BIO-DATA

Dr. Susanta Kumar Sahoo

Professor, Mechanical Engineering Department
National Institute of Technology
Rourkela - 769 008, Orissa, INDIA
Phone: (91)-661-2462520 (O) 2463520 (R) Fax: (91)-661-2472926
Email: sksahoo_rec@rediffmail.com sks@nitrkl.ac.in

Education

Post-Doc Research,2004 Metal Machining & Impact Fatigue	**Loughborough University, UK**
PhD, 2000 Mechanical Engineering	**Utkal University**, Orissa, India
M.Sc. Engg., 1991 Production Engineering	**Sambalpur Univ.**, Orissa, India R.E.C. (NIT), Rourkela
M.B.A., 1999 Human Resource Management	IGNOU, India
PG Diploma, 1995 Operation Management	IGNOU, India
B.Sc. Engg., 1989 Mechanical Engineering, First Class	**Sambalpur Univ.**, Orissa, India U.C.E. (VSSUT), Burla

Experience

1. Lecturer of Mechanical Engineering, IGIT, Sarang, Orissa, India	**2.1.1991 to 1.2.2000**
3. Senior Lecturer, National Institute of Technology, Rourkela, India	**2.2.2000 to 31.6.2000**
4. Asst. Professor, National Institute of Technology, Rourkela, India	**1.7.2000 to 31.12.2005**
5. Asso. Professor, National Institute of Technology, Rourkela, India	**1.1.2006 to 30.6.2008**
5. Professor, National Institute of Technology, Rourkela, India	**1.7.2008 to Present**

Courses Taught

- Undergraduate Courses
  - Primary Production Processes
  - Metal Cutting & Tool Design
  - Modern manufacturing Processes
- Postgraduate Courses
  - Theory of Plastic Deformation
  - Production Technology
  - Theory of Elasticity and Plasticity

Handling Research Project

Sl. No.	Title	Date of start	Date of completion	Cost (Rs. in lakhs)	Funding Agency
1.	Computer Aided Analysis of Metal forming	2000	completed	6.00	AICTE
2.	Product and process design for shape heading of splines and solid spur gear by 3-D modeling and experiments of combined extrusion/forging: A progressive near-net shape process	2009	Completed	32.12	DST
3.	Ultrasonically assisted turning of aviation materials: Development of facility and Investigation for surface finish improvement & reduction of cutting force	2008	Completed	22.53781	DRDO
4.	Investigation on Laser welding of tube	2011	Completed	15.665	BRNS
5.	Development of dissimilar metal welding and testing at high temperature	2011	Completed	18.25	BRFST
6.	Dissimilar metal joining by ultrasonic welding	2012	Completed	17.25	CSIR
7.	Ultrasonic vibration assisted turning of difficult to cut materials: Design and development of a tool holding system & parametric analysis of the process	2016	Completed	38.50	DST

Consultancy Project:

Sl. No.	Title	Date of start	Date of completion	Cost (Rs. in lakhs)	Funding Agency
1.	Study of Wear characteristics of Hot Roll Cooling Water Jet Nozzles	2008	Completed	4.255	Lechler India Ltd. Thane
2.	Mechanical Characterization of Specially Heat Treated Aluminum	2016	Completed	0.286	NALCO, Smelter Angul, Odisha
3.	Mechanical Characterization of Specially Heat Treated Aluminum	2018	Completed	0.38267	NALCO, Smelter Angul, Odisha
4.	Investigation on Tensile strength behavior of alloy steel	2018	Completed	0.19411	SAIL RSP Rkl
5.	Investigation on shrinkage failure of rotating shaft	2019	on going	0.0	**-do-**

Research Experience

- Areas of Interest

  Production Process Analysis (Metal forming, Ultrasonic and laser processing, Turning, Welding)
  Tool & Die Design
  Analytical and Finite Element Analysis

- Research Supervision

	Completed	Continuing
M. Tech.	24	2
M. Tech. (Research)	2	0
Ph.D.	10	4

Summary of Publications:

	SCI/Scopus	Others (International)	Others (National)
Referred Journals	43	22	15
Conference Proceedings	2	43	39
Grand Total = 164			

Honors, Awards visiting Abroad

- **Best Young teacher-2000,** Awarded by ISTE-SGSITS, New Delhi
- **Young Scientist for Year-1998**, Awarded by Orissa Science Academy, Orissa, India
- **Sankarsan Jena Memorial Award** for best paper presented at the 38th Annual Technical Session of the Institution of Engineers (India), Orissa -1997
- **Ganesh Mishra Memorial Award** for best paper presented at the 38th Annual Technical Session of the Institution of Engineers (India), Orissa - 1997
- **3rd prize** for paper presented at the 43rd Annual Session of the Orissa Engineering Congress-1998
- **Ganesh Mishra Mem`orial Award** for paper presented at the 41st Annual Technical Session of the Institution of Engineers (India), Orissa-2000
- **2nd prize** for paper presented at the 44th Annual Session of The Orissa Engineering Congress-1999
- **3rd prize** for paper presented at the 46th Annual Session of The Orissa Engineering Congress-2001
- **Certificate of Excellence**, awarded by India International Friendship Society, New Delhi, 1999.
- Invited as delegate to participate in the '**Asia Science & Technology Seminar**' 2000.
- **Sankarsan Jena Memorial Award** for paper presented at the 44th Annual Technical Session of the Institution of Engineers (India), Orissa –2003
- **Sankarsan Jena Memorial Award** for paper presented at the 46th Annual Technical Session of the Institution of Engineers (India), Orissa –2005
- Visit Loughborough University, UK during 2003-2004(one year) under BOYSCAST scheme, funded by DST, Govt of India
- Visits different Lab. of **University of Illinois at Chicago, USA** during, 18-31, March'2006.
- **Brundaban Sahu Memorial Award** for best paper presented at the 56th Annual Technical Session of the Institution of Engineers (India), Odisha -2015
- **Sankarsan Jena Memorial Award** for best paper presented at the 56th Annual Technical Session of the Institution of Engineers (India), Orissa -2015
- **Sankarsan Jena Memorial Award** for best paper presented at the 57th Annual Technical Session of the Institution of Engineers (India), Orissa -2016
- **Er Ganesh Mishra Memorial Award** for best paper presented at the 58th Annual Technical Session of the Institution of Engineers (India), Orissa -2017
- **Er Raj Kishore Mahapatra Memorial Award** for best paper presented at the 60th Annual Technical Session of the Institution of Engineers (India), Orissa -2019

Short Term /Workshop/ Refreshers courses Organised :

Title	Date	No of Participants	Type of Participants
CNC Machining: Programming & Practices	24-28, Dec'2018	10	Industry+Academic
CNC Milling & Turning: Programming & Practices	12-16, June'2017	10	Industry+Academic
CNC Programming: Methods & Practices	20-24, June'2016	16	Industry+Academic
CNC Milling and Turning: Programming and Practices	18-22, Dec'2015	12	Industry+Academic
CNC Milling and Turning: Programming and Practices	15-19, Dec'2014	14	Industry+Academic
Advanced Manufacturing Practices	13/06/2014	10	Industry+Academic
3rd CNC Programming and Practices	02/06/2014	16	Industry+Academic
Advanced Welding Practices	06/12/2013	16	Industry+Academic
2nd CNC Programming and Practices	02/12/2013	18	Industry+Academic
CNC Programming and Practices	22/05/2013	26	Industry+Academic
Basics of machining and maintenance practices	11/12/2007	11	Industry
Advanced training on CNC Grinding	04/12/2007	17	Industry

List of Publications

A. Referred Journal Papers

(i) INTERNATIONAL JOURNALS:

