

Experience

- Principal, BIT- Durg 2010 - July 2025
- Professor in the Department of Mechanical Engineering, BIT, Durg 2003-2010
- 36 years of Teaching and research experience in the Department of Mechanical Engineering.
- Promoted to the Post of Associate Professor in the year 1998.
- Joined BIT Durg, as a Lecturer in the Department of Mechanical Engineering in 1988

Education

- Ph.D. (Mechanical Engineering) 2006 from Pt. Ravishankar Shukla University, Raipur (CG) – 2006 Topic: "Development and Optimization of Pyrolysis Technology for Production of Liquid Fuels from Rice Husk"
- Master of Engineering (Mechanical Engineering. With Specialization in Thermal Engineering) 1995
From University of Roorkee (Currently IIT Roorkee)
First Class with Honors 80%
- B.E. (Mechanical, 1st class) 1986 from Govt. Engineering. College, Raipur in (NIT, Raipur, Chhattisgarh)

Administrative Responsibilities and Achievements

- Chairman, BOS Mechanical Engineering State Technical University, Chhattisgarh Swami Vivekanand University (CSVТУ) Bhilai.
- Dean in Mechanical Engineering from March 2019 at State Technical University, Chhattisgarh Swami Vivekanand University(CSVТУ)Bhilai.
- Ex-Member of Executive Council of CSVТУ Bhilai.
- Member Board of Studies at CSVТУ Bhilai Mechanical Engineering during 2010 – 2016.
- Dean, Mechanical Engineering at CSVТУ Bhilai during 2010 -2013
- Chairman, Board of Studies, Mechanical Engineering at CSVТУ Bhilai. As a Chairman , BOS instrumental in designing syllabus during 2005-2006.
- Dean and Chairman, Board of Studies, Mechanical Engineering at Pt. Ravishankar University, Raipur since 2003 – 2006
- Member of Core Committee for Mechanical Engineering for Curriculum Development at Pt. Ravishankar University, Bhilai

2. Member of Governing Body at Government Vishwanath Yadav Tamaskar Post-Graduate Autonomous College, Durg, Chhattisgarh.
3. Member of Academic Council at Government Vishwanath Yadav Tamaskar Post-Graduate Autonomous College, Durg, Chhattisgarh.
4. Institute Coordinator of AICTE Margdarshan Scheme. The Institute has been granted Margdarshan Scheme w.e.f. 2018 and is presently mentoring ten Institutions of Chhattisgarh
5. Vice Principal of BIT, DURG for the duration July 2008 – March 2010
6. Head of Department Mechanical Engineering [2003-2010]
 - Department of Mechanical Engineering was accredited by NBA for academic year 2005-2008

7. Principal of BIT Durg since January 2010 – July 2025

During the tenure as a Principal

- The Institute received NAAC accreditation as “A” grade in Cycle 2 w.e.f. 2023-2027.
- Institute received NBA accreditation for Seven UG programs and one PG Program (CSE, Electronics & TC, Civil Engineering, Electrical Engineering, Mechanical Engineering, Information Technology, Electrical & Electronics Engineering and MBA) for academic years 2017-2020 & 2021-2025.
- Institute received NBA accreditation for five UG programs (CSE, Electronics & TC, Civil Engineering, Electrical Engineering, Mechanical Engineering) for academic years 2012-2015.
- The Institute has been ranked under Engineering category in the rank band of 150 -200 in NIRF 2017 & NIRF 2018.
- The Institute received NAAC accreditation as “A” grade in Cycle 1 w.e.f. 2017-2022.
- Introduced three new M.Tech programmes: E-security, Computer Network, Industrial Drives & Control w.e.f. 2015
- Introduced two new M.Tech programmes in the Institute : Data Science and Electrical Power & Energy System w.e.f. 2018
- Increased the intake of B.E. Civil Engineering and B.E. Electrical Engineering from 60 to 120 w.e.f. 2018.
- Ten Departments of the Institute has been recognized as research centres for pursuing Ph.D. 160 research scholars are registered in various Departments for pursuing Ph.D.

▪ **Initiated the International Collaborations :**

- Initiated the student and academic staff exchange programme with Silesian University in Opava, Czech Republic under European Exchange Fellowship Program.
- Initiated the training of students at NCUT Taiwan.

