

## CENTRE FOR RESEARCH



ANNA UNIVERSITY, CHENNAI – 600 025  
**LIST OF PUBLICATIONS OF DC MEMBER**



Name of the Scholar : Pradeep Kumar S L

Programme : Ph.D. (PT)

Research Topic : Design and Construction of Shock Tunnel Capable of Generating Shockwaves for Engineering Applications.

Name of the Supervisor: Dr. J. Maniraj / 2420222

Name of the Member : Dr. N. Shiva shanmugam.

S.No	Title	Year of Publication
1	Kannan, A. Rajesh, N. Siva Shanmugam, and G. Sreedhar. "Studies on corrosion behavior of AISI 316L cold metal transfer weldments in physiological solutions." Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering 234, no. 6 (2020): 644-656.	2020
2	Nikam, P. P., Arun, D., Ramkumar, K. D., & Sivashanmugam, N. (2020). Microstructure characterization and tensile properties of CMT-based wire plus arc additive manufactured ER2594. Materials Characterization, 169, 110671.	2020
3	Rajesh Kannan, A., Mohan Kumar, S., Pramod, R., Pravin Kumar, N., Siva Shanmugam, N., & Palguna, Y. (2020). Microstructure and mechanical properties of wire arc additive manufactured bi-metallic structure. Science and Technology of Welding and Joining, 1-11.	2020
4	Karpagaraj, A., Kumar, N. R., Thiyaneshwaran, N., Shanmugam, N. S., Cheepu, M., & Sarala, R. (2020). Experimental and numerical studies on gas tungsten arc welding of Ti-6Al-4V tailor-welded blank. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 42(10), 1-11.	2020
5	Kumar, N. P., & Shanmugam, N. S. (2020). Some studies on nickel based Inconel 625 hard overlays on AISI 316L plate by gas metal arc welding based hard facing process. Wear, 456, 203394.	2020
6	Karpagaraj, A., N. Rajesh Kumar, K. Sankaranarayanan, N. Siva Shanmugam, and Muralimohan Cheepu. "Simulation and Experimental Studies on Arc Efficiency and Mechanical Characterization for GTA-Welded Ti-6Al-4V Sheets." Arabian Journal for Science and Engineering (2020): 1-12.	2020
7	Duraisamy, R., S. Mohan Kumar, A. Rajesh Kannan, N. Siva Shanmugam, K. Sankaranarayanan, and M. R. Ramesh. "Tribological performance of wire arc additive manufactured 347 austenitic stainless steel under unlubricated conditions	2020

	at elevated temperatures." Journal of Manufacturing Processes 56 (2020): 306-321.	
8	Pramod, R., S. Mohan Kumar, B. Girinath, A. Rajesh Kannan, N. Pravin Kumar, and N. Siva Shanmugam. "Fabrication, characterisation, and finite element analysis of cold metal transfer-based wire and arc additive-manufactured aluminium alloy 4043 cylinder." Welding in the World (2020): 1-15.	2020
9	Kannan, A. Rajesh, S. Mohan Kumar, N. Pravin Kumar, N. Siva Shanmugam, A. S. Vishnu, and Yasam Palguna. "Process-microstructural features for tailoring fatigue strength of Wire Arc Additive Manufactured Functionally Graded Material of SS904L and Hastelloy C-276." Materials Letters (2020): 127968.	2020
10	Pramod, R., N. Siva Shanmugam, and C. K. Krishnadasan. "Studies on cold metal transfer welding of aluminium alloy 6061-T6 using ER 4043." Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications (2020): 1464420720917175.	2020
11	Kannan, A. Rajesh, N. Siva Shanmugam, V. Rajkumar, and M. Vishnukumar. "Insight into the microstructural features and corrosion properties of wire arc additive manufactured super duplex stainless steel (ER2594)." Materials Letters (2020): 127680.	2020
12	Mohan Kumar, S., & Siva Shanmugam, N. (2020). Effect of heat input and weld chemistry on mechanical and microstructural aspects of double side welded austenitic stainless steel 321 grade using tungsten inert gas arc welding process. Materialwissenschaft und Werkstofftechnik, 51(3), 349-367.	2020
13	Girinath, B., N. Siva Shanmugam, and C. Sathiyarayanan. "Studies on influence of torch orientation on microstructure, mechanical properties and formability of AA5052 CMT welded blanks." Archives of Civil and Mechanical Engineering 20, no. 1 (2020): 1-22.	2020
14	Kumar, M. S., Gopi, S., Sivashanmugam, N., & Sasikumar, A. (2020). A study on corrosion behavior of stainless steel dissimilar alloy weld joints (321 & 347). Materials Today: Proceedings.	2020
15	Pramod, R., S. Mohan Kumar, N. Siva Shanmugam, and S. Arungalai Vendan. "Formability studies on plasma arc welded duplex stainless steel 2205 sheet." Materialwissenschaft und Werkstofftechnik 51, no. 2 (2020): 163-173.	2020
16	Kumar, S. M., Sankarapandian, S., & Shanmugam, N. S. (2020). Investigations on mechanical properties and microstructural examination of activated TIG-welded nuclear grade stainless steel. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 42(292), 292.	2020
17	Kannan, A. R., & Shanmugam, N. S. (2020). Some Studies on Mechanical Properties of AISI 316L Austenitic Stainless Steel Weldments by Cold Metal Transfer Process. In Advances in Additive Manufacturing and Joining (pp. 359-371). Springer, Singapore.	2020