1. S.K.Sahoo, P.K.Kar and K.C.Singh, Upper Bound Analysis of the Extrusion of a Bar of Channel Section from Square / Rectangular Billets through Square Dies, J. Mat. Proc. Tech. (England), vol 75(1-3), pp 75-80 (1998). Doi: 10.1016/S0924-0136(97)00285-9
2. S.K.Sahoo and P.K.Kar, An Upper Bound Solution Using SERR Technique for Round-to-Square Drawing through Straightly Converging Dies, Transactions of Mech Engg, The Institution of Engineers (Australia), vol ME 23, no 1, pp 39-41 (1998)
3. S.K.Sahoo, P.K.Kar and K.C.Singh, A Numerical Application of the Upper Bound Technique for Round-to-Hexagon Extrusion through linearly Converging Dies, J. Mat. Proc. Tech., vol 91(1-3), pp 105-110 (1999). DOI: 10.1016/S0924-0136(98)00448-8
4. S.K.Sahoo, P.K.Kar and K.C.Singh, Direct Upper Bound Solution to Rectangular-to-Polygonal Extrusion through Square Dies, ASME Transactions, J. of Manu. Sci and Eng., vol 121, pp 195-201 (1999). DOI: 10.1115/1.2831204
5. S.K.Sahoo and P.K.Kar, Round-to-Hexagon Drawing through straightly Converging Dies: An Application of the SERR Technique, Int. J. Mech. Sci. vol 42, pp 445-449 (2000). DOI: 10.1016/S0020-7403(99)00015-6
6. S.K.Sahoo, Comparison of SERR Analysis in Extrusion with Experiments, J. of Material Processing Technology, U.K., vol. 103(2), pp 293-303, (2000) . DOI: 10.1016/S0924-0136(99)00480-X
7. P.K.Kar, S.K.Sahoo and N.S.Das, Upper Bound Analysis for Extrusion of T-section Bar from Square Billet Through Square Die', MECCANICA (International Journal of Italian Society for Applied and Theoretical Mechanics) vol 35, no.5, pp 399-410 (2000). DOI: 10.1023/A:1010361711579
8. R.K.Sahoo, P.K.Kar and S.K.Sahoo, 3D Upper Bound Modelling for Round-to-Triangle Section Extrusion Using SERR Technique, J. Mat. Proc. Tech., U.K, vol. 138(1-3), pp 499-504, 2003. DOI: 10.1016/S0924-0136(03)00128-6
9. S.K.Sahoo, Three-Dimensional Analysis of Round-to-I Section Extrusion Through Linearly Converging Die, Manufacturing Technology & Research, An International Journal, vol 2, No. 3&4, pp 72-77 (2006)
10. S.K.Sahoo, An Analysis of Plastic flow Through Polygonal Linearly Converging Dies: As Applied to Forward Metal Extrusion, J. of Material Processing Technology, U.K., vol. 132(1-3), pp 286-292, (2003). doi.:10.1016/S0924-0136(02)00942-1
11. S.K.Sahoo and V.V. Silberschmit, Effect of Multi-Impacts on a PMMA Sheet Material, Journal of Materials Processing Technology, UK, vol. 204(1-3), pp 206-212, (2008). Doi: 10.1016/ j.jmatprotec. 2007.11.035
12. R.Sahoo, S.K. Sahoo , P.R.Samantaray, B. Sahoo and P.K.Kar, Round-to-channel Section Extrusion Through Linearly Converging Die: A Three-Dimensional Analysis, Int. J. Adv. Manuf. Technology, 2008 , Vol. 41 PP 677-683. DOI: 10.1007/s00170-008-1511-8
13. L.N.Patra and S.K.Sahoo, Combined Extrusion and Forging: A Three-dimensional Analysis, Journal of Mechatronics and Intelligent Manufacturing (JoMIM), USA., Vol 1, No.3-4 (2009).
14. S.K.Sahoo, B.Sahoo, Patra, L.N., Paltasingh, U.C., Samantaray, P.R. Three-dimensional analysis of round-to-angle section extrusion through straight converging die, Int. J. Adv. Manuf. Technology, 2010 , Vol. 49, Issue 5, PP 505-512. DOI: 10.1007/s00170-009-2427-7
15. L.N.Patra , S.K.Sahoo and B.Sahoo, Combined Extrusion and Forging: A Three-dimensional Analysis, International Journal of Advanced Manufacturing System (IJAMS), Vol 2, No.1-2, 2010.
16. L. N. Patra, S. K. Sahoo, and K. P. Maity, "Plastic Flow of Metal through Flat Dies: A Three Dimensional Analysis," *International Journal of Mechanical and Materials Engineering*, vol. 1, no. 3, pp. 160-165, 2010
17. S. P. Mohapatra, S. K. Sahoo, S. Nanda, A. Palchaudhary, S. C. Patnaik. Thermo Mechanical Modelling of Bar Casting, *Journal of Advanced Research in Mechanical Engineering,* Vol.1 (no. 3), pp. 173-178*,* 2010.
18. Patra, L.N. Sahoo, S.K ,"3D Analysis of Extrusion-Forging Process: Pentagonal Head with Round Shaft," *International Journal of Applied Engineering*, vol. 1, 2011, pp. 2-8.
19. L.N. Patra, S.K. Sahoo, U.C. Paltasingh, B. Sahoo, and P.R. Samantaray, "Lateral Extrusion of Some Complex form: A Three-Dimensional Analysis," *Journal of Advanced Manufacturing Systems*, vol. 1, 2010, pp. 75-89.
20. M.P.Rout, S.K.Sahoo, L.N.Patra, B.C.Behera and K.K.Kanaujia, Flow behavior of Aluminum during warm upset forming, International Journal of Manufacturing Technology and Industrial Engineering, Vol 2 Number 1 January-June 2011, pp 37-41.
21. L.N. Patra, S.K. Sahoo and K.P.Maity Extrusion-forging of round shaft with 8-tooth spur gear head: A three-dimensional analysis, International Journal of Advances in Machining and forming operations, Vol 3 Number 2 July-Dec June 2011, pp 153-165.

