


1.	<b>Name</b>	<b>Dr. Vikas Chawla</b>	
2.	<b>Designation</b>	Principal	
3.	<b>Date of Birth</b>	March 30, 1976	
4.	<b>Education Qualification</b>	<ul style="list-style-type: none"> <li>• B.E. (Mech. Engg.), G.Z.S.C.E.T., Bathinda</li> <li>• M.E. (Industrial Materials and Metallurgy), P.E.C. Chandigarh</li> <li>• Ph.D, Indian Institute of Technology Roorkee</li> </ul>	
		 <b>Email:</b> vikkydmt@gmail.com	
5.	<b>Work Experience</b>	<b>Teaching : More than 13 yrs</b>	
	Principal	D. A. V. College of Engineering & Technology, Kanina, Mohindergarh (Harayana)	11 <sup>th</sup> August 2011 onwards
	Vice-Principal & Professor (Mech.)	Ferozpur College of Engineering & Technology, Feroz-shah, Ferozpur, Punjab	01 yrs 04 months & 10 days
	Professor & Head (Mech.)	Lala Lajpat Rai Institute of Engineering & Technology, Moga, Punjab	2 months & 11 days
	Asst. Professor (Mech.)		06 yrs & 05 days
	Sr. Lecturer (Mechanical)		05 months & 14 days
	Lecturer (Mech.)		04 yrs
	Lecturer (Mech.)	S.B.M.N. Engineering College, Rohtak, Haryana	01 yr
	<b>Research Experience</b>	PhD (Metallurgical & Materials Engineering Department, Indian Institute of Technology Roorkee, Roorkee), with National Doctoral Fellowship ( <b>NDF</b> ) sponsored by A.I.C.T.E, New Delhi [January 2005 to August 2009]	
6.	<b>Area of Specializations</b>	<ul style="list-style-type: none"> <li>• High Temperature Erosion-Corrosion of Materials</li> <li>• Protective Coatings &amp; Surface Engineering</li> <li>• Nanotechnology</li> </ul>	
7.	<b>Academic Achievements and Awards.</b>	(i) <b>ISTE BEST ENGINEERING COLLEGE TEACHER AWARD FOR PUNJAB STATE FOR THE YEAR 2010</b> in the 40th ISTE (Indian Society for Technical Education, New Delhi) Annual Convention held at MEPCO Schlenk Engineering College, Sivakasi, Virudhunagar Dist., Tamil Nadu During 02-04 December, 2010. The Award consists of cash prize, a medallion and a citation.	

		<p>(ii) <b>YOUNG SCIENTIST AWARD (Engineering Section)-2011</b> in the 14th Punjab Science Congress held at Sant Longowal Institute of Engineering &amp; Technology (SLIET), Longowal, Distt. Sangrur, Punjab organized by Punjab Academy of Sciences, Patiala, Punjab During 07-09 February, 2011. The Award consists of cash prize, a medallion and a citation.</p> <p>(iii) Got the appreciation letter from the Principal, R.S.D College, Ferozepur City for scoring 10th position in Science group in 10+1(Non Medical) and 6th position in Science group in 10+2 (Non Medical).</p> <p>(iv) Got appreciation letter from Principal, L.L.R.I.E.T., Moga for the project entitled “Addition of Safety Features in an Automobile”, which was completed by the students of B.Tech. (Mechanical 2000 Batch) under my guidance. In the Press Conference [Dated 28-05-2004] the details of our project were explained.</p> <p>(v) Participated in Zonal Level Badminton competition.</p> <p>(vi) Got selected for regular PhD Programme at I.I.T Delhi in January 2004 and I.I.T Roorkee, Roorkee (January 2006).</p> <p>(vii) Got National Doctoral Fellowship (NDF), sponsored by AICTE, New Delhi for Four (3+1) years.</p> <p>(viii) Got appreciation letter from Principal, L.L.R.I.E.T., Moga for the project entitled “Potentio Spanner- a device to screw &amp; unscrew the nuts of tyre rim of Maruti Alto Car”, which was completed by the students of B.Tech. (Mechanical 2000 Batch) under my guidance.</p>		
8.	<b>Subjects Taught</b>	(a) Graduate Level	Engineering Drawing, Machine Drawing, Strength of Materials, Industrial Automation & Robotics, Power Plant Engineering, Engineering Materials & Metallurgy	
		(b) Post Graduate Level	Instrumentation & Measurement Systems, Renewable Energy Resources	
9.	<b>Total Number of Research Publications (Annexure-I)</b>	<b>Published</b>	<b>63</b>	<b>Communicated</b>
		<ul style="list-style-type: none"> <li>• International Journals</li> <li>• International Conferences</li> <li>• National Conferences</li> <li>• Poster Presentation in National Conferences</li> </ul>	<p>17</p> <p>10</p> <p>33</p> <p>03</p>	10

