19. Participate in a **One Week Faculty Development Programme on Mission 10x Learning Approach organised by Finish School**, RGPV, Bhopal from 22-26 Sept 2009 at. **(One weeks)**
20. Participate in short term course on *Alternative Sources of Energy'* under faculty development programme, during July 10-25, 2008 at Centre for Energy Studies, IIT Delhi. **(Two weeks)**.
21. Participated in workshop on *Developments in Biomass Derived Fuels and Other Renewable Energy Sources and Enhanced Energy Efficiencies in Power Generation and in Other Fuels* during June 12-13, 2008, IIT Delhi. **(Two days)**.
22. Participated in workshop on *Recent Advances in Nanotechnology* during June 2-6, 2008, school of Nanotechnology, Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal. **(One week)**.
23. Participated in Workshop on *Solid-Edge Classic 290-Software for Engineering Graphics* under Quality Improvement Program-2007 organized by Department of Industrial & Production Engineering, University Institute of Technology, Rajiv Gandhi Technological University, Bhopal (INDIA) during August 31- September 1, 2007. **(Two days)**.
24. Participated in Short Term Course on *Environmental-Hazards* under Quality Improvement Program-2007 organised by Department of Applied Science & Humanities, National Institute of Technology Hamirpur, Hamirpur (INDIA) during July 09-13, 2007. **(Two weeks)**.
25. Participated in the workshop on *Documentation of Scientific Heritage of Madhya Pradesh* organized by Vigyan Bharti, Madhya Pradesh and sponsored by M.P. council of Science and Technology held at MPCST at Vigyan Bhawan, Bhopal-MP (INDIA) during December 2-3, 2006. **(Two days)**
26. Participated in *INDEST* workshop during December 1-2, 2005, Indest Consortium, IIT Delhi. **(Two days)**.
27. Prearranged and participated in Summer Training Course on *Concept of Renewable Energy Sources* under Quality Improvement Program-2005 organised by Centre for Energy Studies, Indian Institute of Technology Delhi, New Delhi (INDIA) during June 13-27, 2005. **(Two weeks)**
28. Participated in the workshop on *ESP performance: Role of fly ash resistivity* organized by IIT Delhi and NTPC in collaboration with USAID at Indian international Centre, New Delhi (INDIA) during September 23-24, 2004. **(Two days)**.

- Participated in Summer Training Course on *Non-Conventional Sources of Energy* under Quality Improvement Program-2003 organised by Centre for Energy Studies, Indian Institute of Technology Delhi, New Delhi (INDIA) during June 16-27, 2003. **(Two weeks)**.

### INVITED TALKS

- Guest Speaker** in International Conference on Emerging Trends in Science & Technology organised by AISECT University, Bhopal, 14-15th Feb 2014.
- Expert Lecturer** in National Science Day Celebration on **Solar Photovoltaic -Thermal Applications** organised by Regional Science Centre, Bhopal, 12<sup>th</sup> March 2014.
- Expert Lecturer**, Sagar Institute of Science & Technology (SISTec), Bhopal on 21th Sept. 2013
- Series of Expert Lecturer**, Vindhya Institute of Technology & Science, Indore during 27-29th Dec 2012.
- Expert Lecturer**, Vindhya Institute of Technology & Science, Indore on 07th Jan 2012.
- Expert Lecturer**, Sagar Institute of Research & Technology, Bhopal on 28th March 2012
- Expert Lecturer**, Sagar Institute of Science & Technology (SISTec), Bhopal on 17th March 2012.

### MEMBERSHIP OF PROFESSIONAL BODIES

- Life Membership, India Society for Technical Education (**LM-51948**).
- Life Membership, Solar Energy Society of India (**LM/1757/2012**).
- Life Membership, Global Earth Society for Environmental Energy and Development (**L/165/12**).
- Member, Institute of Engineers, (vide no. **M 147564-3**, date of election 30.09.13)
- Annual Membership, Academic Society of Science Engineering & Technology (**ASSET**) (**AM1809F06**).
- Annual Membership, World Researchers Associations (**AM/2018/0014**).