22. Patra, L.N., Sahoo, S.K., Murmu, M.K., Plastic flow through taper dies: A three dimensional analysis, World Academy of Science, Engineering and Technology International Journal of Mechanical, Aerospace, Industrial, Mechatronic and Manufacturing Engineering Vol:5, No:2, 2011. scholar.waset.org/1999.8/9829
23. U. C. Paltasingh, S. K. Sahoo, P.R. Dash, K.C. Nayak and S. Potnuru, "Lateral Extrusion for Round to-Triangular Head: Experimental Studies and Three Dimensional Analyses", *International Journal of Research in Aeronautical and Mechanical Engineering*, vol. 1(2), pp. 1-8, 2013.
24. V. Kukkala and S. K. Sahoo, "Finite element analysis of ultrasonic vibratory tool and experimental study in ultrasonic vibration-assisted Turning (UVT)", *International Journal of Engineering Science Invention (IJESI),* Special Issue. 2319 – 6726, pp. 73-77, 2013. DOI: 10.11127/ijammc.2013.02.085
25. U. C. Paltasingh, S. K. Sahoo, P.R. Dash and K.C. Nayak, "Simulation and Experimental Studies for Lateral Extrusion of Square and Pentagonal Head from Round Shaft", *International Journal of Research in Engineering and Technology*, vol. 2(7), pp. 56-62, 2013.
26. S. K.Sahoo, S. K. Sarangi, S. N. Panda , Parametric Data Modeling and Experimental Approach for Spot Weldment in SS202, *Int. Journal of Engineering Research and Application*, *Vol. 3, Issue 6, Nov-Dec 2013, pp.130-135*
27. K. Vivekananda, G.N. Arka, S.K. Sahoo (2014) Finite element analysis and process parameters optimization of ultrasonic vibration assisted turning. Procedia Materials Science Vol 6, 2014, pp. 1906-1914. Doi: 10.1016/j.mspro.2014.07.223
28. B. R. Moharana, S. K. Sahoo. (2014) An ANN and RSM integrated approach for predict the response in welding of dissimilar metal by pulsed Nd:YAG laser. *Universal Journal of Mechanical Engineering* 2(5): 169-173, 2014. DOI: 10.13189/ujme.2014.020504.
29. U. C. Paltasingh, S. K. Sahoo, P.R. Dash, K.C. Nayak and S. Potnuru, Lateral Extrusion of Spur gears with Involute Profile: Finite Element Analysis and Experimental Investigation, *IOSR Journal of Engineering*, vol. 3(7), pp. 20-30, 2013.
30. U. C. Paltasingh, S. K. Sahoo, P.R. Dash, K.C. Nayak and S. Potnuru, FEM Analysis and Experimental Investigation for Lateral Extrusion of Hexagonal Head, *International Journal of Engineering Research and Application*, vol. 3(4), pp. 25-33, 2013.
31. M.P. Satapathy, S.K.Sahoo. S. Datta, Optimization of tensile strength of ultrasonic lap welding of dissimilar materials using Taguchi's philosophy, *Applied Mechanics and Materials, Sp. Issue Vol 592-594*, pp. 652-657, 2014. DOI: 10.4028/www.scientific.net/AMM.592-594.652
32. S.Potnuru, S.K.Sahoo, R. Venjamuri, S.K.Sahoo, Three-dimensional Analysis of Combined Forward-Backward Extrusion-Forging Process Using Deform 3D, *Applied Mechanics and Materials, Sp. Issue Vol 592-594*, pp. 791-795, 2014. DOI: 10.4028/www.scientific.net/AMM.592-594.791
33. K. Vivekananda, G.N. Arka, S.K. Sahoo (2014) Design and Analysis of Ultrasonic Vibratory Tool (UVT) Using FEM, and Experimental Study on Ultrasonic Vibration-assisted Turning (UAT). Procedia Engineering Vol 97, 2014, pp. 1178-1186. doi.: 10.1016/j.proeng.2014.12.396
34. M.P. Satapathy, B.R. Moharana, S. Dewangan, S.K.Sahoo. Modelling and Optimization of Ultrasonic Metal Welding on Dissimilar Sheets Using Fuzzy Based Genetic Algorithm Approach, *Engineering Science and Technology: An International Journal Vol 18*, pp. 634-647, 2015. Doi :10.1016/j.jestch.2015.04.007
35. M.P. Satapathy, S.K.Sahoo and S.Datta. Acoustic Horn Design and Effects of Process Parameters on Properties of Dissimilar Ultrasonic Welding Aluminium to Brass, *Journal of Materials and Manufacturing Processes*, *Vol 31*, pp. 283-290, 2016. DOI: 10.1080/10426914.2015.1048465
36. Kasinath Das Mohapatra and Susanta Kumar Sahoo, Micro-structural analysis and multi-objective optimization in gear cutting process for AISI 304 stainless steel using wire EDM, International Journal of Mechanical and Production Engineering,2015,Vol 3 (6),pp.109-114. http://ijmpe.iraj.in/volume.php?volume_id=148
37. K D Mohapatra and S K Sahoo, Experimental investigation of wire edm parameters for gear cutting process using desirability with PCA, International Journal of Technological Research in Engineering, 2015, Vol 2 (10), pp.2415-2419. http://www.ijtre.com/manuscript/2015021049.pdf
38. B.R. Moharana, S. K. Sahu, S.K.Sahoo, R. Bathe. Experimental Investigation on Mechanical and Microstructural Properties of AISI 304 to Cu Joints by CO_2 Laser, *Engineering Science and Technology: An International Journal Vol 19*, pp. 684-690, 2016. Doi: 10.1016/j.jestch.2015.10.004
39. M.P. Satapathy and S.K.Sahoo. Parametric analysis on plastic deformation of materials during ultrasonic spot welding with different anvil geometries, *International Journal of Manufacturing Technology and Management (IJMTM)*, *Vol 31 (4)*, pp. 344-361, 2017. https://doi.org/10.1504/IJMTM.2017.086118

40. T.R.Mohanty, S.K.Sahoo, M.K.Moharana, (2015) Computational modeling of blast furnace stave cooler based on steady state heat transfer analysis. Procedia Engineering Vol 127, 2015, pp. 940-946. Doi: 10.1016/j.proeng.2015.11.440
41. V.B. Shaibu, S.K.Sahoo, A. Kumar, (2015) Computational modeling of dissimilar metal CO_2 laser welding: Applied to copper and 304 stainless steel. Procedia Engineering Vol 127, 2015, pp. 208-214. Doi: 10.1016/j.proeng.2015.11.330
42. Thakur, A., Gangopadhyay, S., Maity, K.P., Sahoo, S.K., Evaluation on Effectiveness of CVD and PVD Coated Tools during Dry Machining of Incoloy 825, Tribology Transactions, vol. 59, no. 6, 2016, pp 1048-1058. DOI: 10.1080/10402004.2015.1131350
43. M.P. Satapathy and S.K.Sahoo. An Experimental Investigation on Joining of Aluminum with Steel Using Ultrasonic Metal Welding, *International Journal of Mechatronics and Manufacturing Systems (IJMMS)*, *Vol 9*, no. 4, pp. 299-309, 2016. Doi: 10.1504/IJMMS.2016.082861
44. M.P. Satapathy and S.K.Sahoo. Microstructural and mechanical performance of ultrasonic spot welded Al-Cu joints for various surface conditions, *Journal of Manufacturing Processes*, *Vol 22*, pp. 108-114, 2016. Doi: 10.1016/j.jmapro.2016.03.002
45. T.R.Mohanty, S.K.Sahoo, M.K.Moharana, Study on blast furnace cooling stave for various refractory linings based on numerical modeling. IOP Conf. Series: Materials Science and Engineering, vol. 115, no. 1, 2016, pp 43-50. Doi: 10.1088/1757-899X/115/1/012039
46. M.P. Satapathy, S.K.Sahoo, Ultrasonic spot welding of dissimilar metals: Characterization and optimization of parameters. IOP Conf. Series: Materials Science and Engineering, vol. 115, no. 1, 2016, pp 11-18. doi:10.1088/1757-899X/115/1/012021
47. S. Sahoo, B.D. Bishoyi, U.K. Mohanty, S. K. Sahoo, J. Sahoo, Ravi Bathe, Effect of Laser Beam Welding on the Microstructure and Mechanical Properties of Commercially Pure Titanium, Trans Indian Institution of Metals, vol. 70, no. 7, 2017, pp 1817-1825. doi:10.1007/s12666-016-0976-7
48. S. K. Sahu, B.R. Moharana,V.B. Shaibu, S.K.Sahoo, An experimental study on CO2 laser beam welding of 304SS and Cu dissimilar pipes, *International Journal of Mechatronics and Manufacturing Systems (IJMMS)*, *Vol 9, no. 4,* pp. 310-326, 2016. Doi: 10.1504/IJMMS.2016.082862
49. Kasinath Das Mohapatra and Susanta Kumar Sahoo, Experimental analysis and optimization of process parameters for gear cutting process using Wire EDM, *International Journal of Mechatronics and Manufacturing Systems (IJMMS)*, *Vol 9*, no. 4, pp. 327-344, 2016. Doi: 10.1504/IJMMS.2016.082863
50. Akshaya Kumar Rout, Kalipada Maity and Susanta Kumar Sahoo, FEM Modeling of Extrusion of Square Billet to Square Product Through Cosine Dies, Journal of The Institution of Engineers (India): Series C, vol 98, issue 2 , pp 91-96, 2017 DOI 10.1007/s40032-016-0245-x
51. Kasinath Das Mohapatra, Susanta Kumar Sahoo and Munmun Bhoumik, Thermal Modeling and Structural Analysis in wire EDM Process for a 3D, International Journal of Applied Mechanics and Materials, 2016, Vol 852,pp.279-289. *doi:10.4028/www.scientific.net/AMM.852.279*
52. Kasinath Das Mohapatra, Mantra Satpathy and Susanta Kumar Sahoo, Comparison of Optimization Techniques on MRR and Surface Finish in Wire EDM Process for Gear, International Journal of Industrial Engineering Computation, 2016, Vol 8,no. 2, pp.251-262(12). doi: 10.5267/j.ijiec.2016.9.002
53. M.P. Satapathy and S.K.Sahoo. Mechanical performance and metallurgical characterization of ultrasonically welded dissimilar joints, *Journal of Manufacturing Processes*, *Vol 25*, pp. 443-451, 2017. DOI: 10.1016/j.jmapro.2017.01.001
54. Kasinath Das Mohapatra and Susanta Kumar Sahoo, Analysis of process parameters in WEDM gear cutting process using entropy grey relational analysis approach, *International Journal of Manufacturing Research (IJMR)*, *Vol 12*, no. 4, pp. 423-443, 2017. https://doi.org/10.1504/IJMR.2017.088392
55. M.P. Satapathy, Abhishek and S.K.Sahoo Effect of brass interlayer sheet on microstructure and joint performance of ultrasonic spot welded copper-steel joints, Journal of Materials Engineering and Performance, *Vol 26*, no. 7, pp. 3254-3262, 2017. DOI: 10.1007/s11665-017-2772-x
56. Kasinath Das Mohapatra and Susanta Kumar Sahoo, A multi objective optimization of gear cutting in WEDM of Inconel 718 using TOPSIS method, Decision Science Letters, *Vol 7*, no. 2, pp.157-170, 2018. DOI: 10.5267/j.dsl.2017.6.002
57. M.P. Satapathy and S.K.Sahoo Experimental and Numerical Studies on Ultrasonic Welding of Dissimilar Metals, Int. Journal of Advanced Manufacturing Technology, *Vol 93*, no. 5, pp. 2531-2545, 2017. DOI: 10.1007/s00170-017-0694-2
58. M.P. Satapathy, Kasinath Das Mohapatra and S.K.Sahoo Ultrasonic spot welding of Al–Cu dissimilar metals: A study on parametric influence and thermomechanical simulation, Int. Journal of