10.	<b>Patents Filed (Annexure-I)</b>	<ul style="list-style-type: none"> <li>• Total 04 [<b>Four</b>] Patents have been filed through Intellectual Property Rights (IPR) Cell, Indian Institute of Technology Roorkee (I.I.T. Roorkee), Roorkee, India and Sanshadow Consultants Pvt. Ltd, Ghaziabad (NCR).</li> </ul>
11.	<b>Sponsored Projects [Annexure-II]</b>	<ul style="list-style-type: none"> <li>• Worked as Co-investigator on a project funded by A.I.C.T.E., New Delhi under NCP (Nationally Coordinated Programme) Scheme, 2006-2011 [Rs. 17.10 Lakhs].</li> </ul>
12.	<b>Association with Journals</b>	<ul style="list-style-type: none"> <li>◆ Working as Associate Editor to the journal named <b>“Research Cell: An International Journal of Engineering Sciences”</b> [ISSN: 2229-6913].</li> <li>◆ Working as member of Editorial Board to the journal named <b>“International Journal of Research in Mechanical Engineering &amp; Technology (IJRMET)”</b> [ISSN: xxxxxxx].</li> <li>◆ Working as reviewer of the manuscripts for the Science Direct / Elsevier Journals namely <b>“Journal of Alloys and Compounds”, “Materials Chemistry and Physics.”</b></li> <li>◆ Working as reviewer of the manuscripts for the <b>Journal of Corrosion Science &amp; Engineering.</b></li> </ul>
13.	<b>Industrial Collaboration</b>	<ul style="list-style-type: none"> <li>◆ Working for the development of high temperature erosion-corrosion resistant thermal spray coatings for the power plant boilers in collaboration with Karan Boilers, Ambala (Hr.).</li> <li>◆ Worked for the development of high temperature erosion-corrosion resistant thermal spray coatings for the power plant boilers and similar applications in collaboration with the following industries: <ul style="list-style-type: none"> <li>○ Guru Nanak Dev Thermal Power Plant, Bathinda, Punjab, India</li> <li>○ Anod Plasma Spray Pvt. Ltd., Kanpur, Uttra Pardesh, India</li> <li>○ Oerlikon Balzers Coating India Limited, Gurgaon, Haryana, India</li> </ul> </li> </ul>
14.	<b>Expert Lectures</b>	<ul style="list-style-type: none"> <li>◆ Delivered an expert lecture on <b>“Corrosion – Types &amp; Preventive Measures”</b> in “Faculty Development Programme (FDP) on Engineering Materials” organized by Baba Banda Singh Bahadur Engineering College, FatehGarh Sahib, Punjab sponsored by Punjab Technical University (PTU), Jalandhar during 08-10 July, 2010.</li> <li>◆ Delivered an expert lecture on <b>“Nanomaterials”</b> in “Faculty Development Programme (FDP) on Engineering Materials” organized by Baba Banda Singh Bahadur Engineering College, FatehGarh Sahib, Punjab sponsored by Punjab Technical University</li> </ul>

		<p>(PTU), Jalandhar during 08-10 July, 2010.</p> <ul style="list-style-type: none"> <li>◆ Delivered an expert talk on <b>“Engineering Drawing-Basic Principles”</b> to the Faculty and Students of Mechanical Engineering Department, Rayat Institute of Engineering &amp; Technology, RailMajra, Teh. Balachaur, S.B.S. Nagar on 04<sup>th</sup> July 2011.</li> <li>◆ Delivered an invited talk on <b>“Characterization &amp; Hot Corrosion Behavior of Nanostructured and Conventional Metal Nitride Coating”</b> in “National Conference on Latest Advancements in Science Engineering and Research (LASER’11)” organized by Baba Farid College of Engineering &amp; Technology, Bathinda, Punjab during 26-27 May, 2011.</li> <li>◆ Delivered an expert lecture on <b>“Understanding the Corrosion”</b> in “Faculty Development Programme (FDP) on Advances in Materials and Manufacturing Technology” organized by Mechanical Engineering Department, M.I.M.I.T., Malout, Punjab sponsored by Punjab Technical University (PTU), Jalandhar during 18-22 July, 2011.</li> <li>◆ Delivered an expert lecture on <b>“High Temperature Erosion-Corrosion Behaviour of Nanostructured and Conventional Coatings”</b> in “Faculty Development Programme (FDP) on Advances in Materials and Manufacturing Technology” organized by Mechanical Engineering Department, M.I.M.I.T., Malout, Punjab sponsored by Punjab Technical University (PTU), Jalandhar during 18-22 July, 2011.</li> </ul>
15.	<b>PhD Guiding</b>	Guiding 10 <b>[Ten]</b> PhD Candidates
16.	<b>M.Tech Thesis Guided / Guiding</b>	Guided 04 <b>[Four]</b> M.Tech Thesis and 07 <b>[Seven]</b> in process
17.	<b>Books Published / Reviewed [Annexure –I]</b>	<ul style="list-style-type: none"> <li>• <b>One Book Published with Lambert Academics Publishers (LAP), Germany</b> High Temperature Corrosion and Erosion (Nanostructured and Conventional Coatings) <a href="http://www.bod.com/index.php?id=3435&amp;objk_id=545280">http://www.bod.com/index.php?id=3435&amp;objk_id=545280</a></li> <li>• <b>Two</b> Books are accepted for publication: <ul style="list-style-type: none"> <li>○ Engineering Drawing</li> <li>○ Machine Drawing</li> </ul> </li> <li>• Guided <b>Two</b> books with expert comments: <ul style="list-style-type: none"> <li>○ Mechatronics                      Tata McGraw Hill Co.</li> <li>○ CAD/CAM                              Tata McGraw Hill Co.</li> </ul> </li> </ul>
18.	<b>Projects Carried out During Study</b>	<ul style="list-style-type: none"> <li>• Fabrication of circular punching M/c, as a Minor Project during B.E (Mechanical).</li> </ul>