### MEMBER EDITORIAL BOARD

- Member, Editorial Board**, Maejo International Journal of Science and Technology (ISSN 1905-7873 © 2007)
- Editorial Advisory Board Member**, Current Alternative Energy, **Bentham Science Publisher**.
- Consulting Editor**, International Journal of Advance Research in Science and Engineering (IJARSE) ISSN: 2319-8354.
- Member**, Scientific Board of Industrial & Mechanical Engineers, International Institute of Engineers.
- Editorial Board Members**: International Journal of Innovation in Engineering Research and Management (ISSN 2348 - 4918)
- Editorial Board Members**, International Journal of Frontier in Technology (IJFT), MANIT, Bhopal.
- Editorial Board Member**, International Journal of Innovative Research in Technology and Management (IJIRTM)

### REVIEWER FOR THE INTERNATIONAL JOURNAL

- Applied Thermal Engineering-Elsevier
- International Journal of Ionics The Science and Technology of Ionic Motion- Springer
- Renewable and Sustainable Energy Reviews -Elsevier
- International Journal of Sustainable Energy-Tylor and Francis
- International Journal of Green Energy-Tylor and Francis
- International Journal of Pavement Research and Technology-Elsevier
- Journal of Alternate Energy Sources & Technologies
- Journal of Construction in Developing Countries
- International Institute of Engineers

### PH.D. GUIDED STUDENTS

S. No.	Name	Topic	Year	Supervisors

1	Trilok Singh Bisoniya (Scholar No.113213203)	Parametric Thermal Performance and Energy Analysis of Earth-Air Heat Exchanger	2014	Dr. Anil Kumar Dr. Prashant Baredar
2	Uzma Qureshi (Scholar No.113213202)	Experimental Investigation and Soft Computing Modelling of Hybrid PVT Solar Collector	2015	Dr. Prashant Baredar Dr. Anil Kumar
3	Vipin Shrivastava (Scholar No.113213204)	Drying Kinetics and Heat Transfer Analysis of Fenugreek Using Modified Indirect Solar Dryer	2015	Dr. Anil Kumar Dr. Prashant Baredar
4	Om Prakash (Scholar No. 123113202)	Design and Performance Analysis of Modified Greenhouse Dryer	2015	Dr. Anil Kumar
5	Prashant Singh Chauhan (Scholar No. 133118001)	Thermal Modeling of North Wall Insulated Greenhouse Dryer	2017	Dr. Anil Kumar

### M.Tech. (Master Degree) GUIDED STUDENTS

S. No.	Name of Student	Thesis Title	Year	Supervisors
1.	Kavita Bagri (092113206)	Effect of Design and Climatic Parameters on Performance of Domestic Type Single Slope Solar Still	2011	Dr. Anil Kumar
2.	Prashant Singh Chauhan (092113208)	Drying Behaviour of Tomato slice and Chillies under Open Sun Greenhouse Condition	2011	Dr. Anil Kumar Dr. Prashant Baredar
3.	Rajesh Mandapati (102113204)	Performance Assessment of Photovoltaic Thermal (PV/T) System Under Different Cooling Modes	2012	Dr. Anil Kumar Dr. Prashant Baredar
4.	Rajeev Ranjan Kumar (102113212)	Design and Performance Testing of Integrated Vertical Axis Turbine	2012	Dr. Prashant Baredar Dr. Anil Kumar
5.	Rahul Mishra (102113215)	Design, Fabrication and Performance Analysis of Hydraulic Operated Sun Tracking System	2012	Dr. Anil Kumar
6.	Arvind Kumar Gupta (102113216)	Drying Behaviour of Chilli and Tomato Slices in Indirect Solar Dryer	2012	Dr. Anil Kumar
7.	Ashutosh (112113211)	Prediction of Greenhouse Dryer Temperature and Coefficient of Diffusivity under NO LOAD condition	2013	Dr. Anil Kumar
8.	Nitin Kumar (122118106)	Power productivity Enhancement Using Performance Analysis of Biomass Gasifier	2014	Dr. Prashant Baredar
9.	Devendra Singh (122118108)	Thermo-Enviriono Analysis of Double Pass Solar Air Heater	2014	Dr. Anil Kumar
10.	Tanisha Gaur (122118118)	Simulation and Modelling of Double Pass Solar Air Collector with Storage Effect	2014	Dr. Anil Kumar
11.	Biswajit Mandal (122118209)	Experimental Study on Biogas Production in Prefabricated FRP Floating Drum Digester	2014	Dr. Prashant Baredar Dr. Anil Kumar
12.	Pankaj Patware	Thermal Performance Analysis of	2014	Dr. Anil Kumar

