

# CURRICULUM VITAE

**Dr. Arun Arora**

**Principal**

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## Educational Odyssey:

- **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**" "  
*Thesis Supervisors:*Dr. M.L. Dewangan, Ex-Director, DTE, Raipur(CG),
- **M.E. (Mechanical Engg. With Specialization in Thermal Engg)** 1995  
From University of Roorkee (Currently IIT Roorkee)  
First Class with Honors – 80%
- **B.E. (Mechanical)** 1986  
from Govt. Engg. College, Raipur (Presently N.I.T. Raipur, Chhattisgarh)  
Pt.RavishankarShuklaUniversity, Raipur (M.P.)  
First Class with 74.2%
- **Class XI**-Board of Sec. Education Bhopal (M.P.) 1981  
Bhilai Vidyalaya, Sector-2, Bhilai  
First Class with 72%

## Curriculum Training:

Organisation : Bhilai Steel Plant, Bhilai  
Duration : 6 weeks  
Work Profile : Study about Mechanical Shop, Blast Furnace, Plate Mill, Rolling Mill, R & D Cell etc.

## Job experience: Total of 30 years of Teaching and Administrative Experience

Organisation	Dates/Duration	Position Held
Bhilai Institute of Technology (BIT) Durg (CG)	01.05.2010 to Till Date	Principal / Professor
	25.07.2008 to 30.04.2010	Vice-Principal / Professor
	15.03.2003 to 24.07.2010	Head (Mechanical) / Professor
	01.09.1998 to 14.03.2003	Reader /Associate Professor
	01.07.1988 to 31.08.1998	Lecturer / Asst. Professor

### Teaching Experience:

Subject Teaching in: Basic Mechanical Engineering, Engineering Thermodynamics, Refrigeration and Air Conditioning, Heat and Mass Transfer, Engineering Mechanics, Energy Conversion System, Turbo Machinery etc.

### University Responsibilities

<b>Position Held</b>	<b>Organization</b>
Member of Board of Studies in Mechanical Engineering	CSVТУ, Bhillai
Member of Core Committee for Mechanical Engineering Curriculum Development	CSVТУ, Bhillai
Member of Core Committee for Curriculum Development	Other Universities
Ex Member of Executive Council	CSVТУ, Bhillai
Ex-Dean & Chairman, Board of Studies in Mechanical Engineering	CSVТУ, Bhillai
Ex-Member, Board of Studies in Mechanical Engineering	CSVТУ, Bhillai
Ex-Chairman, Board of Studies in Mechanical Engineering	Pt. Ravishankar Shukla University, Raipur

### PhD Thesis & Research Papers Reviewed

1. **“Performance Evaluation of Catalytic Converter Using Different Materials in Soft-Computing Planes and Its Comparative Study”**, on December 2016, by VirendraNayak 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 RashtrasantTukdojiMaharaj Nagpur University, Nagpur, Maharashtra, India
6. **“Decision Support System for Behavioural Prediction of Industry Performance Indicators”**, on August 2010 by KamalkishorNarayandas Agrawal at RashtrasantTukdojiMaharaj, Nagpur University, Nagpur, Maharashtra, India
7. **“Nonlinear Transient Vibration Analysis of Smart Laminated Composite Plates Using a Coupled Piezoelectric Mechanical Theory”**of CSVТУ Research Journal.
8. **“Dynamic Response of Corrugated Panels under Blast Loading”**of CSVТУ Research Journal.
9. **“Testing Isomorphism Among Kinematic Chains: Reliability Analysis of Hamming Number Technique”**of CSVТУ Research Journal.

### Editorial Responsibility:

- Member, Board of Reviewers, CSVTU Research Journal, A bi-Annual Research Journal, Bhilai(CG), India ISSN 0974-8725, 2011

### Research Projects:

1. **Project Investigator** of Mini Research Project entitled, “**Development of Eco-Friendly Device which capture CO<sub>2</sub> 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.
2. **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.
3. **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.

### PhD Guidance:

S.No.	Name of Candidate Registered	Topic	University	Position	Status
1	Shiena C. Shekhar	<b>A Framework for a Model of Critical Success Factor of Technical Education</b>	CSVТУ, Bhilai	Supervisor	Completed
2	MukeshDubey	<b>Thermal Modelling and Analysis of Waste Energy Recovery System</b>	C.V. Raman University, Bilaspur	Co-Supervisor	Completed
3	M.K. Pal	<b>Critical Thermodynamic Analysis of Thermal Power Plants to Conserve Energy</b>	C.V. Raman University, Bilaspur	Supervisor	Completed
4	Shatendra Kumar Sahu	<b>A Critical Study of Modified least Square Method and its scope of Application in Mechanical System Design</b>	CSVТУ, Bhilai	Supervisor	On Going
5	Santosh Kumar Mishra	<b>Numerical Studies on Non-Newtonian Fluid Flow through Pipe Using CFD</b>	CSVТУ, Bhilai	Supervisor	On Going
6	Saurabh Kumar	<b>Experimental Investigations on Gas Fluidization of Solids in Stationary Liquid</b>	CSVТУ, Bhilai	Supervisor	On Going