		<ul style="list-style-type: none"> <li>• Properties, selection and case study of tool materials, as a Major Project during B.E (Mechanical).</li> <li>• Apparatus fabrication to find Thermal Conductivity of a material, as a project under Heat Transfer subject during B.E (Mechanical).</li> <li>• Model of Idle Pulley Drive, as a project under Production Technology Subject during B.E (Mechanical).</li> </ul>
19.	<b>Short-Term Courses &amp; Workshops</b>	<ul style="list-style-type: none"> <li>• Attended an ISTE–AICTE sponsored short-term course on “Mechatronics and Automation” of two weeks duration. (January 7 to January 18, 2002) organized by S.L.I.E.T, Longowal (Panjab).</li> <li>• Attended an ISTE–AICTE sponsored course on “Total Quality Management and ISO–9000 Quality System” of two weeks duration (July 1 to July 12, 2002) organized by S.B.S. College of Engineering, Ferozepur (Panjab).</li> <li>• Attended a ISTE–AICTE sponsored short term course on “Industry-Institute Interaction-New Challenges” of two weeks duration (December 16th-December 27th, 2002) organized by S.B.S. College of Engineering, Ferozepur (Panjab).</li> <li>• Attended a ISTE–AICTE sponsored short term course on “Inculcating &amp; Developing Entrepreneurial Attitude (Need of 21st Century)” of one week duration (July 19, 2004 to July 23, 2004) organized by S.B.S. College of Engineering, Ferozepur (Panjab).</li> <li>• Attended a Short Term Q.I.P. course on “Recent Trends in Nanaocomposites” of one week duration. (November 6th to November 10th, 2006) organized by I.I.T Kanpur, Kanpur (U.P).</li> <li>• Attended a Short Term Q.I.P. course on “Functional Nanomaterials : Science &amp; Technology” of one week duration. (February 3rd to February 7th, 2007) organized by I.I.T Roorkee, Roorkee (U.K).</li> <li>• Attended a Short Term Q.I.P. course on “Nanostructured Materials: Research &amp; Development Status” of one week duration. (February 18th to February 22nd, 2008) organized by I.I.T Roorkee, Roorkee (U.K).</li> <li>• Attended a Short Term Q.I.P. course on “Non Destructive Testing and its Applications in Industry” of one week duration. (June 2nd, to June 6th, 2008) organized by I.I.T Roorkee, Roorkee (U.K).</li> <li>• Attended One Day Building Energy Simulation Awareness Workshop held on 4th October 2008 at Department of Architecture and Planning, I.I.T Roorkee, Roorkee (U.K).</li> <li>• Attended Patent Awareness Workshop on 11th December, 2009 organized by Yadwindra College of Engineering, Punjabi University Guru Kashi Campus, Talwandi Saboo in association with Patent Information Centre, Punjab State Council for Science and Technology, Chandigarh.</li> <li>• Attended a Faculty Development Programme on “Industrial</li> </ul>

		Tribology” of one week duration. (January 2nd to January 8th, 2011) organized by I.I.T Ropar, Rupnagar (Pb).
20.	<b>Membership of Professional Bodies</b>	<ul style="list-style-type: none"> <li>○ Life Member of <b>Indian Society for Technical Education [I.S.T.E.]</b>, New Delhi.</li> <li>○ Life Member of <b>Electron Microscope Society</b>, Kolkata, West Bengal.</li> <li>○ Registered Graduate member of <b>Panjab University</b>, Chandigarh.</li> <li>○ Member of <b>International Association of Engineers (IAENG)</b> membership No. 63531), U.S.A.</li> <li>○ Life Member of <b>Punjab Academy of Sciences, Patiala, Punjab.</b></li> </ul>
21.	<b>Extracurricular Activities</b>	<ul style="list-style-type: none"> <li>◆ Worked as <b>Faculty Advisor</b> to I.S.T.E. Students’ chapter and Organized many technical events in the college like <b>ASTRON-2k1, 2k2, 2k3, 2k4 and 2k5</b>-The National Level Technical Fest which include Technical Paper Presentation, Quiz, Poster Making, Group Discussion etc. It is a national level event in which more than 2000 students participate from our college and other colleges from Punjab, Haryana, U.P, Utranchal, H.P, Gujarat, Rajasthan, and Delhi etc.</li> <li>◆ Worked as a member of the College Magazine Committee for the annual magazine named “Reflection.”</li> <li>◆ Worked as a member of N.S.S Committee.</li> <li>◆ Worked as a member of College Cultural Committee and organized <b>Parivartan-2k1, 2k2, 2k3 and 2k4</b>-The Annual Fete and <b>Vibrations-2k3, 2k4 and 2k5</b>-The Annual Function in the college.</li> <li>◆ Worked as a member of <b>College Publicity Committee and Admission Cell.</b></li> <li>◆ Worked as the <b>Secretary and Treasurer</b> to I.S.T.E. Teachers’ Chapter and enrolled many staff members as the Life Member and Annual Member of ISTE Teachers’ Chapter, and have organized Inter/Intra college competitions like paper presentation, GD, Seminars, Workshops etc.</li> <li>◆ Designed the syllabus of Automation to teach the Operators of <b>Nestle India Ltd, Moga.</b></li> </ul>