18	Arunkumar, M., Dhinakaran, V., & Siva Shanmugam, N. (2019). Numerical prediction of temperature distribution and residual stresses on plasma arc welded thin titanium sheets. <i>International Journal of Modelling and Simulation</i> , 1-17.	2019
19	Veeman, D., Sathish, T., Petley, V., & Sriram, G. (2019). EXPERIMENTAL INVESTIGATION ON PLASMA ARC WELDED Ti64 SHEETS. <i>Transactions of the Canadian Society for Mechanical Engineering</i> , (ja).	2019
20	Mohan Kumar, S., and N. Siva Shanmugam. "Finite element simulation for tensile and impact test of activated TIG welding of AISI 321 austenitic stainless steel." <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> 233, no. 11 (2019): 2323-2334.	2019
21	Kumar, S. Mohan, N. Siva Shanmugam, and K. Sankaranarayanassamy. "Activated TIG Welding of AISI 321 Austenitic Stainless Steel for Predicting." <i>Advances in Computational Methods in Manufacturing: Select Papers from ICCMM 2019</i> (2019): 179.	2019
22	Kannan, A. Rajesh, and N. Siva Shanmugam. "Some Studies on Mechanical Properties of AISI 316L Austenitic Stainless Steel." <i>Advances in Additive Manufacturing and Joining: Proceedings of AIMTDR 2018</i> (2019): 359.	2019
23	Pramod, R., C. K. Krishnadasan, and N. Siva Shanmugam. "Design and finite element analysis of metal-elastomer lined composite over wrapped spherical pressure vessel." <i>Composite Structures</i> 224 (2019): 111028.	2019
24	Parthiban, K., N. Siva Shanmugam, K. Sankaranarayanassamy, and S. Arungalai Vendan. "Studies on spin arc welding process on the behavior of C1018 plates-an insight into mechanical and metallurgical transformation." <i>Materials Research Express</i> 6, no. 10 (2019): 106540.	2019
25	Kannan, A. Rajesh, N. Siva Shanmugam, and S. Arungalai Vendan. "Effect of cold metal transfer process parameters on microstructural evolution and mechanical properties of AISI 316L tailor welded blanks." <i>The International Journal of Advanced Manufacturing Technology</i> 103, no. 9-12 (2019): 4265-4282.	2019
26	Girinath, B., N. Siva Shanmugam, and K. Sankaranarayanassamy. "Weld bead graphical prediction of cold metal transfer weldment using ANFIS and MRA model on Matlab platform." <i>Simulation</i> 95, no. 8 (2019): 725-736.	2019
27	Duraisamy, R., Mohan Kumar, S., Rajesh Kannan, A., Siva Shanmugam, N., & Sankaranarayanassamy, K. (2019). Reliability and sustainability of wire arc additive manufactured plates using ER 347 wire-mechanical and metallurgical perspectives. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 0954406219861136.	2019
28	Karpagaraj, A., N. Siva Shanmugam, and K. Sankaranarayanassamy. "Experimental investigations and numerical prediction on the effect of shielding	2019