Modelling and Simulation, *Vol 38*, no. 2, pp. 83-95, 2017. https://doi.org/10.1080/02286203.2017.1395198

59. Mantra Prasad Satpathy, Kasinath Das Mohapatra, Ananda Kumar Sahoo and Susanta Kumar Sahoo, Parametric Investigation on Microstructure and Mechanical Properties of Ultrasonic spot welded Aluminium to Copper sheets, IOP Conf. Series: Materials Science and Engineering vol, 338 (2018) pp 1-6, doi:10.1088/1757-899X/338/1/012024
60. K.D. Mohapatra, V.B. Shaibu and S.K. Sahoo, "Modeling and Analysis of Wire EDM in a Gear Cutting Process for a 2D Model", *Materials Today: Proceedings,* 2018, vol 5, pp 4793-4802. https://doi.org/10.1016/j.matpr.2017.12.053 Scopus
61. K.D. Mohapatra and S.K. Sahoo, "Microstructural analysis of Titanium alloy gear using WEDM process", *Surface Review and Letters*, 2018. https://doi.org/10.1142/S0218625X18501123 SCI
62. K.D. Mohapatra, M.P. Satpathy and S.K. Sahoo, "Optimisation of WEDM parameters in a gear cutting process using MOORA-based GA", *International Journal of Process Management and Benchmarking*, 2018 DOI: 10.1504/IJPMB.2018.10008279 -Scopus.
63. M.P. Satapathy, S. B. Mishra and S.K.Sahoo Ultrasonic spot welding of aluminium-copper dissimilar metals: A study on joint strength by experimentation and machine learning, Journal of Manufacturing Processes, *Vol 33*, pp. 96-110, 2018. https://DOI.org/10.1016/j.jmapro.2018.04.020 -SCI
64. M.P. Satapathy, B. Patel and S.K.Sahoo Exploration of bonding Phenomena and microstructural characterization in high power ultrasonic spot welding of aluminium to steel sheet with copper interlayer, Ain Shams Engineering Journal, *Vol xx*, pp. xx-xx, 2019. https://DOI.org/10.1016/j.asej.2019.07.007 -SCI
65. Ajoy Kumar Nandy, Karthik Balasubramanian, S.K.Sahoo, Experimental and Numerical Analysis of BlastFurnace Cooling Stave with Refractory Lining, International Journal of Advanced Trends in Computer Applications (IJATCA) Special Issue 1 (1), July - 2019, pp. 224-230, ISSN: 2395-3519

(ii) INDIAN NATIONAL JOURNAL PAPERS:

66. S.K.Sahoo, P.K.Kar, K.C.Singh and S.P.Mohapatra, Upper Bound Analysis of Hexagonal Section Bars from Rectangular Billets through Square Dies, **J. Inst. Engrs (India), vol 77, part MC, pp 164-168 (1996)**
67. S.K.Sahoo, P.K.Kar and D.Nayak, Upper Bound Solution Using SERR Technique for Extrusion of Square Bars from Square Billets through Curved Dies, **J. Inst. Engrs.(India), vol 78, part MC, pp 155-160 (1997)**
68. S.K.Sahoo, P.K.Kar and K.C.Singh, Three-Dimensional Analysis Using SERR Technique for Extrusion of Triangular Section Bars from Square / Rectangular Billets through Square Dies, **J. Inst. Engrs (India), vol** 78, Part PR, pp 45-49 (1998).
69. P.K.Kar, S.K.Sahoo and N.S.Das, Section Extrusion from Rectangular Billet: Experimental Verification of the SERR Analysis, Indian Journal of Engineering & Material Sciences, vol 9, pp 35-40 (2002).
70. S.K.Sahoo and P.K.Kar, Polygonal Section Extrusion From Square Billet Through Flat Die: An Application of the Upper Bound Method, J. Inst. Engrs (India), vol 84, pp 12-18, part PR, (2003)
71. S.K.Sahoo and N.S.Das, Forging of a Truncated Cone: An upper bound analysis, Journal of Manufacturing Technology Today, Central Manufacturing Technology Institute, India, pp 7-11,Vol. 2, Issue 10, Oct.**2003**.
72. N.S.Das and S.K.Sahoo, Experimental study of strip extrusion, Journal of Manufacturing Technology Today, Central Manufacturing Technology Institute, India, pp 18-22,Vol. 2, Issue 11, Nov.**2003**.
73. N.S.Das and S.K.Sahoo, A class of upper bound solutions for plane-strain extrusion, Journal of Manufacturing Technology Today, Central Manufacturing Technology Institute, India, pp 17-22,Vol. 4, Issue 5, May'**2005**.
74. P.K.Kar, S.K.Sahoo and N.S.Das, Study of Rectangular –to-Polygonal Section Extrusion: Verification of the SERR Analysis with Experiment, Manufacturing Technology & Research, An International Journal, **vol 2, No. 1&2, pp 25-29 (2006)**
75. S. P. Mohapatra, S. K. Sahoo, S. Nanda, A. Palchaudhary, S. C. Patnaik. Numerical simulation of aluminium bar casting for wire rod production, ***Journal of Scientific and Industrial Research,*** Vol.69, pp. 913-918, 2010. URI: http://hdl.handle.net/123456789/10658

76. Kasinath Das Mohapatra and Susanta Kumar Sahoo, Parametric optimization of wire EDM process for gear cutting, Journal of Basic and Applied Engineering Research, 2014,Vol 1 (3),pp.78-84.
77. Kasinath Das Mohapatra and Susanta Kumar Sahoo, Experimental Analysis and Optimization of Parameters for gear cutting Process using Wire EDM, 56th Technical Annual, The Institution of Engineers (India), Odisha State Centre, Bhubaneswar, Feb., 15, 2015
78. S Potnuru, S.K.Sahoo, R Vinjamuri and S.K.Sahoo, Analysis of Combined extrusion-forging process applied to aluminium collet chuck-holder, 56th Technical Annual, The Institution of Engineers (India), Odisha State Centre, Bhubaneswar, Feb., 15, 2015.
79. M.P. Satapathy, S.K.Sahoo, Ultrasonic metal welding of dissimilar metals: Characterization and optimization of parameters, Annual Technical Journal, 57th Annual Technical, The Institution of Engineers (India), Odisha State Centre, Bhubaneswar, Feb., 18, 2016.
80. M.P. Satapathy, S.K.Sahoo, Ultrasonic spot welding of dissimilar metals: Application to Automotive fields. 58th Annual Technical Journal, The Institution of Engineers (India), Odisha State Centre, Bhubaneswar, Feb., 19, 2017.