▪ **Strengthened the Entrepreneurship Cell**

- MoU with Department of Commerce and Industry, Government of Chhattisgarh for promoting startups.
- MoU with AIC@36Inc Government of Chhattisgarh for Training, Entrepreneurship development, startups , Industry Interaction etc.
- MoU with M/S BSBK Pvt. Ltd., Bhilai for consultancy and existing testing of water samples of BSBK.
- MoU with Department of Chemistry Govt. D.T.P.G. college, Utai, Durg for Develop academic and educational cooperation.
- MoU with Sunveg Energy systems Pvt. Ltd., A CREDA Registered System Integrator for entrepreneur support system.
- MoU with Govt. Dr. W.W.Patankar Girls P.G. College, Durg C.G. for promoting research and training, exchange of faculty, students and conduction of FDPs in the field Entrepreneurship and Management.
- MoU with The Department of Chemistry, Division for Radio Chemistry university of Sarajevo Bosnin and Herzegovina for Academic and Scientific Colabration.
- MoU with The institute of Nuclear Sciences, Ege university, Turkey for Promote Cooperation in Engineering and Scientific Research.
- MoU with The Department of Chemistry, university of North Bengal, Darjeeling for Develop academic and educational cooperation.
- MoU with The Department of Chemistry, Sukanta Mahavidyalaya, Dhupguri, JalpaiGuri for Develop academic and educational cooperation.
- MoU with School of Studies in Mathematics, Vikram University, Ujjain for Develop academic and educational cooperation.
- MoU with Indian Meteorological Society, New Delhi to hold Meteorological Station at BIT, Durg for Production of data for National Interest.

8. Enhanced the contribution of Institute towards Society

- Institute has adopted Bhanpuri Village
- Initiated a Unit of NSS with a strength of 100 students exclusively for girls.
- Initiated a Unit of NCC for Boys with a strength of 52 in the year 2013
- Started Unit of NCC exclusively for girls with a strength of 54 in the year 2018.
- Institute received “**BEST NSS Unit 2016**” Award

9. Institute is selected by AICTE to establish IDEA LAB in 2021

10. Initiated the MoU with NITTTR Bhopal. BIT Durg is presently recognized as one of the Training Institute (TI) for developing, validating and disseminating much needed “Learning Resources” through trained “Trainer Educators” for the larger fraternity of technical education and in turn supporting vocationalisation of technical education.

11. Institute received ISTE “**BEST CHAPTER AWARD**” 2015

12. Established the culture of research in the Institute by

- Initiating the National Conference to be organized yearly in all the Departments of the Institute.
- Initiating the Financial reward scheme for faculty members to encourage for Quality research publications.

Research & Development

Patents & Software Copyright:

- Front Wheel Drive System for Motorcycle, CBR No. 12026 dated 26.05.17
- Intermediate Pyrolysis of Medicinal Plants, CBR No. 32389 dated 05.05.16
- Automated vehicle monitoring system using Android SW-10693/2018
- Biometric Vehicle Ignition System SW-12926/2019
- Automatic Toilet/ Urinal Flush System SW-12167/2019

Research Projects:

- Legal Representative of Erasmus + project key activity 171-mobility of higher education students and staff supported by European Union worth 20200 Euro for three years (1st Aug. 2023 to 31st Jul. 2026).
- Chief Mentor of AICTE- IDEA LAB sanctioned by All India Council for Technical Education (AICTE), New Delhi worth Rs. 90.60 Lakhs for two years from Sep. 2021.
- Project Investigator of Mini Research Project entitled, “Development of Eco-Friendly Device which capture CO₂ from atmosphere and convert it to fuel.” sanctioned by Chhattisgarh Council of Science and Technology (CCOST) Raipur (CG) worth Rs. 1.12 Lakhs for two years from March 2013.
- Principal Investigator of Research Promotion Scheme entitled, “Design and

Development of Pyrolysis Reactor for Extracting Oil for Herbal Mosquito Repelling Machine”, sponsored by All India Council for Technical Education, New Delhi worth Rs. Fourteen Lakhs Forty Thousand for two year from January 2012.

- President of Research Committee for Project entitled, “Design of a Herbal Mosquito Repellent/Killing Machine” sanctioned by Chhattisgarh Rajya Vanoushadhi Board(CG) worth Rs. 3 Lakhs for three years from August 2008.

Research Guidance:

- Awarded 06 Research Scholars.
- 3 research Scholars under guidance.

