Dr. Sourabh Kumar Soni

PROFILE

Looking for a challenging and demanding position in the technical education sector in a growth oriented technical Institution, to render professional skills and add value to organizational growth and objectives.

TECHNICAL EXPERIENCES

- **Casting:** Stir, Squeeze, Gravity, Centrifugal.
- **Microscopy:** Scanning Electron Microscope, Transmission electron microscope, Optical Microscopy.
- **Diffraction:** X-Ray Diffraction Analysis.
- **Oxidation:** Thermal Gravimetric Analyzer.
- **Advanced Machining Processes:** CNC Milling, CNC Turning, CNC Drilling, MQL Machining.
- **Advanced Materials Processing:** Ultrasonic Processing, Ball-milling, Wire electric discharge machining.
- **Characterization Techniques:** Pin/Ball-on-disk Tribometer, INSTRON Tensile Testing Facility, Hardness, Surface Roughness Tester, Vibration Analysis.
- **Polymer/Fibre Composites Processing.**
- **Honeycomb Composites Processing.**
- **Powder Metallurgy Processing.**

COMPUTER PROFICIENCY

- **Windows, MS Word, MS Excel and MS Power-point.**

SOFTWARE SKILL

- **MINITAB:** TAGUCHI, RSM
- **MATLAB:** ANN Toolbox
- **CREO**
- **AUTOCAD**

EDUCATION

- **Ph.D. (Mechanical Engineering)** from the Vellore Institute of Technology (VIT), Vellore (TN) with 8.43 CGPA (2017-2022).
- **M. Tech (Production Engineering)** from Bhilai Institute of Technology, Bhilai (C.G.) affiliated to Chhattisgarh Swami Vivekanand Technical University, Bhilai (C.G.) with 72.90 % (2015).
- **B.E. (Mechanical Engineering)** from Chhatrapati Shivaji Institute of Technology, Durg (C.G.) affiliated to Pt. Ravishankar Shukla University, Raipur (C.G.) with 71.95 % (2004-2008).

WORK EXPERIENCE

- Currently working as an Assistant Professor in **Chhatrapati Shivaji Institute of Technology (CSIT), Durg (C.G.)** since March 2021.
- **4-months** teaching Experience in **Government Engineering College (GEC), Bilaspur (C.G.)** as a Guest faculty (2020-2021).
- Worked in **Rungta College of Engineering & Technology (RCET), Bhilai (C.G.)** for **10 months** as an Assistant Professor (2016-2017).
- Worked as an Assistant Professor in **Garv Institute of Management & Technology (GIMT), Bhilai (C.G.)** for **4 years 11 months** (2011-2016).
- Worked as a lecturer in **Shri Shankaracharya Engineering College (SSEC), Bhilai (C.G.)** for **1 year 2 months** (2010-2011).
- Worked in **Oriental Institute of Science & Technology (OIST), Bhopal (M.P.)** for **8 months** as a Lecturer (2009-2010).

ACADEMIC RESEARCH

- Three-year academic research during Ph.D. on the topic **"Experimental investigation on microstructural, mechanical and machining characteristics of Al-based hybrid nanocomposites".**

ACADEMIC PROJECT

- Project Title: **"Analysis and optimization of CNC vertical end milling process by using Taguchi method"** (In M. Tech Final Year).
- Project Title: **"Automatic Car Jacking System"** (In B.E. Final Year).

ACADEMIC AWARD

- Raman Research Award.

PERSONAL DETAILS

Father's Name: Late Shri R. R. Soni
Mother's Name: Late Smt. P Soni
Address: Asha Nagar, Street no. 14,
Distt. - Durg (CG)
Pin. 491001
Date of Birth: 09 April 1987
Marital Status: Married
Nationality: Indian
Languages Known: English, Hindi.