B. Published Conference Papers

(i) INTERNATIONAL CONFERENCE PAPERS:

81. S.K.Sahoo, P.K.Kar and K.C.Singh, Upper Bound Analysis to Find the Effect of Die Orientation when Extruding Hexagonal Section from Square Billets through Square Dies, Proceedings **International Conference on Advances in Mechanical and Industrial Engineering, University of Roorkee, India, February 6-8, pp 895-901 (1997)**
82. S.K.Sahoo, P.K.Kar and K.C.Singh, Upper Bound Analysis to Find Effect of Die Orientation when Extruding Triangular Section from Square Billets through Square Dies, Proceeding **International Conference on Theoretical, Computational and Experimental Mechanics, I.I. T., Kharagpur, India, December, 1-5, pp 123-128 (1998)**
83. S.K.Sahoo and P.K.Kar, Die Orientation Effect for Extrusion of Channel Section from Square Billets through Square Dies: A 3-D Upper Bound Modelling, Proceeding **International Conference on Flexible & Automatic Manufacturing Systems (IFAMS), Coimbatore, India, January, pp 45-49 (2000)**
84. R.K.Sahoo, P.K.Kar and S.K.Sahoo, 3-D Upper-Bound Modelling for Round-to-Triangle Section Extrusion Using SERR Technique, Proceeding **International Manufacturing Conference in China (IMCC 2000) at Hongkong, August 16-17, pp 121-122 (2000).**
85. S.K.Sahoo and P.K.Kar, An Application of the Upper Bound Method for the Analysis of 3-Dimensional Section Extrusion, Proceeding **First MIT Conference on Fluid and Solid Mechanics held at MIT, Boston, USA from June 12-15, pp 149 (2001).**
86. L.N.Patra and S.K.Sahoo, Combined Extrusion and Forging: A Three-dimensional Analysis, Proc. **International Conference on 'Advances in Mechanical Engineering**', December 15-17, 2008, SVNIT, Surat, India, PP. 725-730.
87. L.N.Patra and S.K.Sahoo, Upset Forging of Sectional Blocks: A Three-dimensional Analysis, Proc. **2nd International Conference on 'Recent Advances in Material Processing Technology**', February 21-23, 2009, National Engineering College, Kovilpatti, India, PP. 394-398.
88. L.N.Patra and S.K.Sahoo, Lateral Extrusion of sectional shapes: A Three-dimensional Analysis, Proc. **International Conference on 'Advances in Mechanical Engineering**', December 15-17, 2009, SVNIT, Surat, India, PP. 725-730.
89. L.N.Patra and S.K.Sahoo, B.Sahoo, K.P.Maity , Triangle-to-round section Extrusion through Flat dies: A three Dimensional Analysis, **International conference on Advances in Mechanical Engineering**(ICAME-10), NIT , Surat, **PP 448-452, January(2010)**
90. S.K.Sahoo, L.N.Patra, M.K.Murmu, B.Sahoo ,U.C.Paltasingh, , P.R.Samantaray , Triangle-to-round Extrusion through Taper dies: A three Dimensional Analysis,: A three Dimensional Analysis, **International conference on Advances in Mechanical Engineering**(RAF&SM-2010), NIT Rourkela, **PP 33-38, February (2010)**
91. L.N.Patra and S.K.Sahoo, K.P.Maity, Extrusion-forging of Round shaft with Triangle Head: A Three-dimensional, 2nd International Conference on Production and Industrial Engineering (CPIE-2010), NTI Jalandhar, December 3-5, PP 214-219, (2010)
92. L.N.Patra and S.K.Sahoo, B. C. Behera, K.P.Maity, Extrusion-forging of Circular shaft with Pentagonal Head: A Three-dimensional, INTERNATIONAL CONFERENCE ON INNOVATIVE SCIENCE AND ENGINEERING TECHNOLOGY-2011(ICIEST-2011), V.V.P. Engineering college ,Rajkot, April 8-9, PP 37-42, (2011)