## Annexure-I

### **[ A ] Patents Filed:**

Following 04 [Four] Patents have been filed through Intellectual Property Rights (IPR) Cell, Indian Institute of Technology Roorkee (I.I.T. Roorkee), Roorkee, India and Sanshadow Consultants Pvt. Ltd, Ghaziabad (NCR) by **Vikas Chawla**, S. Prakash, D. Puri and Buta Singh Sidhu:

1. GAS NITRIDED TITANIUM-ALUMINIUM AND ALUMINIUM-CHROMIUM BASED COATINGS ON ASTM-SA210 GRADE A-1 STEEL (Application No.: 1235/DEL/2010 of 28.5.2010)
2. GAS NITRIDED ALUMINIUM-CHROMIUM COATING ON ASTM-SA213-T-22-BOILER STEEL (Application No.: 1236/DEL/2010 of 28.5.2010)
3. A PROCESS FOR COATING MATERIALS WITH TITANIUM-ALUMINIUM BASED GAS NITRIDED COATINGS (Application No.: 1237/DEL/2010 of 28.5.2010)
4. A PROCESS FOR COATING MATERIALS WITH ALUMINIUM-CHROMIUM BASED GAS NITRIDED COATINGS (Application No.: 1238/DEL/2010 of 28.5.2010)

### **[B] Research Papers:**

#### **Papers Published in International Referred Journals:**

1. **Vikas Chawla**, S. Prakash, Buta Singh, “**State of art: Applications of Mechanically Alloyed Nanomaterials: A Review**”, Materials & Manufacturing Processes, Taylor & Francis Group, Vol. 22, 2007, 469-473 (Impact Factor: 0.968-2009).
2. **Vikas Chawla**, Uma Batra, D. Puri, Amita Chawla, “**To study the effect of austempering temperature on fracture behavior of Ni-Mo austempered ductile iron**”, Journal of Minerals and Materials Characterization and Engineering, Vol. 7, No. 4, 2008, 307-316.
3. **Vikas Chawla**, S. Prakash, D. Puri, Buta Singh, “**Performance of plasma sprayed nanostructured and conventional coatings**”, Journal of the Australian Ceramic Society, Vol. 44, No. 2, 2008, 56-62.
4. **Vikas Chawla**, S. Prakash, D. Puri, Buta Singh, “**State Of Art: Plasma Sprayed Nanostructured Coatings: A Review**”, Materials Forum, Vol. 32, 2008, 137-143.
5. Manoj Singla, D. Deepak Dwivedi, Lakhvir Singh and **Vikas Chawla**, “**Development of Aluminium Based Silicon Carbide Particulate Metal Matrix Composite**”, Journal of Minerals and Materials Characterization and Engineering, Vol. 8, No. 6, 2009, 455-467.
6. Manoj Singla, Lakhvir Singh and **Vikas Chawla**, “**Study of Wear Properties of Al-SiC Composites**”, Journal of Minerals and Materials Characterization and Engineering, Vol. 8, No. 10, 2009, 813-819.
7. **Vikas Chawla**, S. Prakash, D. Puri and Buta Singh Sidhu, “**Corrosion behaviour of nanostructured TiAlN and AlCrN hard coatings on Superfer 800H superalloy in simulated**

