CURRICULUM VITAE

Dr. Sudhir Kumar, Ph.D. (I.I.T. Roorkee),
American Welding Society (AWS), Member
The Indian Institute of Metals, Member
Mobile No. +91 8958083894,8077550093
Email: iitsudhir@gmail.com, skumar10@mt.iitr.ac.in
Current Address:
Project Scientist, Mechanical Engg Dept.
IIT Bhubaneswar, Bhubaneswar
PIN- 752050

➢ OBJECTIVE:

To put significant contribution for technology advancement and for the betterment of society by working with a highly motivated group, that matches with my knowledge and skills in the areas of mechanical engineering.

➢ SUBJECT OF INTEREST:

Mechanics of Solid, Traditional manufacturing, Non Traditional manufacturing, Additive Manufacturing, Coating, Computational analysis.

➢ RESEARCH AREA OF INTEREST:

Fatigue and fracture analysis, Mechanics of materials, Welding Engg, Surface Engg, Coating, Computational analysis.

➢ EXPERIENCE:

Post	Origination	From	To	Pay
Assistant Professor	Central University of Haryana	16/08/2019	Till Now	61,700/-
Project Scientist	IIT Bhubaneswar	16/11/2018	16/07/2019	48,200/-
SRF	IIT Roorkee	10/10/2013	31/01/2016	18,000/-

➢ EDUCATIONAL QUALIFICATIONS:

Degree	Year	Discipline/Branch	University/Board	Marks%/CGPA	Division
Ph.D	2018	Effect of TIG surfacing on fatigue properties of AISI 4340 structural steel	Indian Institute of Technology (IIT) Roorkee		
M.Tech.	2013	Mechanical Engg.	Indian Institute of Technology (IIT) Roorkee	7.697/10	First
B.E.	2009	Mechanical Engg.	Maharshi Dayanand University (MDU), Rohtak	66.07%	First
DIPLOMA	2005	Mechanical Engg. (Tool and Die)	Govt. Polytechnic Sonepat	56.85%	Second
10th	2002	English, Hindi, Math, Science, SS, Phy. and health edu.	Adarsh Sr. Sec. School, Ateli, Haryana	52.83 %	Second

➢ EXAMINATION:

- **Qualified**, GATE 2011 and 2012 in **Mechanical** discipline with **score 526 and 431.**

➢ COMPUTER SKILLS:

- CATIA
- AUTO CAD
- ANSYS
- Math's Processor experience on ORIGIN.

➢ RESEARCH & PROJECTS:

- Ph.D. degree on topic: **"Effect of TIG surfacing on Fatigue Properties of AISI 4340 structural steel"** at Indian Institute of Technology (IIT) Roorkee (June 2018).

  Guide: **Dr. P.K. Ghosh,** Place: **Indian Institute of Technology Roorkee, MMED**

- **M.Tech. Major Project (Thesis work), Topic: "Minimizing the Transverse Shrinkage and Shrinkage Stresses in ASS Multi-pass Thick Pipe Weld"**
  Guide: **Dr. M. M. Mahapatra,** Place: **Indian Institute of Technology Roorkee, MIED**
  Dr. P. K. Ghosh, Place: **Indian Institute of Technology Roorkee, MMED**

- **B.E. Major Project "**Design and Manufacturing of welding fixture" (DAV College of Engg. & Technology).

- **Diploma project** "Maintenance of Workshop Machines" (Govt. polytechnic, Sonipat) Maintenance of mechanical workshop in which machine like lathe, milling, shaper, grinder, planer etc.

➢ SCHOLARSHIP AWARDED:

- Scholarship from Ministry of Human Resources and Development (MHRD), India through GATE to pursue M.Tech study.
- Senior Research Fellowship (SRF) from Council of Scientific & Industrial Research (CSIR), Human Resource Development Group, New Delhi for project work.
- Scholarship from Ministry of Human Resources and Development (MHRD), India through GATE to pursue Ph.D study.

➢ LIST OF PUBLICATIONS: (in SCI)

1. **Sudhir Kumar**, P.K. Ghosh, R Kumar, "Surface modification of AISI 4340 steel by multi-pass TIG arcing process", in Journal of Materials Processing Technology, 249, 2017, 394-406 (impact factor= **3.647**).