S.No.	Name of Candidate Registered	Topic	University	Position	Status
1	Shiena C. Shekhar	A Framework for a Model of Critical Success Factor of Technical Education	CSVТУ, Bhilai	Supervisor	Awarded
2	Mukesh Dubey	Thermal Modelling and Analysis of Waste Energy Recovery System	C.V. Raman University, Bilaspur	Supervisor	Awarded
3	M.K. Pal	Critical Thermodynamic Analysis of Thermal Power Plants to Conserve Energy	C.V. Raman University, Bilaspur	Supervisor	Awarded
4	Santosh Kumar Mishra	Numerical Studies on Non-Newtonian Fluid Flow through Pipe Using CFD	CSVТУ, Bhilai	Supervisor	Awarded
5	Saurabh Kumar	Experimental Investigations on Gas Fluidization of Solids in Stationary Liquid	CSVТУ, Bhilai	Supervisor	Awarded
6	Manish Kumar	Thermodynamic performance Analysis of Renewable Based Triple Power and Tri	CSVТУ, Bhilai	Co – Supervisor	Awarded
7	Jaysingh Gaharwar	Development of Intermediate Pyrolysis reactor for characterization of Herbal product	CSVТУ,	Supervisor	Registered

8	Jitendra Chauhan	Sustainable Synthesis and Characterization of Zinc Oxide Polymer Nanocomposite	CSVТУ , Bhilai	Supervisor	Registered
9	Arun Kumar Sao	Analysis of Thermodynamic Performance and Enhancing the Heat Transfer Rate of Air Condition Condenser Unit and its Optimization by the Application of Phase Change Materials	CSVТУ , Bhilai	Supervisor	Registered

PhD Thesis & Research Papers Reviewed

Ph.D Thesis Evaluated:

1. "Performance Evaluation of Catalytic Converter Using Different Materials in Soft-Computing Planes and Its Comparative Study", on December 2016, by Virendra Nayak at C.V. Raman University, Bilaspur, CG, India.
2. "Performance Assessment and Control of Heat Exchanger Using Soft Computing Techniques", on February 2015, by Pravin Kumar Borkar at C.V. Raman University, Bilaspur, CG, India.
3. "Investigation of Reliability Analysis of Steam Turbine and Its Fault Diagnosis Using Soft Computing Methodology", on January 2015, by Deo Narayan Dewangan at C.V. Raman University, Bilaspur, CG, India.
4. "Analysis and Control of Automatic Exhaust by Using Metal Nano Particles", on February 2014, by Mukesh Thakur at C.V. Raman University, Bilaspur, CG, India.
5. "Field Data Based Modeling and Simulation of Structural Subassemblies of Tractors", on August 2013 by Jayant P. Giri at Rashtrasant Tukdoji Maharaj Nagpur University, Nagpur, Maharashtra, India
6. "Decision Support System for Behavioural Prediction of Industry Performance Indicators", on August 2010 by Kamalkishor Narayandas Agrawal at Rashtrasant Tukdoji Maharaj, Nagpur University, Nagpur, Maharashtra, India

As research paper reviewer

1. Member, Board of Reviewers, CSVTU Research Journal, A bi-Annual Research Journal, Bhilai(CG), India ISSN 0974-8725, 2011
2. "Nonlinear Transient Vibration Analysis of Smart Laminated Composite Plates Using a Coupled Piezoelectric Mechanical Theory" of CSVTU Research Journal.
3. "Dynamic Response of Corrugated Panels under Blast Loading" of CSVTU Research Journal.
4. "Testing Isomorphism Among Kinematic Chains: Reliability Analysis of Hamming Number Technique" of CSVTU Research Journal.

Faculty Development Programmes Attended/Organized

1. Attended 2 days National Level Seminar on Technology Management for Innovation & Entrepreneurship at RCET, Bhilai in March 2005
2. Attended 2 days National Level Seminar on paper presentation contest at MPCET, Bhilai in March 2004
3. Attended 2 days National Level Workshop on 'Requirements of Technical Courses for meeting Future Needs for H.R.' at Raipur in September 2003
4. Attended 2 days National Level Conference of 'Issues Pertaining to the Development of New State and the Capital of Chhattishgarh' at Raipur in

April 2003.

5. Attended 2 days National Level Seminar on paper presentation contest at MPC CET, Bhilai in March 2003
6. Attended National Conference on 'Modern Trends in Welding Technology', Bhilai in September 2000
7. Attended 15 days STTP on 'Solar Energy Utilization at IIT, Roorkee in June 1998. Organized Two –week ISTE workshop on Engineering. Thermodynamics conducted by IIT, Bombay from 11th to 21st Dec.2012. No. of participant – (38)
9. Organized Two – week ISTE workshop on Fluid Mechanics conducted by IIT, Kharagpur from 20th May to 30th May 2014, No. of participant – 45
10. Organized Two-week ISTE workshop on Engineering. Mechanics conducted by IIT, Bombay from 25th Nov. to 5th Dec, 2013, No. of participant – 48
11. Organized One day Workshop on "Research Methodology of Engineering and Technology" on 25th Sep. 2008
12. Organized One day Symposium on "Advances in Bio-Energy Technologies in association with CREDA on 20th Aug. 2008
13. Two Days National Conference BITCON from 16th to 17th March 2007 – 7th – 8th Nov.2008