93. L.N.Patra and S.K.Sahoo, 3D Analysis of 4-tooth Spur Gear Forms with Circular Shaft, 5th International conference on Advances in Mechanical Engineering (ICAME-11),SVNIT , Surat, June 06-08, PP 139-143, (2011)
94. B. C. Behera, S.K.Sahoo, L.N.Patra, M.P.Rout and K.K.Kanaujia, Finite Element Analysis of Ultrasonic Stepped Horn, 5th International conference on Advances in Mechanical Engineering (ICAME-11),SVNIT , Surat, June 06-08, PP 60-64, (2011)
95. M.P.Rout, S.K.Sahoo, L.N.Patra, B.C.Behera and K.K.Kanaujia, Flow behavior of Aluminum during warm upset forming, 5th International conference on Advances in Mechanical Engineering (ICAME-11),SVNIT , Surat, June 06-08, PP 631-635, (2011)
96. K.K.Kanaujia, , M.P.Rout B. C. Behera, S.K.Sahoo and B.K.Maharana, Optimization of Tensile strength of AISI304 Stainless steel and Copper using Nd:YAG Laser Welding, 5th International conference on Advances in Mechanical Engineering (ICAME-11),SVNIT , Surat, June 06-08, PP 616-620, (2011)
97. L.N.Patra, S.K.Sahoo and K.P.Maity, 3D Analysis for net shape gear production by combined extrusion-forging process, accepted for publication on Proceedings of the International conference on Computational Methods in Manufacturing (ICCMM-2011), PP 23-30, IIT Guwahati, December 15-16, 2011.
98. B.C.Behera, S.K.Sahoo, B.N. Sahoo, L.N.Patra, P.R. Dhal and S.Kata, Finite Element Analysis of Ultrasonic Stepped Cylindrical Horn for Vibration Assisted Turning, Conference on Emerging trends and application in engineering(NCETAE-2011) page 234-237,IGIT Sarang, Odisha, December 26-28, 2011
99. B.C.Behera, S.K.Sahoo and A.K.Mandal, Experimental investigation and parametric optimization in ultrasonic assisted turning of carbon steel: using Taguchi based Grey relational analysis, International conference on Processing and fabrications of advanced materials-XXI, vol2, page 121-132, IIT Guwahati, December, 2012.
100. Kanhu Charan Nayak and Susanta Kumar Sahoo, "Dynamic Simulation and Optimization of Extrusion Process for 2024 Aluminum Alloy", *Twenty-First International Symposium on Processing and Fabrication of Advance Materials*, IIT Guwahati, Dec. 10-13, 2012.
101. Kanhu Charan Nayak and Susanta Kumar Sahoo, "Shaped Forging of Flywheel: A FEM Analysis", *3rd International Conference on Production and Industrial Engineering (CPIE)*, NIT Jalandhar, Mar. 29-31, 2013.
102. Bikash Ranjan Moharana, Susanta Kumar Sahoo and Sushanta Kumar Sahu, "Optimization of Processing Parameters in Welding of Two Dissimilar Metal by Pulse Nd:YAG Laser", *International confeennce on material science(ICMS)*, Tripura University, Feb. 14-16, 2013.
103. Bikash Ranjan Moharana, Susanta Kumar Sahoo and Sushanta Kumar Sahu, "Fuzzey Ruled-Based Prediction of Tensile Strength for Dissimilar Metal Joint", *3rd International Conference on Production and Industrial Engineering (CPIE)*, NIT Jalandhar, Mar. 29-31, 2013.
104. Srikar Potnuru, RaviTeja Vinjamuri, Susanta Kumar Sahoo and Santosh Kumar Sahu, Three Dimensional Analysis of Combined Forward and backward Extrusion process, International Mechanical Engineering Congress – 2014, NIT Trichy, 13-15 June 2014.
105. Mantra Prasad Satpathy, Sushant Kumar Sahoo and Saurav Datta, Optimization of tensile strength during ultrasonic lap welding of dissimilar metals using Taguchi's philosophy, International Mechanical Engineering Congress – 2014, NIT Trichy, 13-15 June 2014.
106. B. R. Moharana, S. K. Sahoo, An ANN and RSM integrated approach for predict the response in welding of dissimilar metal by pulsed Nd:YAG laser, 1st International Conference on Mechanical Engineering: Emerging Trends for Sustainability (ICMEETS 2014), MANIT Bhopal, 29th -31st January 2014.
107. Kasinath Das Mohapatra and Susanta Kumar Sahoo, Parametric optimization of wire EDM process for gear cutting, 5th *International Conference on Innovative trends in Mechanical, Material, Manufacturing, Automobile Engineering and Applied Physics (ITMAEAP)*, JNU Delhi, Aug. 23-24, 2014
108. K. Vivekananda, G.N. Arka, S.K. Sahoo (2014) Design and Analysis of Ultrasonic Vibratory Tool (UVT) Using FEM, and Experimental Study on Ultrasonic Vibration-assisted Turning (UAT), 12th Global Congress On Manufacturing And Management, GCMM 2014, VIT Vellor, Nov. 17-19, 2014. DOI: 10.1016/j.proeng.2014.12.396
109. K. Vivekananda, G.N. Arka, S.K. Sahoo (2014) Finite element analysis and process parameters optimization of ultrasonic vibration assisted turning. 3rd International Conference on Materials Processing and Characterisation (ICMPC 2014), GRIET, Hyderabad, 8-9 March'2014. DOI: 10.1016/j.mspro.2014.07.223
110. Mantra Prasad Satpathy, Irshad K.T. and Susanta Kumar Sahoo Design and FEM simulation of acoustic horn with booster used for ultrasonic lap welding of dissimilar material, Proc. International Conference on Advances in Materials, Manufacturing and Applications, NIT Tiruchirappalli, April 9-11' 2015.
111. S. Potnuru, A G Y Bonda, S.K.Sahoo, Experimental and finite element analysis of Combined Extrusion-forging process, International Conference on Applied Engineering, science & Technology - 2015, Madurai, 14-16 May 2015.

112. T.R.Mohanty, S.K.Sahoo, M.K.Moharana, Computational modeling of blast furnace stave cooler based on steady state heat transfer analysis. Int. Conference on computational heat and mass transfer, NIT Warangle, Nov 30-Dec 2'2015.
113. V B Shaibu, S.K.Sahoo, A. Kumar, Computational modeling of dissimilar metal CO_2 laser welding: Applied to copper and 304 stainless steel. Int. Conference on computational heat and mass transfer, NIT Warangle, Nov 30-Dec 2'2015.
114. T.R. Mohanty S.K.Sahoo, D.Kumar, M.K.Moharana, 3D CFD Analysis of Blast Furnace Stave Cooler for various cooling medium and refractory linings. Int. Conference on computer aided engineering, GITAM Univ., Hyderabad, Dec 10-12, 2015.
115. S. Potnuru, S.K.Sahoo, T. Tudu, Combined forward and backward extrusion of adapter: An experimental and numerical analysis. Int. Conference on computer aided engineering, GITAM Univ., Hyderabad, Dec 10-12, 2015.
116. T.R. Mohanty S.K.Sahoo, K.Singh, A predictive system applied to blast furnace based on multi-objective Neural Network. 2nd International Conference on Advances in Steel, Power and Construction Technology (ICASPCT-2016), OPJU, Raigarh, March 17-19, 2016.
117. R Kandi and S K Sahoo, "Design and Modeling of a Flexible Acoustic Horn for Ultrasonic Vibration Assisted Turning," *Proceedings of International Conference on Advances in Dynamics, Vibration and Control, ICADVC- 2016*, National Institute of Technology, Durgapur, pp. 197-201, 2016.
118. M P Satpathy, S K Sahoo, S Potnuru, K D Mohapatra, "Mechanical properties and interfacial characterization of aluminum-brass joint in ultrasonic welding", ICEMS 2016, Jaipur National University, Jaipur.

119. R. Kandi and S.K.Sahoo, Experimental Investigation on Machinability of Titanium Alloy, Ti-6Al-4V during Ultrasonic Vibration Assisted Turning, Proc. 6th International & 27th AIMTDR 2016 , December 16-18, 2016, College of Engineering Pune, India, PP. 232-235.
120. M.P Satpathy and S.K.Sahoo, Ultrasonic Spot Welding of Dissimilar Metals: Mechanical Behaviour and Microstructural Analysis Proc. 6th International & 27th AIMTDR 2016 , December 16-18, 2016, College of Engineering Pune, India, PP. 936-939.
121. B.R.Moharana, S.K.Sahoo and K.P. Maity, Experimental Investigation and Parametric Optimization of Welding of SS 304-Copper Dissimilar Metal Couple by Pulsed TIG Welding Process, Proc. 6th International & 27th AIMTDR 2016 , December 16-18, 2016, College of Engineering Pune, India, PP. 944-948.
122. K. Mohapatra and S.K.Sahoo, Optimization of Single Pitch Error and MRR in a WEDM Gear cutting Process using MOORA Method. Proc. 6th International & 27th AIMTDR 2016 , December 16-18, 2016, College of Engineering Pune, India, PP. 1689-1693.
123. Srikar Potnuru, Susanta K. Sahoo and Santosh K. Sahoo, Multi-stage Extrusion/ Forging of Collet Chuck Holder: Numerical and Analytical Modelling of the Process, Proc. 6th International & 27th AIMTDR 2016 , December 16-18, 2016, College of Engineering Pune, India, PP. 1012-1016.
124. Rout, A.K, Maity, K.P, Sahoo, S.K. FEM analysis of extrusion of triangular sections from round billets through curved dies, 10th Asia-Pacific Conference on Advances in Materials Processing X, APCMP 2012; Jinan; China; 14-17 June 2012 Code 89707, Pages 391-396. Advanced Materials ResearchVolume 500, 2012, DOI: 10.4028/www.scientific.net/AMR.500.391.
125. Potnuru,S, Sahoo,S.K., Sahoo,S.K. Combined extrusion-forging: Simulation, experimental & microscopic investigation of axisymmetric single collar collet chuck holder, ASME 12th International Manufacturing Science and Engineering Conference, MSEC 2017 collocated with the JSME/ASME 2017 6th International Conference on Materials and Processing, Los Angeles; United States; 4 June 2017 through 8 June 2017; Code 129265. DOI: 10.1115/MSEC2017-2615, ISBN: 978-0-7918-5072-5 10.1115/MSEC2017-2615

http://proceedings.asmedigitalcollection.asme.org/proceeding.aspx?articleid=2646178

(ii) INDIAN NATIONAL CONFERENCE PAPERS:

126. S.K.Sahoo, P.K.Kar and K.C.Singh, Upper Bound Analysis to Find the Effect of Die Orientation when Extruding Square Sections from Square Billets through Square Dies, **Proceeding Symposium on Plasticity and Impact Mechanics, (IMPLAST '96), I.I.T., Delhi, pp 243, December 6-8 (1996)**
127. S.K.Sahoo and S.K.Senapati, Combined Formability Behavior of Some Sheet Metals When Drawn Through Conical Die, Paper Presented at **40th. ISTAM Congress** held at MACT Bhopal, pp 28, Dec'96 .
128. S.K.Senapati and S.K.Sahoo, Study of Cavitation Damage of Solid by Bubble Collapse in a Venturi Type Cavitation Tunnel, Paper Presented at **40th. ISTAM Congress** held at MACT Bhopal, pp 24, Dec' 96.