2. **Sudhir Kumar,** P.K. Ghosh**,** "TIG arc processing improves tensile and fatigue properties of surface modified of AISI 4340 steel", International Journal of Fatigue, 116, 2018, 306–316, (impact factor= **3.132**).

3. **Sudhir Kumar**, PK Ghosh, " Thermal behaviour of TIG arc surfacing affecting mechanical properties of AISI 4340 steel substrate under static and dynamic loading ", International Journal of Fatigue **(Under review).** (impact factor= 3.132).

4. R. Kumar, P.K. Ghosh, **Sudhir Kumar**, "Thermal and metallurgical characteristics of surface modification of AISI 8620 steel produced by TIG arcing process", in Journal of Materials Processing Technology, 240, 2017, 420-431, (impact factor= **3.647**).

5. K. Kumar, **Sudhir Kumar**, A. Kumar, R. Anant, R. Kumar, "Viscoelastic and thermally stable PDMS-SiO 2 filled epoxy adhesive joint on steel substrate", in Polymer Composites, 39, 2889-2896, 2018 (impact factor= **2.33**),

6. D Sharma, PK Ghosh, **Sudhir Kumar,** S Das, R Anant, N Kumar "Surface Hardening by in-situ Grown Composite layer on Mild Steel Employing TIG Arcing Process" Surface and Coatings Technology, 352, 2018, 144-158, (impact factor= **2.906**)

7. B.P. Agrawal, A.K. Chauhan, R. Kumar, R. Anant, **Sudhir Kumar**, "GTA pulsed current welding of thin sheets of SS304 producing superior quality of joint at high welding speed", in Journal of the Brazilian Society of Mechanical Sciences and Engineering, 39, 2017, 4667-4675, (impact factor= **1.235**).

8. A. Kumar, R. Anant, K. Kumar, S.S. Chauhan, **Sudhir Kumar**, R. Kumar,, " Anticorrosive and electromagnetic shielding response of a graphene/TiO 2 epoxy nanocomposite with enhanced mechanical properties", in RSC Advances, 6, 2016, 113405-113414, (impact factor= **3.108**).

9. R. Anant, J P. Dahiya, B.P. Agrawal, P.K. Ghosh, R Kumar, **Sudhir Kumar** and K. Kumar, "SMA, GTAW and P-GMA dissimilar weld joints of 304LN stainless steel to HSLA steel; Part -1: Hot corrosion kinetics", in Materials Research Express, 5, 2018, 096502,(impact factor= **1.15**)

10. R. Anant, J P. Dahiya, B.P. Agrawal, P.K. Ghosh, R Kumar, **Sudhir Kumar** and K. Kumar, "SMA, GTAW and P-GMA dissimilar weld joints of 304LN stainless steel to HSLA steel; Part -2: Hot corrosion kinetics", in Materials Research Express, 5, 2018, 096503, (impact factor= **1.15**)

11. D Sharma, PK Ghosh, R Anant, **Sudhir Kumar,** "Surface modification of microalloyed steel by silicon carbide reinforcement using tungsten inert gas arcing, Materials Research Express. 6(3), 2018,(impact factor= **1.15**), 2018

12. **Sudhir Kumar**, R. kumar, P.K. Ghosh, D. Sharma, K. Kumar, R. Anant , "Finite Element modelling of TIG welding process on AISI 4340 steel plate", in The Journal of Thermal Stresses (under review),(impact factor= **1.493**), 2019

13. C. Pandey, M.M. Mahapatra, P. Kumar, **Sudhir Kumar**, "A comparative study on microstructure evolution and their effect on the Charpy toughness of heat affected zones for TIG welded ferritic/martensitic P91 and P92 steel", Journal of Materials Engineering and Performance, (under review),(impact factor= **1.33**), 2019

14. **Sudhir Kumar**, PK Ghosh, "Effect of multi-pass TIG arcing process on Fatigue properties of steel ", in (to be communicate).