Research Publications

International Journal	National Journal	International Conferences	National Conference
54	7	5	17

INTERNATIONAL JOURNAL

1. Kumar, M., Arora, A., Pandey, S. et al. Thermodynamic performance analysis of solar-biomass based gas turbine- Rankine–Kalina combined triple power cycle. Multiscale and Multidiscip. Model. Exp. and Des. 7, 673–688 (2024). <https://doi.org/10.1007/s41939-023-00235-z>
2. Kumar, M., Arora, A., Banchhor, R. and Chandra, H. (2023), "Energy and exergy analysis of hybridization of solar, intercooled reheated gas turbine trigeneration cycle", World Journal of Engineering, Vol. 20 No. 4, pp. 641-654. <https://doi.org/10.1108/WJE-09-2021-0567>
3. Kumar, M., Chandra, H., Banchhor, R. et al. Integration of Renewable Energy based Trigenration Cycle: A Review. J. Inst. Eng. India Ser. C 102, 851–865 (2021). <https://doi.org/10.1007/s40032-021-00690-y>
4. Santosh Kumar Mishra, Arun Arora, Yogesh Kumar, Manoj Sao and Hari Shankar Chandra (2020)" CFD study of heat transfer effect on nanofluid of Newtonian and non-Newtonian type under vibration", Chemical Product and Process Modeling. Aug. 2023, <https://doi.org/10.1515/cppm-2020-0027>

5. Mishra, S. K., Chandra, H., & Arora, A. (2019). Effect of velocity and rheology of nanofluid on heat transfer of laminar vibrational flow through a pipe under constant heat flux. *International Nano Letters*, 9 (3), xx-xx. <https://doi.org/10.1007/s40089-019-0276-4>.
6. MK Jindal, SK Sar, A Arora, S Singh, M Sahu, V Diwan, "Annual Effective Dose Equivalent of population staying in industrial area Bhilai, Chhattisgarh India estimated using Gamma dose rate measurements", *Research Journal of Chemistry and Environment* 22 (12), 22-27
7. MK Jindal, SK Sar, S Singh, A Arora, "Risk assessment from gamma dose rate in Balod District of Chhattisgarh, India", *Journal of Radioanalytical and Nuclear Chemistry* 317, 387-395
8. SK Sar, V Diwan, S Biswas, S Singh, M Sahu, MK Jindal, A Arora, "Study of uranium level in groundwater of Balod district of Chhattisgarh state, India and assessment of health risk", *Human and Ecological Risk Assessment (HERA)* 24 (3), 691-698
9. SK Sar, M Sahu, S Singh, V Diwan, M Jindal, A Arora, "Assessment of uranium in ground water from Durg District of Chhattisgarh state and its correlation with other quality parameters", *Journal of radioanalytical and nuclear chemistry* 314, 2339-2348
10. Choudhury A., Chandra H., Arora A., "Application of solid oxide fuel cell technology for power generation - A review", (2013) *Renewable and Sustainable Energy Reviews*, 20 , pp. 430-442.
11. H. Chandra, A. Arora, S. C. Kaushik, A. Tripathi & A. Rai, "Thermodynamic analysis and parametric study of an intercooled-reheat closed-cycle gas turbine on the basis of a new isentropic exponent", Pages 82-97 Published online: 03 Mar 2011
12. A. Arora, J. Gaharwar, "Development and Fabrication of Intermediate Pyrolysis Reactor and Characterization of Extracted Neem Oil" *International Journal of Mechanical Engineering*. (2022)
13. Mishra S.K., Chandra H, Arora A, " Effects on heat transfer and radial temperature profile of Non – isoviscous vibrational flow with varying reynolds number" , *Journal of Applied Fluid Mechanics*, Vol 2 , No 1, 2019, PP 135-144.(Indexed n SCOPUS)
14. Mishra S.K., Chandra H, Arora A, " Effects on Thermal Entrance Length of Non-Newtonian Nanofluid Under Vibrational Flow" , *International Journal of Technical Innovation in Modern Engineering & Science* , Vol 5, Issue 02, February 2019, PP 50 -55.
15. Kumar M., Chandra H., Banchhor R., **Arora A.**, "Thermodynamic study of renewable based trigeneration cycle", *International Journal of Advanced in Management, Technology and Engineering Sciences*, Vol. – 8, March 2018, ISSN NO : 2249-7455, PP 1346-1351
16. Jaysingh G., **Arora A.**, Santosh K S, "Production of bio-oil from plants using pyrolysis reactor: short review", *International Journal of Advanced in Management, Technology and Engineering Sciences*, Vol. – 8, March 2018, ISSN NO : 2249-7455, PP 1377-1381
17. Mishra S, Chandra H., **Arora A.**, "Complex Internal Fluid Flow Behaviour", , *International Journal of Advanced in Management, Technology and Engineering Sciences*, Vol. – 8, March 2018, ISSN NO : 2249-7455, PP 1461-1467
18. Pal M K , Chandra H., **Arora A.**, "Spiritual depiction of Thermal Engineering", *International Journal of Advanced in Management, Technology and Engineering Sciences*, Vol. – 8, Issue IV 2018, ISSN NO : 2249-7455, PP 721 -727