129. S.K.Sahoo, P.K.Kar and K.C.Singh, Upper Bound Analysis for Extrusion of Hexagonal Sections from Square Billets through Square Dies Assuming Unequal Dead Metal Heights at Corner Points, **Proceeding National Conference on Recent Advances in Mechanical Engineering, REC Kurukshetra,pp 28-31 (1997)**
130. S.K.Sahoo, P.K.Kar and K.C.Singh, A Knowledge - Based Approach for Selection of Extrusion Parameters, Proceeding **37th Annual Technical Session, IE (India), Orissa Center, pp 152-157, February 16 (1997)**
131. S.K.Sahoo, P.K.Kar and K.C.Singh, Upper Bound Analysis of Extrusion of Square Section Bars from Square Billets through Square Dies Assuming Unequal Dead Metal Heights at Corner Points, **Proceedings, 37th Annual Technical Session, IE (India), Orissa Center, pp 153-155, February 16 (1997)**
132. S.K.Sahoo, Energy Management with Sustainable Development', Proc. **40th Science Congress**, pp 79-83, **Dec'97**, Bhubaneswar.
133. S.K.Sahoo, P.K.Kar and K.C.Singh, Square to Hexagon Extrusion Through Square Die: An Upper Bound Analysis to Find the Eccentric Effect, **Proceedings, 39th Annual Technical Session, The Institution of Engineers (India), Orissa Center, pp 139-143, February 16(1998)**
134. S.K.Sahoo, Development of Computer Aided Manufacturing Optimisation for Extrusion' **All India Seminar on 'Design of Production System**- A New Concept' I.E.(India), Orissa Local Center, Bhubaneswar, pp 9-13, **July 1998**.
135. S.K.Sahoo, P.K.Kar and K.C.Singh, Eccentricity Effect on Square to Triangular Extrusion through Square Dies, Paper presented at the **43rd Annual Session of the Orissa Engineering Congress, pp 57-61, April 6 (1998)**
136. S.K.Sahoo, P.K.Kar and K.C.Singh, Extrusion of T-Section from Round Billetsthrough Square Dies: An Upper Bound Analysis, Paper presented at **44th ISTAM Congress, PSG College, Coimbatore, pp 46, December (1998)**
137. S.K.Sahoo, P.K.Kar and K.C.Singh, Optimum Length of Straightly Converging Die for Round-to-Square Extrusion, Paper presented at the **44th Annual Sesion, Orissa Engineering Congress, pp 167-170, January 18 (1999**)
138. S.K.Sahoo, P.K.Kar and K.C.Singh, Drawing of Square Section from Round Billet Through Taper Die: A 3-D Analysis, Proc. **40th. Annual Tech. j. Orissa Center, IE (I**), pp 155-159, Jan'99.
139. S.K.Sahoo, Expert System for Preventive Tool Maintenance of Press Tools' **National Seminar on 'Condition based Monitorin**g', I.E (India), pp 97-101, Bhubaneswar, July' 99.
140. S.K.Sahoo and P.K.Kar , A 3-D Upper Bound Modelling for Round-to-T Section Extrusion through Linearly Converging Dies, Paper presented at **National Conference on Manufacturing Challenges in the 21st Century, Banaras Hindu University, Varanasi, pp 231-235 (2000)**
141. S.K.Sahoo and P.K.Kar, Upper Bound Analysis for Extrusion of a Regular Pentagon Section from Rectangular Billets through Square Dies, paper presented at **45th Session of Orissa Engineering Congress, pp 68-72 (Jan'2000)**
142. S.K.Sahoo and P.K.Kar, Extrusion of Square-to-Polygonal Sections through Flat Dies: A Comparison of SERR technique with Experiments, **Proceedings of the 41rst Annual Technical Session, IE (India), Orissa Center, pp 79-83, (Jan'2000)**
143. S.K.Sahoo and P.K.Kar, Round-to-Square Extrusion Through Taper Die: A Three-dimensional Analysis, **Proceeding of 19th All India Manufacturing Technology, Design & Research Conf. , I.I.T., Madras, pp 145-149, Dec'2000**
144. S.K.Sahoo, Optimum Die Length for Extrusion of Round-to-I Section:An Application of SERR Technique, Paper presented at the **46th Annual Session, Orissa Engineering Congress, pp 63-65, January (2001**).
145. S.K.Sahoo and P.K.Kar, Polygonal Section Extrusion From Square Billet Through Flat Die: An Application of the Upper Bound Method, Proceeding **National Conference on Emerging trends in Manufacturing, Banaras Hindu University, Varanasi, pp 184-187, January 19-20,(2002)**.
146. S.K.Sahoo, Forging of a Truncated Cone: An upper bound analysis, **Proceeding of 20th All India Manufacturing Technology, Design & Research Conf. , B.I.T., Mesra, Ranchi, December, pp 216-219, (Dec' 2002).**
147. G.Mahananda and S.K.Sahoo, 3-Dimensional Limit Analysis for Metal Flow Through Converging Dies from Round Billet, **Proceedings of the 44th Annual Technical Session, The Institution of Engineers (India), Orissa Center, pp 107-111, January (2003).**
148. S.K.Panigrahi and S.K.Sahoo, Comparative study between columns having T-shapes and square shapes, **Proceedings of the 45th Annual Technical Session, The Institution of Engineers (India), Orissa Center, pp 69-73, February (2004).**
149. S.K.Sahoo, Extrusion of I-Section from Round Billet through Linearly converging Dies: An Upper Bound Analysis, Paper presented at **47th ISTAM Congress, NIT, Rourkela, December (2004).**
150. P.K.Kar, S.K.Sahoo and N.S.Das, Study of rectangular-to-polygonal section extrusion: Verification of SERR analysis with experiment, **Proceedings of the 46th Annual Technical Session, The Institution of Engineers (India), Orissa Center, pp 67-76, February (2005).**