	area and post flow time in the GTAW of CP Ti sheets." The International Journal of Advanced Manufacturing Technology 101, no. 9-12 (2019): 2933-2945.	
29	Hiremath, Somashekhar S., N. Siva Shanmugam, and BR Ramesh Bapu, eds. <i>Advances in Manufacturing Technology: Select Proceedings of ICAMT 2018</i> . Springer, 2019.	2019
30	Edberk, J. Anthuvan Stephen, and N. Siva Shanmugam. "Studies on the weld integrity, formability and microstructural evolution of grade 2 titanium sheets of laser beam welding process." <i>Materials Research Express</i> 6, no. 4 (2019): 046525.	2019
31	Dhinakaran, V., Rakesh Patil, Gokulakrishnan Sriram, and N. Siva Shanmugam. "Studies on crack propogation in plasma arc welded Ti-6Al-4V joint during erichsen cupping test." (2019).	2019
32	Arunkumar, M., Dhinakaran, V., Sivashanmugam, N., & Petley, V. (2019). Effect of Plasma Arc Welding on Residual Stress and Distortion of Thin Titanium Sheet. <i>Materials Research</i> , 22(6).	2019
33	Kannan, A. Rajesh, N. Siva Shanmugam, and S. Naveenkumar. "Effect of arc length correction on weld bead geometry and mechanical properties of AISI 316L weldments by cold metal transfer (CMT) process." <i>Materials Today: Proceedings</i> 18 (2019): 3916-3921.	2019
34	Suresha, Bheemappa, S. G. Channabasavanna, and N. Siva Shanmugam. "Microstructure and Abrasive Wear Behaviour of Nickel Based Hardfacing Stainless Steel Deposited by Gas Metal Arc Welding." In <i>Applied Mechanics and Materials</i> , vol. 895, pp. 278-283. Trans Tech Publications Ltd, 2019.	2019
35	Kumar, S. Mohan, N. Siva Shanmugam, and K. Sankaranarayanassamy. "Activated TIG Welding of AISI 321 Austenitic Stainless Steel for Predicting Parametric Influences on Weld Strength of Tensile Test—Experimental and Finite Element Method Approach." In <i>Advances in Computational Methods in Manufacturing</i> , pp. 179-192. Springer, Singapore, 2019.	2019
36	Pramod, R., N. Siva Shanmugam, C. K. Krishnadasan, and K. Sankaranarayanassamy. "Finite Element Analysis of Potential Liner Failures During Operation in Spherical Pressure Vessel." In <i>Advances in Computational Methods in Manufacturing</i> , pp. 1073-1087. Springer, Singapore, 2019.	2019
37	Girinath, B., N. Siva Shanmugam, and K. Sankaranarayanassamy. "Investigation on the Effect of Torch Angle on the Formability of AA5052 CMT Weldments." <i>Transactions of the Indian Institute of Metals</i> 72, no. 6 (2019): 1551-1555.	2019
38	Edberk, J. Anthuvan Stephen, N. Siva Shanmugam, and K. Sankaranarayanassamy. "Design and fabrication of special fixture for different weld configurations of commercial pure Titanium sheet in laser beam welding process." In <i>IOP Conference Series: Materials Science and Engineering</i> , vol. 455, no. 1, p. 012075. IOP Publishing, 2018.	2018