	(122118221)	Low Cost Solar Cooking Systems		
13.	Surendra Kumar (132118115)	Modelling and Simulation of Biomass Gasifier Connected to Synchronous Generator	2015	Dr. Prashant Baredar Dr. Anil Kumar
14.	Anushka Pradhan (132118116)	Design and Analysis of STHE for Waste Heat Recovery from 5kW Gasifier System	2015	Dr. Prashant Baredar Dr. Anil Kumar
15.	Mohit Kumar Junotja (132118121)	Micro level Study of Silicon Solar PV Industrial Process and Embodied Energy Analysis	2015	Dr. Anil Kumar Dr. Sanjay Tyagi
16.	Sanjeev Kumar Bhukesh (132118203)	Design, Development and Experimental Study of Concentrated Solar Thermo-Electric Generator	2015	Dr. Anil Kumar
17.	Mratyunjay Singh (132118219)	Modelling and Simulation of Solar Thermo Electric Generator	2015	Dr. Anil Kumar
18.	Sanjay Nirapure (132118220)	Performance Prediction and Efficiency Improvement of Downdraft Gasifier.	2015	Dr. Prashant Baredar Dr. Anil Kumar
19.	Mukul Sharma (162118205)	Modeling , Simulation and Energy Analysis of Domestic Multi-Self Solar Dryer	2018	Dr. Anil Kumar
20.	Rahul Yadav (162118207)	Performance Analysis of CSP based Single Slope Solar Still	2018	Dr. Anil Kumar
21.	Lothugedda Hemagiri (162118223)	Experimental Study on End Losses Characteristics in Parabolic Trough Collector	2018	Dr. Anil Kumar
22.	Ashay Mhaeo Gaikwad (162118214)	Design and Techno-Economic Analysis of Floating Solar PV System	2018	Dr. Anil Kumar
23.	Ravi Kant (162118218)	Performance Evaluation of Hybrid Single Slope Active and Passive Solar Still	2018	Dr. Anil Kumar

## COUNTRY VISITED

Academic visit to United Kingdom and Thailand, and Personal visit to Malaysia

## LANGUAGE KNOWN

Hindi, English, Basic Thai and Basic Japanese

## ADMINISTRATIVE EXPERIENCE / POSTS HELD

Post Held	Tenure	Responsibilities
<i>Convener (RE), DPPC Committee, Energy Centre, MANIT Bhopal</i>	Aug 2018 to Till date	Coordinate all academic activities of M.Tech. (RE)
<i>Prof. I/c Departmental web site, Energy Centre, MANIT, Bhopal</i>	April 2018 to Till date	All activities of improvements of departmental web page on institute website
<i>Departmental TPO Coordinator, TPO Cell, M.A.N.I.T., Bhopal</i>	April 2017 to Till date Sept. 2010 to June 2015	All activities of TPO cell