- marine environment**" Journal of Minerals and Materials Characterization and Engineering, Vol. 8, No. 9, 2009, 693-700.
8. **Vikas Chawla**, D. Puri, S. Prakash, Amita Chawla and Buta Singh Sidhu, **"Characterization and comparison of corrosion behavior of nanostructured TiAlN and AlCrN coatings on Superfer 800H (INCOLOY 800H) substrate"**, Journal of Minerals and Materials Characterization and Engineering, Vol. 8, No. 9, 2009, 715-727.
  9. Manoj Singla and **Vikas Chawla**, **"Mechanical Properties of Epoxy Resin – Fly Ash Composite"**, Journal of Minerals and Materials Characterization and Engineering, Vol. 9, No. 3, 2010, 199-210.
  10. Dinesh Gond, **Vikas Chawla**, D. Puri and S. Prakash, **"High Temperature Corrosion Behaviour of T-91 and T-22 Bare Steel in 75wt.%Na<sub>2</sub>SO<sub>4</sub>+25wt.%NaCl Molten Salt Environment at 900°C"**, Journal of Minerals and Materials Characterization and Engineering, Vol. 9, No. 7, 2010, 593-606.
  11. Dinesh Gond, **Vikas Chawla**, D. Puri and S. Prakash, **"Oxidation Studies of T-91 and T-22 Boiler steel in air at 900°C"**, Journal of Minerals and Materials Characterization and Engineering, Vol. 9, No. 8, 2010, 749-761.
  12. **Vikas Chawla**, Amita Chawla, Buta Singh Sidhu, S. Prakash and D. Puri, **"Oxidation behavior of nanostructured TiAlN and AlCrN thin coatings on ASTM-SA213-T-22 boiler steel"**, Journal of Minerals and Materials Characterization and Engineering, Vol. 9, No.11, 2010, 1037-1057.
  13. **Vikas Chawla**, S. Prakash, D. Puri and Buta Singh Sidhu, **"Salt fog corrosion behavior of nanostructured TiAlN and AlCrN hard coatings on ASTM-SA213-T-22 boiler steel"** Jordan Journal of Mechanical and Industrial Engineering (accepted).
  14. **Vikas Chawla**, Amita Chawla, Buta Singh Sidhu, S. Prakash and D. Puri, **"Performance of nanostructured metal nitride coated T-22 boiler steel in Na<sub>2</sub>SO<sub>4</sub>–60% V<sub>2</sub>O<sub>5</sub> environment at 900°C under cyclic conditions"**, Journal of Minerals and Materials Characterization and Engineering Vol. 10, No.7, 2011, 583-608.
  15. **Vikas Chawla**, Amita Chawla, Y. Mehta, S. Prakash, D. Puri and Buta Singh Sidhu, **"Investigation of properties and corrosion behavior of hard TiAlN and AlCrN PVD thin coatings in the 3 wt% NaCl solution"** Journal of the Australian Ceramic Society, Vol. 47, No. 1, 2011, 48-56.
  16. **Vikas Chawla**, S. Prakash, D. Puri, Prema G. Gurbuxani and Buta Singh, **"Hot Corrosion and Erosion problems in coal based power plants in India and possible solutions: a review"**, Journal of Minerals and Materials Characterization and Engineering, Vol. 10, No.4, 2011, 367-385.
  17. Manoj Kumar Singla, Harpreet Singh and **Vikas Chawla**, **"Thermal Sprayed CNT Reinforced Nanocomposite Coatings – A Review"**, Journal of Minerals and Materials Characterization and Engineering, Vol. 10, No. 8, 2011, 717-726.

#### **Papers Published in Indian Journals**

18. Manoj Singla, Lakhvir Singh and **Vikas Chawla**, **"Synthesis and tribological characterization of Al-SiC composites"** International Journal of Mechanical Engineering, Vol. 2, No.2, 2009, 105-111.

## **[C] Papers in Conferences**

### **International Conferences:**

19. Amit Handa, **Vikas Chawla** and Harpreet Singh, “**Effect of Axial Pressure and Rotational Speed on the Mechanical Properties of Friction Welded Ø25mm Mild Steel bars**”, 2<sup>nd</sup> International Conference on Production and Industrial Engineering (CPIE-2010)”, organized by Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, 2-4<sup>th</sup> December, 2010.
20. Rakesh Goyal, **Dr. Vikas Chawla** and Dr. Buta Singh Sidhu, “**Detonation gun spray coating to enhance the wear resistance – A Review**”, 2<sup>nd</sup> International Conference on Production and Industrial Engineering (CPIE-2010)”, organized by Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, 2-4<sup>th</sup> December, 2010.
21. A. K. Mangla and **Dr. Vikas Chawla**, “**Enhancement in the service life of engineering components by Hardfacing: A review**”, 2<sup>nd</sup> International Conference on Production and Industrial Engineering (CPIE-2010)”, organized by Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, 2-4<sup>th</sup> December, 2010.
22. **Vikas Chawla**, S. Prakash, D. Puri, Buta Singh, “**State of art: Plasma Sprayed Coatings with Nanostructured materials: A Review**”, International Conference and Exhibition, “Materials and Austceram”, organized by the Australian Ceramic society and Materials Australia, 4<sup>th</sup> -6<sup>th</sup> July, 2007, Sydney, Australia.
23. **Vikas Chawla**, S. Prakash, D. Puri, Buta Singh, Manoj Singla, “**State of art: Hot Corrosion: A Review**”, Global Conference on “Production & Industrial Engineering (CPIE-2007)”, organized by Dr. B.R. Ambedkar National Institute of Technology, Jalandhar, Punjab, 22-24<sup>th</sup> March, 2007.
24. **Vikas Chawla**, Uma Batra, Manoj Singla, “**Failure Analysis of Ni-Mo Austempered Ductile Iron austempered at 330°C**”, International Conference on “Advances in Mechanical Engineering (AME 2006)”, organized by Baba Banda Singh Bahadour College of Engineering, Fatehgarh Sahib, Punjab, 1-3rd December, 2006.
25. **Vikas Chawla**, S. Prakash, D. Puri, Buta Singh, “**Plasma Sprayed Coatings for protection against Hot Corrosion-A Review**”, International Conference on “Advances in Mechanical Engineering (AME 2006)”, organized by Baba Banda Singh Bahadour College of Engineering, Fatehgarh Sahib, Punjab, 1-3rd December, 2006.
26. **Vikas Chawla**, S. Prakash, D. Puri, Buta Singh, “**State of Art: Nanomaterials: a Review**”, International Conference on “Advances in Mechanical Engineering (AME 2006)”, organized by Baba Banda Singh Bahadour College of Engineering, Fatehgarh Sahib, Punjab, 1-3rd December, 2006.
27. **Vikas Chawla**, Buta Singh, S. Prakash, “**State of art: Applications of Mechanical Alloyed Nanomaterials-a review**”, International Conference organized by Metallurgy Department, Indian Institute of Technology Kharagpur, 3-5th February, 2006.
28. **Vikas Chawla**, Buta Singh, Uma Batra, “**Crack Initiation & Propagation in Ni-Mo**