CONTACT

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EMAIL:
sourabhknk@gmail.com

RESEARCH INFO:

Google Scholar:
https://scholar.google.com/citations?user=SL7eXmcAAAAJ&hl=en
ORCID ID:0000-0003-4512-2004
Scopus Author ID: 57201904221

VOCATIONAL TRAINING

- Bhilai Steel Plant, Bhilai Chhattisgarh (One month).
- Jindal steel & power plant Chhattisgarh (15 days).

OTHER ACADEMIC & RESEARCH ACTIVITIES

- Reviewer of the Materials Today: Proceeding Journal (Elsevier).
- Worked as a Workshop Superintendent.

RESEARCH INTERESTS

- Composites, Nanocomposites and Hybrid Nanocomposites.
- Material Characterization, Material Processing and Nanoparticle Dispersion.
- Advanced Manufacturing Processes and Machinability Studies of Composites.
- Welding and Secondary Processing of Composites (Friction Stir Processing, Heat Treatment and Roll Bonding).
- Optimization Techniques.
- Analysis of FG-CNTRC Structures.
- Ultrasonic-assisted Melt-stirring Processing.

PUBLICATIONS

SCI/Scopus indexed international journals:

1. **Soni, S. K.**, & Thomas, B. (2020). Influence of TiO_2 and MWCNT nanoparticles dispersion on microstructure and mechanical properties of Al6061 matrix hybrid nanocomposites. Materials Research Express, 6(12), 1265f3. **(SCIE, IF – 1.929)**
2. **Soni, S. K.**, Thomas, B. & Kar, V. R. (2020). A Comprehensive Review on CNTs and CNT-Reinforced Composites: Syntheses, Characteristics and Applications. Materials Today Communications, 101546. **(SCIE, IF – 3.383)**
3. **Soni, S. K.**, Tody, V., & Thomas, B. (2021). Influence of dispersion technique/time on dispersion stability, aspect ratio and morphology of multi-walled carbon nanotubes. International Journal of Nanotechnology, 18(5/6/7/8). **(SCIE, IF – 0.532)**
4. **Soni, S. K.**, Ganatra, D., Mendiratta, P., Reddy, CH S K A. and Thomas, B. (2021). Microstructure and Mechanical Characterization of Al2O3/Graphene Reinforced Al6061 Based Hybrid Nanocomposites. Metals and Materials International. **(SCIE, IF – 3.642)**

5. Dey, K., Rohit, V. J., Kumar, **Soni, S. K.**, & Thomas, B. (2019). Dynamic analysis of functionally graded shaft. FME Transactions, 47(1), 151-157. **(ESCI/Scopus)**
6. **Soni, S. K.**, & Thomas, B. (2020). Microstructure, mechanical properties and machinability studies of Al7075/SiC/h-BN hybrid nanocomposite fabricated via ultrasonic-assisted squeeze casting. FME Transactions, 48(3), 532-542. **(ESCI/Scopus)**
7. Agarwal, P., Kishore, A., Kumar, V., **Soni, S. K.**, & Thomas, B. (2019). Fabrication and machinability analysis of squeeze cast Al7075/h-BN/graphene hybrid nanocomposite. Engineering Research Express, 1(1), 015004. **(ESCI)**
8. **Soni, S. K.**, & Thomas, B. (2017). A comparative study of electrochemical machining process parameters by using GA and Taguchi method. IOP Conference Series: Materials Science and Engineering (Vol. 263, No. 6, p. 062038). **(Scopus)**
9. **Soni, S. K.**, & Thomas, B. (2018). Experimental investigation and optimization of welding process parameters for various steel grades using NN tool and Taguchi method. AIP Conference Proceedings (Vol. 1943, No. 1, p. 020051). **(Scopus)**
10. Pradeep, T., **Soni, S. K.**, & Thomas, B. (2020). Design manufacture and testing of a composite support structure for spacecraft application. Materials Today: Proceedings, 22, 1374-1379. **(Scopus)**
11. Garg, V., Saxena, S., Goyal, G., **Soni, S. K.**, & Thomas, B. (2021). Influence of CNTs grading and reinforcement on dynamic characteristics of composite Plates in thermal environment. In IOP Conference Series: Materials Science and Engineering (Vol. 1123, No. 1, p. 012052). **(Scopus)**

