




भारत सरकार / Government of India
परमाणु ऊर्जा विभाग / Department of Atomic Energy
होमी भाभा राष्ट्रीय संस्थान / Homi Bhabha National Institute
राजा रामन्ना प्रगत प्रौद्योगिकी केन्द्र
Raja Ramanna Centre for Advanced Technology



HBNI Faculty Profile

Name	<i>Dr. Christ P. Paul</i>	
Designation	<i>Professor</i>	
Research Area	<i>Laser Additive Manufacturing; Laser Directed Energy Deposition; Laser Powder Bed Fusion; Material Testing & Characterization.</i>	
Research Profile	<i>Dr. Paul is leading a research group in area of Laser Additive Manufacturing (LAM) at RRCAT. He has about 25 years of experience in research and development of LAM, from system development to its applications in engineering and prosthesis. His research programs focus on next generation additive manufacturing system and processes. To this end, his group explores novel techniques to develop advanced materials, innovative products, modelling and simulation tools, and holistic in-situ and ex-situ characterization techniques. He is instrumental in promoting LAM technology in India through collaborations with other national labs and reputed academic institutes by extending the indigenous developed facility for experiments. He has contributed chapters to 28 books and published over 120 research papers.</i>	
Ten Selected Recent Publications		
1.	S. Yadav, C.P. Paul, A.K. Rai, R. Singh, S.K. Dixit, Elucidating laser directed energy deposition based additive manufacturing of copper-stainless steel functionally graded material: Processing and material behaviour, 2023, Journal of Manufacturing Processes, 92, pp. 107-123,	
2.	Nayak, S.K., Jinoop, A.N., Shiva, S. and Paul, C.P., 2022. Laser Additive Manufacturing of Nickel Superalloys for Aerospace Applications. In Additive and Subtractive Manufacturing Processes (pp. 185-210). CRC Press.	
3.	Rai, A.K., Paul, C.P., Mishra, G.K., Singh, R., Rai, S.K. and Bindra, K.S., 2021. Study of microstructure and wear properties of laser borided Inconel 718. Journal of Materials Processing Technology, 298, p.117298.	



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4.	Singh, S., Jinoop, A.N., Palani, I.A., Paul, C.P., Tomar, K.P. and Prashanth, K.G., 2021. Microstructure and mechanical properties of NiTi-SS bimetallic structures built using Wire Arc Additive Manufacturing. Materials Letters, 303, p.130499.
5.	Banait, S.M., Paul, C.P., Jinoop, A.N., Kumar, H., Pawade, R.S. and Bindra, K.S., 2020. Experimental investigation on laser directed energy deposition of functionally graded layers of Ni-Cr-B-Si and SS316L. Optics & Laser Technology, 121, p.105787.
6.	Jinoop, A.N., Paul, C.P. and Bindra, K.S., 2019. Laser assisted direct energy deposition of Hastelloy-X. Optics & Laser Technology, 109, pp.14-19.
7.	Shiva, S., Palani, I.A., Mishra, S.K., Paul, C.P. and Kukreja, L.M., 2015. Investigations on the influence of composition in the development of Ni-Ti shape memory alloy using laser based additive manufacturing. Optics & Laser Technology, 69, pp.44-51.
8.	Jhavar, S., Paul, C.P. and Jain, N.K., 2013. Causes of failure and repairing options for dies and molds: A review. Engineering Failure Analysis, 34, pp.519-535.
9.	Paul, C.P., Alemohammad, H., Toyserkani, E., Khajepour, A. and Corbin, S., 2007. Cladding of WC-12 Co on low carbon steel using a pulsed Nd: YAG laser. Materials Science and Engineering: A, 464(1-2), pp.170-176.
10.	Paul, C.P., Ganesh, P., Mishra, S.K., Bhargava, P., Negi, J.A. and Nath, A.K., 2007. Investigating laser rapid manufacturing for Inconel-625 components. Optics & Laser Technology, 39(4), pp.800-805.