**Austempered Ductile Iron (ADI)**", 14th ISME International Conference on "Mechanical Engineering in Knowledge Age", organized by Delhi College of Engineering, New Delhi, 12-14th December, 2005.

**National Conferences:**

29. Lucky Goyal, Rutash Mittal, **Vikas Chawla** and Jasbir S. Hundal, "**Comparison of corrosion behavior of nano-structured TiAlN and AlCrN coatings on different substrates,**" National conference on latest advancements in science, engineering and research (LASER-11) organized by Baba Farid College of Engineering & Technology, Bathinda (Panjab) on 26-27 May, 2011.
30. **Vikas Chawla** "**Hot Corrosion Behaviour of Nanostructured and Conventional Metal Nitride Coated Grade A-1 Boiler Steel in Na<sub>2</sub>SO<sub>4</sub>-60% V<sub>2</sub>O<sub>5</sub> Environment at 900°C,**" 14<sup>th</sup> Punjab Science Congress (Under the aegis: Punjab Academy of Sciences, Patiala) on "Role of Scientific Innovations & Knowledge in Economic Development" organized by S.L.I.E.T, Longowal (Panjab) on 07-09 February, 2011.
31. Amit Handa, **Vikas Chawla** and Rajinder Ghai, "**To Study hardness and tensile strength of weldments of friction welded mild steel,**" 14<sup>th</sup> Punjab Science Congress (Under the aegis: Punjab Academy of Sciences, Patiala) on "Role of Scientific Innovations & Knowledge in Economic Development" organized by S.L.I.E.T, Longowal (Panjab) on 07-09 February, 2011.
32. **Vikas Chawla**, Buta Singh, Manoj Singla and Manish Goyal, "**A survey of the studies on the use of physical vapour deposition (PVD) technology for developing corrosion and erosion resistant coatings,**" National Conference on "Advancements & Futuristic Trends in Mechanical & Materials Engineering." Organised by Yadwinder Engineering College, Talwandi Saboo, Bathinda, Punjab on 19-20 February, 2010.
33. A.K.Mangla, Sehijpal Singh, J.S. Grewal and **Vikas Chawla**, "**Improvement in abrasive wear resistance by Hardfacing: A Review,**" National Conference on "Advancements & Futuristic Trends in Mechanical & Materials Engineering." Organised by Yadwinder Engineering College, Talwandi Saboo, Bathinda, Punjab on 19-20 February, 2010.
34. J. P. Singla, J.S. Grewal and **Vikas Chawla**, "**A survey of the detonation gun sprayed wear resistant coatings,**" National Conference on "Advancements & Futuristic Trends in Mechanical & Materials Engineering." Organised by Yadwinder Engineering College, Talwandi Saboo, Bathinda, Punjab on 19-20 February, 2010.
35. Mohan Singh, Dharpal Deepak, Manoj Singla, Manish Goyal and **Vikas Chawla**, "**An Experimental Estimate Mathematical Model of Surface Roughness for Turning Parameters on CNC Lathe Machine,**" National Conference on "Advancements & Futuristic Trends in Mechanical & Materials Engineering." Organised by Yadwinder Engineering College, Talwandi Saboo, Bathinda, Punjab on 19-20 February, 2010.
36. Nitest Dutt, Richa Sharma, **Vikas Chawla**, "**Safety tools and techniques in welding process-a review**", National Conference on advances in materials and manufacturing technology (AMMT-2007), organized by mechanical engineering department, Sant Longowal Institute of

Engineering & Technology, Longowal, Punjab, 6-7th February 2009.