151. S.K.Sahoo and P. Swain, Upset forging of regular polygonal blocks: A three dimensional upper bound analysis, Proceedings, **National conference on Recent Advances in Manufacturing Technologies** (RAMT-2005)**,** NIT, Rourkela**, PP 21-27, October (2005).**
152. S.K.Sahoo and P Reezwana, Lubrication effect in Upset forging of regular polygonal blocks, Proceedings**, National conference on Recent Advances in Industrial Tribology and Maintenance** (RAITM-2006)**,** NIT, Rourkela**, PP 33-38, January (2006).**
153. S.K.Sahoo and P Reezwana, Three dimensional analysis of Upset forging of L- sectional blocks with re-entrant corners, Proceedings, **National conference on Emerging Trends in Nano Technology and Innovations in Design and Manufacturing** (ETNDM-2006)**,** NIT, Rourkela**, PP 51-56, February (2006).**
154. S.K.Sahoo and P Reezwana, An UBET analysis of 3D Non-Axisymmetric upset forging of L-sectional blocks, Proceedings, **National conference on Recent Trends in Mechatronics, Nano Technology and Robotics** (RTMNR-2006)**,** NIT, Rourkela**, PP 69-73, April (2006).**
155. S.K.Sahoo, Quality of axisymmetric and non-axisymmetric forged products, Proceedings, **All India National conference on Challenges for Quality and Reliability,** (CQR-2006)**,** NIT, Rourkela**, PP 33-39, November (2006).**
156. S.K.Sahoo, Bulging analysis in the upset forging of Porous composite metals, Proceedings, **All India National conference on** Advances in composite materials**,** (ACM-2007)**,** NIT, Rourkela**, PP 23-28, April (2007).**
157. L.N.Patra and S.K.Sahoo, K.P.Maity , Plastic flow of metal through Flat dies: A three Dimensional Analysis, **National conference on Recent Advances in Fluid and Solid Mechanics** (ICAME-10), NIT , Suratkal, **PP 199-203, January(2010)**
158. L.N.Patra, S.K.Sahoo and K.P. Maity, Combined Extrusion and Forging: A Three-dimensional Analysis, Proc. AIMTDR, December 13-15, 2010, Andhra Univ. Visakhapatanam, India, PP. 515-520.
159. V. Kukkala and S. K. Sahoo, "Experimental Study and Optimization of Machining Parameters in Ultrasonic Vibration-assisted Turning (UVT)", *All India Seminar* o*n Recent Advances in Mechanical Engineering,* The Institution of Engineers (India), Odisha State Centre, Bhubaneswar, Mar.16-17, 2013.
160. M P Satpathy, S K Sahoo and K C Nayak, "FEM simulation of ultrasonic stepped sonotrode used for plastic welding", *All India Seminar* o*n Recent Advances in Mechanical Engineering,* The Institution of Engineers (India), Odisha State Centre, Bhubaneswar, Mar.16-17, 2013
161. T.R.Mohanty, S.K.Sahoo, M.K.Moharana, Study on blast furnace cooling stave for various refractory linings based on numerical modeling. 5th National Conference on processing, characterization and materials, NIT Rourkela, Dec 12-13, 2015.
162. M.P. Satapathy, S.K.Sahoo, Ultrasonic spot welding of dissimilar metals: Characterization and optimization of parameters. 5th National Conference on processing, characterization and materials, NIT Rourkela, Dec 12-13, 2015.
163. Srikar Potnuru, Vivekananda kukkala, Susanta K. Sahoo and Suryansh Choudary, Multi Objective Optimization of Cutting Parameters in Turning Operation to Reduce Surface Roughness and Cutting Forces, National Conference on Innovations in Mechanical Engineering (NCIME'16), Madanapalle,517325. Andhra Pradesh (india), Oct.' 21-22, 2016.
164. M.P. Satapathy, S.K.Sahoo, Implication of a Novel Joining Technique in Automotive Industry for Production of Lightweight Vehicles, The Institution of Engineers (India), Odisha State Centre, Bhubaneswar, Mar.30, 2019.

Thesis supervised: M.Tech.(R)/M.Phil /Ph.D.

Sl.no.	Degree	Name of Student	Brief Title of Thesis	Year Completed	Co-Supervisor, if any
1.	Ph.D.	L.N.Patra	Three Dimensional Analysis of Combined Extrusion/Forging: http://ethesis.nitrkl.ac.in/4449/	2012	Dr. K.P.Maity
2.	Ph.D.	S.Mohapatra	Modelling and study of deformation behavior for continuous casting process applied to aluminum products	2013	Dr. S.Pattanaik
3.	Ph.D.	U.Paltasingh	3-D Analysis of Lateral Extrusion	2015	Dr.P.R.Dash

4.	Ph.D.	Srikar Potnuru	Numerical, analytical and experimental analysis of combined extrusion forging processes applied to collet chuck holders	2016	Dr. S.K.Sahoo, MM
5.	Ph.D.	M.P.Satapathy	Ultrasonic spot welding of dissimilar metal sheets: an experimental, numerical and metallurgical investigation	2017	Dr. S.Datta
6.	Ph.D.	Bikash Moharana	Mechanical and metallurgical investigation of AISI 304 stainless steel and commercially pure copper dissimilar metal couple weldments	2017	-
7.	Ph.D.	Kasinath Das Mohapatra	Experimental and numerical investigations of machining Ti-6Al-4V spur gears using wedm process	2018	-
8.	Ph.D.	Vivekananda Kukkala	Ultrasonic vibration assisted turning of a nickel-base superalloy: acoustic horn design, experimental investigations and numerical analysis	2018	-
9.	Ph.D.	Taps Ranjan Mohanty	Investigations of blast furnace cooling staves and intelligent prediction using artificial neural network	2019	Prof. M. Moharana
10.	Ph.D.	Sushanta Kumar Sahu	An investigation of dissimilar pipe welding of AISI 304 stainless steel with CP copper	2019	-
11.	Ph.D.	Ananda Kumar Sahoo	Ultrasonic vibration assisted turning	-	
12.	Ph.D.	Chandramani Upadhyay	Experimental and numerical investigations of machining Inconel 617	-	
13.	Ph.D.	V B Shaibu	An investigation of dissimilar metal welding of AISI 304 stainless steel with CP copper	-	
14.	Ph.D.	Suvransu Pattanaik	Additive manufacturing	-	

1.	M.Tech.(R)	B.C. Behera	Development and experimental study of machining parameters in ultrasonic vibration-assisted turning: http://ethesis.nitrkl.ac.in/4416/	2011	Dr. K.P.Maity
2.	M.Tech.(R)	R. Kandi	Acoustic horn design, numerical and experimental investigations of ultrasonic vibration assisted turning of Ti-6Al-4V	2016	-

BOOK

1. BOOK Title Ultrasonic Spot welding of dissimilar aluminium to brass sheet: M.P.Satapathy and S.K.Sahoo, Lambert Academic Publishing, 2018,
ISBN 978-613-9-82743-5

2. Ultrasonic welding of dissimilar metal sheets. S.K.Sahoo and M.P.Satapathy, CRC Press, Elsevier, 2019

Book Chapter:

1. Title of Book: Processing and Fabrication of Advanced Materials-XXI vol.II
Author editors: P.S. Robi , N. Bhatnagar , T.S. Srivatsan
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Author of chapter: B.C.Behera, S.K.Sahoo

2. Book Title: Dynamics of Machines and Mechanisms, Industrial Research
Author: K.R. Balasubramanian, S.P. Sivapirakasam, R. Anand
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Welding of dissimilar materials using Taguchi's philosophy
M.P. Satapathy, S.K.Sahoo. S. Datta, Optimization of tensile strength of ultrasonic lap joint.
Page -652-657

Three Dimensional Analysis of Combined Forward and Backward Extrusion-Forging Process Using DEFORM 3D
S. Potnuru, R. Vinjamuri, S.K. Sahoo and S.K. Sahoo
Page -791-795

3. **Book Title** : Mechatronics and Intelligent ManufacturingVolume 1, 2012, Pages 217-230
Combined extrusion and forging: A three-dimensional analysis
(Book Chapter)
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pp. 183-199
https://doi.org/10.1007/978-981-13-0378-4_8

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DOIhttps://doi.org/10.1007/978-981-10-8767-7_11
Print ISBN978-981-10-8766-0 **Online ISBN**978-981-10-8767-7

7. Satpathy M.P., Sahoo S.K., Das D. (2019) **Role of Acoustic Softening Effects in Ultrasonic Spot Welded Dissimilar Materials**. Pp 743-751. In: Shanker K., Shankar R., Sindhwani R. (eds) **Advances in Industrial and Production Engineering. Lecture Notes in Mechanical Engineering. Springer**, Singapore **2019**
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