### **Short-term Courses Attended:**

1. 2 days National Level Seminar on Technology Management for Innovation & Entrepreneurship at RCET, Bilai in March 2005
2. 2 days National Level Seminar on paper presentation contest at MPC CET, Bilai in March 2004
3. 2 days National Level Workshop on 'Requirements of Technical Courses for meeting Future Needs for H.R.' at Raipur in September 2003
4. 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. 2 days National Level Seminar on paper presentation contest at MPC CET, Bilai in March 2003
6. National Conference on 'Modern Trends in Welding Technology', Bilai in September 2000
7. 15 days STTP on 'Solar Energy Utilization at IIT, Roorkee in June 1998

### **Short-Term Course/Workshop/Symposiums/National Conferences Organized:**

1. Two –week ISTE workshop on **Engg. Thermodynamics** conducted by IIT, Bombay from 11<sup>th</sup> to 21<sup>st</sup> Dec. 2012. No. of participant – (38)
2. Two – week ISTE workshop on **Fluid Mechanics** conducted by IIT, Kharagpur from 20<sup>th</sup> May to 30<sup>th</sup> May 2014, No. of participant – 45
3. Two-week ISTE workshop on **Engg. Mechanics** conducted by IIT, Bombay from 25<sup>th</sup> Nov. to 5<sup>th</sup> Dec, 2013, No. of participant – 48
4. One day Workshop on “**Research Methodology of Engineering and Technology**” on 25<sup>th</sup> Sep. 2008
5. Two Days National Conference **BITCON** from 7<sup>th</sup> to 8<sup>th</sup> Nov. 2008
6. One day Symposium on “**Advances in Bio-Energy Technologies** in association with CREDA on 20<sup>th</sup> Aug. 2008
7. Two Days National Conference **BITCON** from 16<sup>th</sup> to 17<sup>th</sup> March 2007 – 7<sup>th</sup> – 8<sup>th</sup> Nov. 2008

### **Professional Affiliation:**

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

### Patents filed for:

- “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

### Research Publications:

International Journal	National Journal	International Conferences	National Conference
23	7	5	12

### INTERNATIONAL JOURNAL

1. 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, published online in December 2017, ISSN 1549-7860
2. 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”, International Journal Dealing with All Aspects and Applications of Nuclear Chemistry, Vol. 297, Number 3, September 2017
3. 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
4. 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
5. **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.
6. **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.
7. 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
8. Chandra H., Pal M.K., **Arora A.**, “Second Law of 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
9. 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

10. 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
11. Choudhury A., Chandra H, **Arora A.**, "Application of Solid Oxide Fuel Technology for Power Generation-A Review", Renewable and Sustainable Energy Reviews, 2013, PP 430-442
12. 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 (IJEIT) 2(5), 141-150, November 2012
13. Kshirsagar M.P., **Arora A.**, Chandra H., "Estimation of anaerobic co digestion potential of agri-waste in India and Comparative Financial Analysis", International Journal of Sustainable Energy, Vol. 31, No. 3, June 2012, PP175-188
14. 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
15. 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
16. 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
17. 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
18. Kumar S., **Arora A.**, Chandra H., "Two-Phase Flow – A Critical Review", International Journal of Mechanical Engineering, July-December 2009, Vol 2, Issue 2, PP91-95
19. 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.
20. 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.
21. 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
22. **Arora A.**, Dewangan M.L., "Experimental Investigation of Pyrolysis of Rice Husk", Applied Science Periodical, Vol X, No. 1, February 2008

23. 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

### 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(PongamiaPinnata), Neem (AzadirachtaIndica) 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, March-2010.
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. 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
2. 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.
3. 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.
4. 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.
5. 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, YashwantChavan College of Engineering, Nagpur, Maharashtra, 19-20 Jan 2008.
6. 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
7. 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.
8. 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.
9. Shiena C. Shekhar, **Arora A.**, “Sustainable Development: A necessity in Technical Education”, National Conference, Institute of Technology, Guru Ghasidas University, March 2007.
10. 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.
11. 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.
12. Shiena C. Shekhar, **Arora A.**, “Quality Improvement in Technical Education Institutes for the Development of Chhattisgarh”, National Seminar, Institution of Engineers (India), Chhattisgarh state centre, 15 Sept-2006.

#### **Book Publications:**



“Basic Mechanical Engineering”,  
Authors: **Arun Arora** & S.K. Ganguly  
Publications : Antra and Aakashsha Publications

**Personal Profile:**

Father's Name : Late K.C. Arora  
(Ex-Employee, BSP, Bhilai)

Permanent Address : H.No. 392, MIG-2, HUDCO  
Bhilai, Dt-Durg (CG) Pin : 490009

Mobile No. : 9425555770

Date of Birth : 27<sup>th</sup> April 1964

Sex : Male

Marital Status : Married

Wife's Name : Mrs. Saroj Arora  
(Ranger in Forest Department, Govt. of Chhattishgarh)

Kid's Name : Anil Kumar (Son) and Aakashsha Arora (Daughter)

Nationality : Indian

Language Speak : Hindi, English, Punjabi

Language Read/Write : Hindi, English

Personal Strengths : Desperate and dedication about the ambition.

I hereby declare that all the above mentioned information are true and correct to the best of my knowledge and belief.

Date:

Place:

**(Dr. Arun Arora)**