19. Kumar S., **Arora A.**, Chandra H., "Effect of solid bed height on pressure drop in stationary liquid fluidization, International Journal of Technology, Vol. 8, Issue 1, 2018, PP 6 – 10.
20. Kumar S., **Arora A.**, Chandra H., "Flow regimes in stationary liquid fluidization", International Journal of Technology, Vol. 8, Issue 01, June 2018, PP 11- 15.
21. Sahu S., **Arora A.**, Bal D.S., "Application of modified least square method to study the heat transfer through porous fin with temperature dependent internal heat generation", Vol. – 8, March 2018, ISSN NO : 2249-7455, PP 1480-1486.
22. Kumar S., **Arora A.**, Chandra H., "Effect of variation in size of solids on fluctuation ratio of the fluidized bed during stationary liquid fluidization", International Journal of Advanced in Management, Technology and Engineering Sciences, Vol. – 8, March 2018, ISSN NO : 2249-7455, PP 1473-1479.
23. Santosh K S, Megha S, Sweta S, Vijita Diwan, **Arora A.**, Study of Uranium level in groundwater of Balod District of Chhattisgarh State , India and assessment of health risk, Human and Ecological Risk Assessment : An International Journal, Vol 24, No 3, 2018, PP 691 -688(**Taylor & Francis**)
24. Kumar S., **Arora A.**, Chandra H., "Effect of variation in solid bed height on the pressure distribution during gas fluidization of solids", Research Journal of Engineering Sciences, Vol. 6(7), August 2017, ISSN 2278-9472, PP 7-13
25. Santosh K S, Vijita D, Supriya B, Shweta S, Megha S, Majok K J & **Arun Arora**, "Study of Uranium level in groundwater of Balod district of Chhattishgarh State, India and assessment of health risk", Human and Ecological Risk Assessment: An International Journal, December 2017, ISSN 1549-7860, (**Taylor & Francis, Indexed in Scopus**)
26. Santosh K S, Megha S, Sweta S, Vijita Diwan, **Arora A.**, "Assessment of uranium in ground water from Durg District of Chhattisgarh state and its correlation with other quality parameters", Journal of Radioanalytical and Nuclear Chemistry : International Journal , Vol. 297, Number 3, September 2017, (**Publisher Springer, Indexed in Scopus**)
27. Santosh K S, Arora A, Chandra H, " Continuous Gas Lift Studies for Circulation of Heavy Liquid Metal Using CFD" in Research Journal of Engineering Sciences, Vol6, Issue 9, October 2017, PP 6 -13 (**Indexed in Scopus**)
28. Kumar S., **Arora A.**, Chandra H., "Effect of variation in solid bed height on fluctuation ratio during gas fluidization of solids in stationary liquid" International Journal for Research in Applied Science & Engineering Technology, Vol. 5, Issue XII, December 2017, PP 1642- 1649.
29. Chandra H., **Arora A.**, "Thermodynamic Analysis of Rice-Husk Fired Cogeneration Plant", International Journal of Innovative Research in Science, Engineering and Technology (IJIRSET), Vol. 5, Issue 1, January 2016, PP 585-594
30. Nair Lethika D., Sar Santosh K., **Arora A.**, " Chemical characterization of Oscimum Sanctum in Bhilai – Durg region of Chhattisgarh, International Journal of Applied Science – Research and Review, Vol 3, Issue 4, 2016, PP 130 -137
31. Chandra H., **Arora A.**, "Cogeneration: Environmentally Sound Energy Efficient Technology", Journal of Mechanical Engineering (IASET: JME) International Academy of Science , Engineering and Technology, Vol. 4, Issue 1, June 2015, PP 17-30