International journals:

1. **Soni, S. K.**, & Moulick, S. K. (2014). Analysis and Optimization of CNC Vertical End Milling Process by using Taguchi Method. International Journal of Engineering and Management Research, 4(6), 64-71.
2. **Soni, S. K.**, & Moulick, K. S. (2014). Optimization of Milling Process Parameter for Surface Roughness of Inconel 718 By Using Taguchi Method. International Journal for Scientific Research & Development, 2(11), 2321-0613.
3. Kumar, U., Prasad, A. K., & **Soni, S. K.** (2016). Efficient Use of Energy in an Electric Arc Furnace by Heat Integration Approach. International Journal of Engineering Sciences & Research Technology, 5(7), 744-748.

Book Chapter:

1. **Thomas, B. & Soni, S. K.** (2022). A Review on advance polymers used in Aerospace. Repair of Advanced Composites for Aerospace Applications, Taylor and Francis, 11(1), CRC press.

CONFERENCES AND WORKSHOPS:

Conferences:

1. Presented paper in **ICDEM 2018** conference at NIT Suratkal "Experimental investigation and optimization of welding process parameters for various steel grades using NN tool and taguchi method".
2. Presented paper in **SET 2017** conference at VIT Vellore "A comparative study of electrochemical machining process parameters by using GA and taguchi method".
3. Presented paper in **ICMMM 2019** conference at VIT Vellore "Design manufacture and testing of a composite support structure for spacecraft application".
4. Presented paper in **ICNAN 2019** conference at VIT Vellore "Effect of sonication and ball milling time on the dispersion stability and morphology of multi-walled carbon nanotubes".
5. Presented paper in **ICDAC 2020** conference at VIT Vellore "Free vibration and buckling analysis of FG-CNTRC plates".

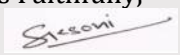
WORKSHOPS/FDP/WEBINAR:

1. Two-week ISTE workshop on "Engineering mechanics" held on BIT, Bhilai organized by IIT Bombay.
2. Two months workshop on "CREO parametric 1.0 CAD" organized by DCS.
3. One-day workshop on "ANN approach for predictive modelling and optimization" organized by department of thermal and energy engineering, SMEC, VIT, Vellore.
4. Two-day workshop on "Impact analysis and composites FEA" organized by department of design and automation, SMEC VIT, Vellore.
5. Two-day workshop on "Design of Experiments" organized by ASC of VIT, Vellore.
6. One week E- Faculty Development Program on "Advanced Materials and Manufacturing Systems" organized by Department of Mechanical Engineering, CCET, Bhilai.
7. Five-day online Faculty Development Programme on "Mechatronics, Automation, and Robotics" conducted by the Department of Mechanical Engineering, OP Jindal University, Raigarh, SOE in association with IEEE Bombay Section and AICRA.
8. One-day workshop on "Latex" organized by ASC of VIT, Vellore.
9. One-day webinar on "Solar Based Thermal Energy Storage System Using Nano Fluids" organized by Mechanical Engineering Department, CCET, Bhilai.
10. Half-a-day FDP on "Capacity and Unit Price fixing for Small hydropower plant" organized by ASC in Association with SMEC of VIT, Vellore.
11. Half-a-day FDP on "Effectiveness of 5S thinking and its implementation on productivity of Engineering Industry" organized by ASC in Association with SMEC of VIT, Vellore.

12. One-day Webinar on "Acoustic Emission Signal Monitoring During Manufacturing Process" organized by the Department of Mechanical Engineering, kings Engineering College, Chennai.

I hereby certify that the information provided above is correct to the best of my knowledge and belief

Yours Faithfully,



Dr. Sourabh Kumar Soni **Date- 28/02/2022**