Co-Coordinator, Dept. Research Progress Committee, MANIT, Bhopal.	Sept. 2014 to June 2015	All activities of DRPC
<i>Prof. I/c Industrial Visits &amp; Educational Tours,</i> Energy Centre, MANIT, Bhopal	Sept. 2014 to June 2015	All related activities
<i>Prof. I/c Time Table,</i> Energy Centre, MANIT, Bhopal	July 2014 to June 2015	All activities in Compiling Time Table
<i>Member</i> SC/ST Cell, MANIT, Bhopal.	July 2014 onwards	All activities of SC/ST Cell
<i>Coordinator,</i> Rajya Bhasha Karyanavan Simiti, MANIT, Bhopal	2013-14	All activities of Hindi cell
<i>Coordinator, M.Tech. (RE),</i> Energy Centre, M.A.N.I.T., Bhopal	July 2013 to June 2018 onwards	All activities of PG student coordination
<i>Warden</i> Hostel No.1, M.A.N.I.T., Bhopal	Sept. 2012 to August 2013	Administration of the Student Hostel
<i>Member,</i> Board of Studies, Department of Energy, M.A.N.I.T., Bhopal	July 2010 to present	All activities of BOG
<i>Member,</i> Anti Ragging Committee, M.A.N.I.T., Bhopal	July 2010 to June 2018 onwards	To prevent ragging in Institute
<i>Question Paper setter</i> Rajiv Gandhi Poudyogiki Vishwavidyalaya, Bhopal (MP State Technological University, Bhopal) University, Ujjain Engineering College, Ujjain, Barkatullah University, Bhopal, Institution of Engineers (India), Peoples University, Bhopal	Aug 2005 to June 2015	Setting question papers and question bank
<i>In-charge, Solar Energy Lab,</i> Energy Centre, M.A.N.I.T., Bhopal	May 2010 to June 2015	All activities of Solar Energy Laboratory
<i>Exam Coordinator,</i> Dept. of Energy, M.A.N.I.T., Bhopal	August 2010 to October 2012	All activities of examination in energy centre
<i>Member,</i> Board of Studies, Department of Mech. Engg., U.I.T., RGPV, Bhopal	July 2005 to July 2010	All activities of Board
<i>Deputy Organiser,</i> Central Valuation, Examination Centre, RGPV, Bhopal	June 2007 to July 2008	All activities of Examination Centre
<i>Coordinator,</i> Electronic Checking System & Control valuation, R.G.P.V., Bhopal	July 2008 to May 2010	All activities of Examination valuation Centre

## SPORTS INTEREST AND ACHIEVEMENTS

1. Participated in "**Marathon**" in the Sport Fiesta, Prince of Songkla University, Hat Yai, Thailand from September 30 April - 14 May 2016.
2. "**Silver Medal Winner**" of **Marathon** competition in Sport Fiesta, Prince of Songkla University, Hat Yai, Thailand from 13-21 May 2017.
3. "**Bronze Medal Winner**" of **Swimming Competition** in Sport Fiesta, Prince of Songkla University, Hat Yai, Thailand from 13-21 May 2017.

## OTHER INFORMATION

1. **Member Advisory Committee,** *International Round table on "PV and CSP for Cost-Effective Solar Power"* at RGPV, Bhopal, India on 28<sup>th</sup> March 2018 under TEQIP-III programme organised by RGPV (Rajiv Gandhi Technical University in Madhya Pradesh) and Tokyo Institute of technology, Japan.

2. **Ph.D. Thesis Examiner** in Anna University, Chennai, Gujarat Technological University and K.N.Modi University, Newai.
3. Successfully completed **Thai Language Course** organised by PSU International Affair Office, Prince of Songkla University, Hat Yai, Thailand from September 8-November 3, 2016.
4. Have done **Basic-1 Japanese language** course from 30.06.1998 to 19.11.1998 from FAAAI in cooperation of Association for overseas Technical Scholarship (AOTS) New Delhi.

**Date & Place:** 05/01/2019 & Delhi (India)

**(Dr. Anil Kumar)**