32. Kumar S., **Arora A.**, Chandra H., “ Experimental Investigations on Variation in Particle Size on Pressure Drop during Gas Fluidization of Solids in Stationary Liquid” International Research Journal of Engineering and Technology, Vol 02, Issue 05, 2015, PP 883-886
33. Kumar S., **Arora A.**, Chandra H., Standardization of measurement process during gas Fluidization of solids in stationary liquid using gauge repeatability and reproducibility methodology” in Global Journal of Multidisciplinary Studies, Vol 4, Issue 6, May 2015, PP 215 -222
34. Dewangan S K, **Arora A.**, “ Mechanical properties of Aluminium 6063 alloy based graphic particles reinforced metal matrix composite” in International Journal for Scientific Research and Development” , Vol 3, Issue 5, 2015, PP 369 – 378.
35. **Arora A.**, Chandra H, “Review on Recovery and Utilization of Waste Heat In Internal Combustion Engine”, International Journal of Advanced Engineering Research and Studies, Vol. 4, Issue 2, March 2015, PP 199-205.
36. **Arora A.**, Chandra H., “Review on Waste Energy Recovery Systems”, International Journal of Innovative Research in Science, Engineering and Technology, Vol. 3, Issue 12, 2014, PP 18356-18367.
37. Bramhane R., **Arora A.**, Chandra H., "Simulation of Flexible Manufacturing System using Adaptive Neuro Fuzzy Hybrid Structure for Efficient Job Sequencing and Routing”, International Journal of Mechanical Engineering and Robotics Research, Vol. 3, Issue 4, October 2014, PP 33-48 (**Indexed in Scopus**)
38. Chandra H., Pal M.K., **Arora A.**, “Second Law Analysis of Gas Based Thermal Power Plant to Improve Its Performance”, International Journal of Scientific Research and Management, Vol 2, Issue 3, March 2014, PP 682-688
39. Bramhane R., **Arora A.**, Chandra H., "Simulation of Flexible Manufacturing System using Adaptive Neuro Fuzzy Hybrid Structure for Efficient Job Sequencing ”, International Journal of Innovative Science and Modern Engineering, Vol. 2, Issue 8, July 2014, PP 21-28
40. Pal M.K., **Arora A.**, Chandra H., “Energy and Exergy Analysis of Coal Fired Thermal Power Plant”, International Journal of Engineering Research & Technology, February 2014, Vol. 3, Issue 2, PP 2388-2392
41. Nair Lethika D., Sar Santosh K., **Arora A.**, Mahapatra D., “A Comparative Study of Zinc Concentration conducted on few Medicinal Plants of Chhattishgarh”, International Journal of Current Research in Chemistry and Pharmaceutical Sciences”, Vol. 1, Issue 5, 2014, PP 40-43
42. Choudhury A., Chandra H, **Arora A.**, “Application of Solid Oxide Fuel Technology for Power Generation-A Review”, International Journal of Renewable and Sustainable Energy Reviews, 2013, PP 430-442 (**Publisher Elsevier, Indexed in Scopus**)
43. Nair Lethika D., Sar Santosh K., **Arora A.**, Mahapatra D, “Fourier Transform Infrared Spectroscopy Analysis of few medicinal Plants in Chhattisgarh” Journal of Advanced Pharmacy Education and Research, 2013, (**Indexed in Scopus**)
44. Shiena C. Shekhar, **Arora A.**, “Customer View Analysis of Organization and Governance in Indian Engineering Education–A QFD Approach”, International Journal of Engineering and Innovative Technology, Vol 2, Issue 5, November 2012, PP 141 -150