➢ CONFERENCES:

1. Participated and Presented a Paper in the International Conference on **Advances in Materials & Processing: Challenges and Opportunity (AMPCO 2017)** organized by Indian Institute of Technology (IIT) Roorkee**.**
   Title: Surface modification of AISI 4340 structural steel by single and multi-pass TIG arcing process.

2. Participated and Presented a presentation in the 3rd International Conference on **Production and Industrial Engineering (CPIE-2016)** organized by NIT Jalandhar, punjab**.**
Title: Finite Element modeling of TIG welding process on AISI 4340 steel plate.

3. Participated and Presented a presentation in the National Conference on **Advances in Material Sciences & IOT for Smart Environmental Monitoring and Sustainability** organized by Lingaya's university Faridabad.
Title: Effect of Gas tungsten arcing (GTA) process on Surface properties of SAE 8620 steel.

➢ LIST OF SHORT COURSES & WORKSHOP: *Participated and Attended*

1. Two week faculty development programme on **heating, ventilation & air-conditioning and refrigeration,** Jalpaiguri govt Engg college, December 17-28 2018
2. **One week National Level Hands on Training on** Electron Microscopy- Why, How and What" organized by IIC, IIT Roorkee, 2015
3. **Participate in one week short course on** Advance Concept of Quality Inspection and its Application in Fatigue and Fracture Mechanics" under TEQIP scheme, 2016
4. **Two days workshop on** Considering Industry Stake-Holding in Lab Research" organized by MHRD-IPR Chair, IIT Roorkee, 2014
5. **Participate in Conference on** Scientific Validation of Traditional Knowledge-II, IIT Roorkee, 2017
6. **One day QIP Workshop on** Advances in Surface Modification Technologies: Friction Stir Processing, IIT Roorkee, 2013
7. **One day QIP Workshop on** Advancement in Aerospace Materials Joining, IIT Roorkee, 2013
8. **One day QIP workshop on** Failure Prevention of Welded Structure Through control of Residual Stress and Hydrogen Embeittlement, IIT Roorkee, 2016
9. **Entrepreneurship Awareness Camp on** Entrepreneurship Awareness Camp conducted by Entrepreneurship & Management Development Cell in coloration with Hardicon Ltd. Sponsored by Development of Science & Technology, Govt. of India held on 31/01/2005 to 02/02/2005
10. **Entrepreneurship Awareness Camp on** Entrepreneurship Awareness Camp conducted by Entrepreneurship & Management Development Cell approved by AICTE, New Delhi from 25/10/2004 to 27/10/2004 Organizing member of the workshop held on October 24, 2017 organized by School of Basic Science and Humanities, Lingaya's University Faridabad (In collaboration with CMS-Vatavaran).

➢ TECHNICAL SKILLS:

- Hands on experience on number of instruments including: Optical Microscopy, INSTRON 8802 Fatigue testing including KIC, JIC and dAdN, Tensile testing machine, Scanning Electron Microscopy (SEM), X-Ray diffraction spectroscopy
- I have mentored Ten B.Tech. Student for their project work at IIT Roorkee during my Ph.D. period.

➢ MEMBERSHIP:

- American Welding Society (AWS), Student Member no – 2057830,
- The Indian Institute of Metals, Student Member no – 56846.

➢ CURRICULAR ACTIVITIES

- NCC- B Certificate.
- Participated in Annual Training Camp of NCC.
- Winner- Volleyball- Ravindra Bhawan- IIT Roorkee

➢ PERSONAL INFORMATION

Gender	Male
Marital Status	Married
Community	OBC
Father's Name	Dina Ram
Date of Birth	22-02-1987
Height	5'8"
Home Town	Narnaul, Haryana
Languages Known	Hindi & English

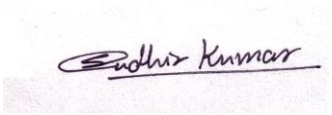
References:

Dr. P.K. Ghosh (Professor)
Metallurgical & Materials Engg. Dept.
Indian Institute of Technology Roorkee
prakgfmtiitr@gmail.com
9412073413

Dr. Sourav Das (Assistant Professor)
Metallurgical & Materials Engg. Dept.
Indian Institute of Technology Roorkee
souravju@gmail.com
07060308578

Declaration:

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.



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I.I.T. Roorkee, India