39	Ramkumar, K. Devendranath, Vinayak Varma, Madhukar Prasad, N. Deva Rajan, and N. Siva Shanmugam. "Effect of activated flux on penetration depth, microstructure and mechanical properties of Ti-6Al-4V TIG welds." <i>Journal of Materials Processing Technology</i> 261 (2018): 233-241.	2018
40	Kumar, S. Mohan, and N. Siva Shanmugam. "Studies on the weldability, mechanical properties and microstructural characterization of activated flux TIG welding of AISI 321 austenitic stainless steel." <i>Materials Research Express</i> 5, no. 10 (2018): 106524.	2018
41	Mani, C., Sankaranarayananasamy, K., & Sivashanmugam, N. (2018). Evaluating the effects of different types of hand gloves and handle grip materials on hand-arm response while operating hand grinding machines. <i>Journal of Industrial Safety Engineering</i> , 4(3), 10-23.	2018
42	Parthiban, K., N. Siva Shanmugam, and K. Shankara. "Experimental and numerical investigation of charpy impact test of spin arc welded C1018 plates." In <i>IOP Conference Series: Materials Science and Engineering</i> , vol. 455, no. 012069. 2018.	2018
43	Gandhi, Chaitanya, Nikhil Dixit, Omkar Aranke, M. Arivarasu, N. Siva Shanmugam, M. Manikandan, and N. Arivazhagan. "Characterization of AA7075 weldment using CMT process." <i>Materials Today: Proceedings</i> 5, no. 11 (2018): 24024-24032.	2018
44	Subramani, P., Sanket Shetty, R. Anirudhapandit, P. R. Hari, K. Gokul Kumar, M. Manikandan, N. Arivazhagan, and N. Siva Shanmugam. "Investigations on the Microstructure, Microsegregation and Hardness Properties of Bead on Plasma Arc Welded C-276 Alloy." <i>Materials Today: Proceedings</i> 5, no. 5 (2018): 13628-13636.	2018
45	Karpagaraj, A., N. Siva Shanmugam, B. Suresha, and S. Arungalai Vendan. "Studies on Spring Back Effect of TIG Welded Ti-6Al-4V Sheets." In <i>Simulations for Design and Manufacturing</i> , pp. 147-171. Springer, Singapore, 2018.	2018
46	Kumar, N. P., Devarajan, P. K., Vendan, S. A., & Shanmugam, N. (2017). Prediction of bead geometry in cold metal transfer welding using back propagation neural network. <i>The International Journal of Advanced Manufacturing Technology</i> , 93(1-4), 385-392.	2017
47	Ramkumar, K. Devendranath, Jelli Lakshmi Narasimha Varma, Gangineni Chaitanya, S. Logesh, Madhav Krishnan, N. Arivazhagan, and N. Siva Shanmugam. "Experimental investigations on the SiO <sub>2</sub> flux-assisted GTA welding of super-austenitic stainless steels." <i>The International Journal of Advanced Manufacturing Technology</i> 93, no. 1-4 (2017): 129-140.	2017
48	Dhinakaran, V., Siva Shanmugam, N., Sankaranarayananasamy, K., & Rahul, R. (2017). Analytical and numerical investigations of weld bead shape in plasma arc welding of thin Ti-6al-4v sheets. <i>Simulation</i> , 93(12), 1123-1138.	2017

49	Bharathi, R. Selva, N. Siva Shanmugam, R. Murali Kannan, and S. Arungalai Vendan. "Studies on the Parametric Effects of Plasma Arc Welding of 2205 Duplex Stainless Steel." <i>High Temperature Materials and Processes</i> 37, no. 3 (2018): 219-232.	2017
50	Dhinakaran, V., N. Siva Shanmugam, and K. Sankaranarayananasamy. "Some studies on temperature field during plasma arc welding of thin titanium alloy sheets using parabolic Gaussian heat source model." <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> 231, no. 4 (2017): 695-711.	2017
51	Dhinakaran, V., N. Siva Shanmugam, and K. Sankaranarayananasamy. "Experimental investigation and numerical simulation of weld bead geometry and temperature distribution during plasma arc welding of thin Ti-6Al-4V sheets." <i>The Journal of Strain Analysis for Engineering Design</i> 52, no. 1 (2017): 30-44.	2017
52	Karpagaraj, A., N. Siva Shanmugam, and K. Sankaranarayananasamy. "Studies on mechanical behavior and microstructural analysis of tailor welded blanks of Ti-6Al-4V titanium alloy sheet." <i>Journal of Materials Research</i> 31, no. 14 (2016): 2186-2196.	2016
53	Kumar, Nalajam Pavan, S. Arungalai Vendan, and N. Siva Shanmugam. "Investigations on the parametric effects of cold metal transfer process on the microstructural aspects in AA6061." <i>Journal of Alloys and Compounds</i> 658 (2016): 255-264.	2016
54	Karpagaraj, A., & Sankaranarayananasamy, K. (2015). Some studies on mechanical properties and microstructural characterization of automated TIG welding of thin commercially pure titanium sheets. <i>Materials Science and Engineering: A</i> , 640, 180-189.	2015
55	Venkataramanan, Vijaikrishnan, Ramakrishnan Madhavanewswaran, and Siva N. Shanmugam. "Steady state analysis of regular hollow pyramidal radiating fin with triangular cross-section." <i>Thermal Science</i> 19, no. 1 (2015): 59-68.	2015
56	Ramkumar, K. D., Sai, R. J., Sridhar, G., Reddy, V. S., Prabakaran, P., Arivazhagan, N., & Sivashanmugham, N. (2015). Influence of filler metals in the control of deleterious phases during the multi-pass welding of Inconel 718 plates. <i>Acta Metallurgica Sinica (English Letters)</i> , 28(2), 196-207.	2015