45. Kshirsagar M.P., **Arora A.**, Chandra H., "Estimation of anaerobic codigestion potential of agri-waste in India and Comparative Financial Analysis", International Journal of Sustainable Energy, Vol. 31, No. 3, June 2012, PP175-188(**Publisher Taylor & Francis, Indexed in SCI**)
46. Nair Lethika D., Sar Santosh K., **Arora A.**, Mahapatra D. " A comparative study on proximate analysis conducted on medicinal plants of Chhattisgarh, CG, India" in Research Journal of Chemical Sciences, Vol 2(9), September 2012, PP 18-21.
47. Kumar S., **Arora A.**, Chandra H., "Two Phase Flow – A Critical Review", International Journal of Mechanical Engineering, July-December 2009, Vol 2, Issue 2, PP 14-16
48. Chandra H, **Arora A.**, Kaushik S.C., Tripathi A, Rai A, "Thermodynamic Analysis and Parametric Study of an Intercooled-Reheat Closed-Cycle Gas Turbine on the Basis of a New Isentropic Exponent", International Journal of Sustainable Energy, Vol 30, No. 2, April 2011, PP 82-97 (**Publisher Taylor & Francis, Indexed In SCI**)
49. Shiena C. Shekhar, **Arora A.**, "Customer View Analysis of Human Resources-Students in Indian Engineering Education– A QFD Approach", International Journal of Engineering Research and Industrial Applications (IJERIA), Ascent Publications, 2(6), Oct 2009, PP 339-354.
50. Shiena C. Shekhar, **Arora A.**, , "Translating Customers' Voice to Operational Characteristics of Physical Resources (Central Facilities) in Indian Engineering Education- A QFD Approach", Journal of Pacific Management Review (JPMR), University of California, USA, 2009.
51. Chandra H, **Arora A.**, Tripathi A, Agrawal M, "Role of Harmonic Mean Isentropic Exponent in the Analysis of Closed Cycle Gas Turbine Power Plant cycle with Intercooler", International Journal of Engineering Research & Industrial Applications, Vol. 2, No. VI, 2009, PP 145-160
52. **Arora A.**, Dewangan M.L., "Experimental Investigation of Pyrolysis of Rice Husk", Applied Science Periodical, Vol X, No. 1, February 2008
53. Shiena C. Shekhar, **Arora A.**, "Performance Evaluation of Technical Education Institutes in Chhattishgarh", International Journal of Math. Sci. & Engg. Applications, Vol 2, No 3, 2008, PP 153-161
54. Rajkiran B., **Arora A.**, Chandra H., "Simulation of Flexible Manufacturing System using Adaptive Neuro Fuzzy Hybrid Structure for Efficient Job Sequencing", International Journal of Innovative Science and Modern Engineering, Vol 2, Issue 8, July 2004 PP 21-27

NATIONAL JOURNAL

1. Nair Lethika D., Sar Santosh K., **Arora A.**, Mahapatra D., "Fourier Transform Infrared Spectroscopy Analysis of Few Medicinal Plants of Chhattishgarh, India", Journal of Advanced Pharmacy Education & Research, July-Sept. 2013, Vol 3, Issue 3, PP196-200
2. Nair Lethika D, Sar Santosh K, **Arora A.**, Mahapatra Deepak, "HPLC of the leaves of medicinal plants Karanj(Pongamia Pinnata), Neem (Azadirachta Indica) and Babul (Acacia Nilotica) of Chhattishgarh, India", CSVTU Research Journal Vol. 6, 2013, PP 33-37

3. Nair Lethika D., Sar Santosh K., **Arora A.**, Mahapatra D., "A Comparative Study on Proximate Analysis Conducted on Medicinal Plants of Chhattishgarh, CG, India", Research Journal of Chemical Sciences, Vol 2, Issue 9, Sept. 2012, PP 18-21
4. Kumar S., **Arora A.**, Chandra H., "Experimental Investigations of Gas-Solid Fluidization of Spherical Food Material", CSVTU Research Journal, Vol 4, No. 1, 2011, PP 108-112
5. Shiena C. Shekhar, **Arora A.**, "Customer View Analysis of the Research & Development & Interaction Effort in Indian Engineering Education– A QFD Approach", Journal of Technology, PSG College of Technology, Coimbatore, Vol 6, No 1, March-2010, PP 56-62
6. Shiena C. Shekhar, **Arora A.**, "Customer View Analysis of the Financial Resources in Indian Engineering Education– A QFD Approach", Indian Journal of Technical Education(IJTE), New Delhi, India, Vol- 33, No. 2 April - June 2010.
7. Shiena C. Shekhar, **Arora A.**, "Customer View Analysis of Supplementary Processes in Indian Engineering Education– A QFD Approach", Indian Journal of Engineering, Science & Technology (IJEST), Bannari Amman Institute of Technology, Sathyamangalam, Erode District, Tamil Nadu, April 2009.

INTERNATIONAL CONFERENCES/ SYMPOSIUM/ SEMINARS

1. Choudhury A., Chandra H., **Arora A.**, "Mathematical Modelling of Electro Reduction Cell To Convert Atmospheric Carbon Di-oxide Back to Fuel to Recycle Carbon-Di-Oxide", International Conference on Recent Advances in Mechanical Engineering, INCRAME, Dr. M.G.R. University, Chennai April, 2012
2. Shiena C. Shekhar, **Arora A.**, "Engineering Education Paradigm in India – A need for Continuous Quality Improvement to meet Global Challenges", International Seminar on Quality of Professional Education in the Present Era, IE(I) & Indian Association of Teachers Educators (IATE), Dehradun, 25-26 July 2009.
3. Shiena C. Shekhar, **Arora A.**, "Sustainable Development: A necessity for inclusion in Technical Education", International Conference, Wessex Institute of Technology, UK, April 2007.
4. Shiena C. Shekhar, **Arora A.**, "Quality system Excellence in Engineering Education", International Conference on Engineering Education(ICEE), Coimbra, Portugal, Sept.2007.
5. Shiena C. Shekhar, **Arora A.**, "Customer View Analysis of the Human Resources (Faculty & Staff) in Indian Engineering Education– A QFD Approach", 21st Symposium (in Savannah, Georgia USA), QFD Institute, New York, USA, December 5, 2009.