37. **Vikas Chawla**, D. Puri, S. Prakash, Buta Singh, Manoj Singla, “**State of art: a survey of the studies on hard TiAlN and AlCrN coatings: a review**”, National Conference on advances in materials and manufacturing technology (AMMT-2007), organized by mechanical engineering department, Panjab Engineering College, Chandigarh, on 21-22 September, 2007.
38. Manoj Singla, Deepak Dewivedi, **Vikas Chawla**, Rupinder Singh, “**Techniques for fabrication and testing of aluminium based metalmatrix composites- an overview**”, National Conference on “Trends and Advances in Mechanical Engineering” organized by YMCA institute of Engineering , Faridabad, Haryana, 9-10<sup>th</sup> December, 2006.
39. Manoj Singla, Deepak Dewivedi, **Vikas Chawla**, Rupinder Singh, “**Development of metal matrix composite (Al-SiC) and subsequent evaluation of mechanical properties**”, National Conference on “Trends and Advances in Mechanical Engineering” organized by YMCA institute of Engineering , Faridabad, Haryana, 9-10<sup>th</sup> December, 2006.
40. **Vikas Chawla**, D.Puri, Buta Singh, S.Prakash, “**State of Art: How to get nanostructured materials: a review** ”, National Conference on “Advancement & Futuristic Trends in Mechanical & Materials Engineering”, organized by G.Z.S. College of Engineering & Technology, Bathinda, Punjab, 13-14th October 2006.
41. **Vikas Chawla**, Ankush Kaul, Varun Nagpal, “**Rapid Prototyping**”, National Conference on “Advancement & Futuristic Trends in Mechanical & Materials Engineering”, organized by G.Z.S. College of Engineering & Technology, Bathinda, Punjab, 13-14th October 2006.
42. **Vikas Chawla**, D.Puri, Buta Singh, S. Prakash, Manoj Singla, “**State of Art: Corrosion in Thermal Power Plants and Preventive Measures: a review**”, National Conference on “Advancement & Futuristic Trends in Mechanical & Materials Engineering”, organized by G.Z.S. College of Engineering & Technology, Bathinda, Punjab, 13-14th October 2006.
43. Manoj Singla, Deepak Dwivedi, Lakhvir Singh, **Vikas Chawla**, “**Fabrication & property analysis of metal matrix composition (Al-SiC)**”, ISTE sponsored National Conference on “Recent Advances in Mechanical Engineering”, organized by Department of Mechanical Engineering , Rayat Institute of Engineering & Information Technology, Railmajra, NawanShahr, Punjab, 8-9<sup>th</sup> September, 2006.
44. Manoj Singla, Deepak Dwivedi, **Vikas Chawla**, Neeru Singla, “**Role of industry, industry associations, NGO’s in management of technical education-experience of India and developed countries**”, ISTE sponsored National Conference on “Recent Advances in Mechanical Engineering”, organized by Department of Mechanical Engineering , Rayat Institute of Engineering & Information Technology, Railmajra, NawanShahr, Punjab, 8-9<sup>th</sup> September, 2006.
45. Neeru Singla, Parminder Kaur, Manoj Singla, **Vikas Chawla**, “**Artificial Neural Network-a new horizon**”, National Conference on “Information and Emerging Technologies”, organized by Institute of Engineering & Technology, Bhaddal, Punjab, 17-18th February, 2006.
46. Manoj Singla, Neeru Singla, **Vikas Chawla**, Deepak Diwedi, “**Flexible Manufacturing System- an overview**”, National Conference on “Advancement in Modeling and Simulation”,

organized by Lala Lajpat Rai Institute of Engineering & Technology, Moga, Punjab, 20-21st January, 2006.

47. Shivam Prashar, Ankush Kaul, **Vikas Chawla**, “**Industrial Automation**”, National Conference on “Advances in Manufacturing Technology”, organized by National Institute of Technical Teachers’ Training & Research, Chandigarh, 9-11th November, 2005.
48. Nadeep Narang, Ankush Kaul, **Vikas Chawla**, “**Just in Time Manufacturing**”, National Conference on “Advances in Manufacturing Technology”, organized by National Institute of Technical Teachers’ Training & Research, Chandigarh, 9-11th November, 2005.
49. **Vikas Chawla**, Tavman Singh, “**Hot Corrosion and prevention by surface treatment-a review**”, National Conference on “Advances in Manufacturing Technology”, organized by National Institute of Technical Teachers’ Training & Research, Chandigarh, 9-11th November, 2005.
50. Navkaran Singh, Varun Nagpal, **Vikas Chawla**, “**Rapid Prototyping**”, National Conference on “Advances in Manufacturing Technology”, organized by National Institute of Technical Teachers’ Training & Research, Chandigarh, 9-11th November, 2005.
51. Ankush Kaul, **Vikas Chawla**, Saurabh Chaudhary, “**Non Conventional Machining**”, National Conference on “Advances in Manufacturing Technology”, organized by National Institute of Technical Teachers’ Training & Research, Chandigarh, 9-11th November, 2005.
52. **Vikas Chawla**, Gaurav Makkar, Nancy Sharma, Prabhjot Kaur, “**Technologies for the Utilization of Renewable Energy Resources**”, 8th National Convention of ISTE Students’ Chapter on “Impact of Technology on Social Living”, organized by Baba Banda Singh Bahadaur College of Engineering, Fatehgarh Sahib, Punjab, 21-23rd October 2005.
53. **Vikas Chawla**, Prabhjot Kaur, Harish Kumar, “**Total Quality Management**”, national conference on “Emerging Trends in Manufacturing Systems” organized by Seth Jai Parkash Mukand Lal Institute of Engineering & Technology, Haryana, 15-16th March 2005.
54. Kishore Kunal, Shailander Kanwar, **Vikas Chawla**, “**Mechatronics**”, national conference on “Emerging Trends in Manufacturing Systems” organized by Seth Jai Parkash Mukand Lal Institute of Engineering & Technology, Haryana, 15-16th March 2005.
55. Kamal Mangal, Navansh Goyal, **Vikas Chawla**, “**The Factory of Future**”, national conference on “Emerging Trends in Manufacturing Systems” organized by Seth Jai Parkash Mukand Lal Institute of Engineering & Technology, Haryana, 15-16th March 2005.
56. Navansh Goyal, **Vikas Chawla**, “**Nanomachining-the small world**”, national conference on “Emerging Trends in Manufacturing Systems” organized by Seth Jai Parkash Mukand Lal Institute of Engineering & Technology, Haryana, 15-16th March 2005.
57. Moksh Sharma, Ankush Kaul, **Vikas Chawla**, “**Total Quality Management**”, national conference on “Emerging Trends in Manufacturing Systems” organized by Seth Jai Parkash Mukand Lal Institute of Engineering & Technology, Haryana, 15-16th March 2005.
58. Karan Goel, Chandeeep Singh, **Vikas Chawla**, “**Supply Chain Management**”, national conference on “Emerging Trends in Manufacturing Systems” organized by Seth Jai Parkash Mukand Lal Institute of Engineering & Technology, Haryana, 15-16th March 2005.
59. **Vikas Chawla**, Bhupesh Chawla, “**Automation**” national seminar on “Recent Advances in