NATIONAL CONFERENCES/ SYMPOSIUM/ SEMINARS

1. **Arora A.**, Effect of Supervised Vibration on laminar force Convection heat transfer and radial temperature profile of non- newton fluid, BITCON 2019, National conference, Bhilai Institute of Technology, March 2019

2. **Arora A**, Effect of Supervised Vibration on laminar force Convection heat transfer of non-isoviscous nano fluid, BITCON 2019, National conference, Bhilai Institute of Technology, March 2019
3. **Arora A**, Short review on production of bio oil using pyrolysis reactor from neem, karanj and mahua seeds. National conference, Bhilai Institute of Technology, March 2019
4. Sar S K, **Arora A**, "Study of Uranium Contamination & its health effect in ground water of Balod", National Conference on Green Technology for Sustainable Development", SSEEC, Bhilai, 16-17 Jan. 2018
5. Dubey M, **Arora A**, Chandra H, "Thermodynamic Analysis of Rice husk Fired Cogeneration Power plant" National Conference on Clean, Efficient and Affordable Future through Sustainable Energy, VEC, Lakhanpur, March 30 – 31, 2015,
6. Choudhury A., Chandra H., **Arora A.**, "Integrated Device to Fix Carbon-di-oxide of Atmosphere and Power Plant", All India Conference, AICON, CSIT, Durg, 20-21 Jan, 2012
7. Shiena C. Shekhar, **Arora A.**, Mal M.C., "Technical Education in Chhattisgarh - A TQM Application", Higher Education: New Challenges and Emerging Roles", East Zone Vice Chancellor's Conference, Varanasi, July 23 – 24, 2010.
8. Shiena C. Shekhar, **Arora A.**, "Intricated Castings using Reverse Engineering, Laser Scanning and Rapid Prototyping Technology", BITCON 2008, National conference, Bhilai Institute of Technology, 7-8th November 2008.
9. Shiena C. Shekhar, **Arora A.**, "Improvement of Student Visualization Skills through Rapid Prototyping Technology", BITCON 2008, National conference, Bhilai Institute of Technology, 7-8th November 2008.
10. Shiena C. Shekhar, **Arora A.**, "A Framework for Analyzing Total Quality in Technical Education Institution: An Approach using Equal and Quality Function Deployment Methodology", Quality Edge-2008, All India Seminar on Organizational Excellence for Global Competitiveness, Yashwant Chavan College of Engineering, Nagpur, Maharashtra, 19-20 Jan 2008.
11. Shiena C. Shekhar, **Arora A.**, "Translating Customers' Voices into Operations Requirements- A QFD application in Technical Education System", National Conference, Institute of Engineers (India), Jabalpur, Chhattisgarh, 6-June 2007
12. Shiena C. Shekhar, **Arora A.**, "Redesign of Engineering Education system: An appraisal of the factors which influence customers' satisfaction", National Conference, Technologia-07, Madhya Pradesh Christian College of Engineering & Technology, Bhilai, Chhattisgarh, March 2007.
13. Shiena C. Shekhar, **Arora A.**, "Initiatives of service Quality Applied in Engineering System – A Review of Literature", National Conference – BITCON 2007, Mechanical Engineering Department, Bhilai Institute of Technology, 16-17 March 2007.
14. Shiena C. Shekhar, **Arora A.**, "Sustainable Development: A necessity in Technical Education", National Conference, Institute of Technology, Guru Ghasidas University, March 2007.
15. Shiena C. Shekhar, **Arora A.**, "Sustainable Development: A necessity in Technical Education", National Conference, Institute of Technology, Guru Ghasidas University, Chhattisgarh, 6-7 Jan 2007.
16. Arora A., Shiena C. Shekhar, Gupta M.K., Kowar M.K., "Opportunities of Broad Band Technology in Enhancing Quality of Education", All India Seminar, Institution of Engineers (India), Bhilai Local Centre, 6-7 Jan 2007.

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1. Arora A, Ganguly K S, “Basic Mechanical Engineering”, Antra and Aakansha Publications
2. Sar K Santosh, Thakur K Anil , Arora A, Study of Impact of Road Construction on Forest Management, 2016, Lambert Academic Publishing

Professional Affiliation

- Life membership – Indian Society for Technical Education, New Delhi
- Member – FIE, IE(I)
- Member – Indian Metrological Society, New Delhi