Science & engineering”, organized by Guru Nanak Dev Engineering College, Ludhiana, Panjab, 29th November-2002.

60. **Vikas Chawla**, Neelkanth Grover, Bhupesh Chawla, “**Industry Institute Interaction**”, national conference on “Industry Institute Partnership for National & Institutional Development” organized by Sant Longowal Institute of Engineering & Technology, Longowal, Punjab, 6-7th February 2003.
61. **Vikas Chawla**, Bhupesh Chawla, J.K Agrawal, “**Natural Gas Vehicle (NGVs): an option to control pollution by automobiles**”, national seminar on “Science and Technology in Present perspective” organized by S.B.S institute of Engineering & Technology, Ferozepur, Punjab, 26th October, 2002.

## **[D] Poster Presentation in Conferences**

### **National Conferences:**

1. A. K. Mangla and **Vikas Chawla** “**Selection of hard-facing alloys to improve the wear resistance,**” 14<sup>th</sup> Punjab Science Congress (Under the aegis: Punjab Academy of Sciences, Patiala) on “Role of Scientific Innovations & Knowledge in Economic Development” organized by S.L.I.E.T, Longowal (Panjab) on 07-09 February, 2011.
2. Jwala Prasad, J.S. Grewal and **Vikas Chawla** “**Effect of detonation gun sprayed coatings on wear rate: a review,**” 14<sup>th</sup> Punjab Science Congress (Under the aegis: Punjab Academy of Sciences, Patiala) on “Role of Scientific Innovations & Knowledge in Economic Development” organized by S.L.I.E.T, Longowal (Panjab) on 07-09 February, 2011.
3. Rakesh Goyal, **Vikas Chawla** and **Buta Singh Sidhu** “**A review paper on AlCrN and TiAlN hard coatings,**” 14<sup>th</sup> Punjab Science Congress (Under the aegis: Punjab Academy of Sciences, Patiala) on “Role of Scientific Innovations & Knowledge in Economic Development” organized by S.L.I.E.T, Longowal (Panjab) on 07-09 February, 2011.

## **[ E] Books Published**

### **Books Published:**

High Temperature Corrosion and Erosion (Nanostructured and Conventional Coatings)

Publisher: LAP Lambert Academic Publishing, Germany

[http://www.bod.com/index.php?id=3435&objk\\_id=545280](http://www.bod.com/index.php?id=3435&objk_id=545280)

### **Books Accepted for Publication:**

1. Title: Engineering Drawing  
University: Punjab Technical University Jalandhar.  
Course: Bachelor of Technology [First Year]

2. Title: Machine Drawing  
University: Punjab Technical University Jalandhar.  
Course: Bachelor of Technology [Second Year]  
Publisher: Krishna Brothers', Jalandhar, Punjab.

**Books Reviewed:**

Guided **Two**books with expert comments:

1. Mechatronics.
2. CAD/CAM.

**Publisher: Tata McGraw Hill Co.**

## **Annexure-II**

Sponsored Project Completed:

1. A project funded by A.I.C.T.E., New Delhi under NCP (Nationally Coordinated Programme) Scheme [Rs. 17.10 Lakhs]. The Details are as follows:

**Title of the Project:**

Study of Plasma Sprayed Coatings with Nano-structured Materials

**Chief Coordinator:** Dr. Buta Singh Sidhu

**Coordinators** : Dr. Satya Prakash  
Dr. D. Puri  
Er. Vikas Chawla  
Er. Rajesh Gupta  
Er. J.S Tiwana

**Participating Institutes:**

G. Z. S. College of Engineering and Technology, Bathinda (Panjab)  
Indian Institute of Technology Roorkee, Roorkee (Uttarakhand)  
Lala Lajpat Rai Institute of Engineering & Technology, Moga (Panjab)

**Collaborating Industries:**

Guru Nanak Dev Thermal Plant, Bathinda (Panjab)  
Anod Plasma Spray Limited, Kanpur (U.P)