



भारतीय प्रौद्योगिकी संस्थान रोपड़  
INDIAN INSTITUTE OF TECHNOLOGY ROPAR  
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I take immense pleasure in introducing Mr. Shubhra Kamal Nandi and recommending him for a PhD position at your institute. I am Anupam Agrawal, Associate Professor, Department of Mechanical Engineering at Indian Institute of Technology (IIT) Ropar, India. I have a PhD from IIT Kanpur and post-doctoral experience from Northwestern University and Clemson University.

I have known Shubhra for the last one and half years when he joined IIT Ropar as a Masters student. I have been supervising his MTech work on, “**Development of a Semi-analytical Model for the prediction of temperature distribution and residual stress evolution in Selective Laser Melting.**” He has developed a novel and efficient analytical model for prediction of temperature distribution and understanding the melt-pool physics. While working on the analytical simulation models for SLM he has developed his programming skills in C++, Python, and MATLAB®. Apart from software tools, he has experience of working on mechanical characterization equipment like SEM and EDS. He also undertook a course on **Micromanufacturing** with me, in which he received 'A-' grade (9 on a 10 point scale).

He is always keen to learn new skills and has good problem-solving and analytical abilities. He easily gets along with fellow members and has the ability to work independently as well as in a team.

Overall he is one of the brightest students I have known with a deep interest in research. I am confident that he will be a great asset for your institute. I am pleased to recommend him for doctoral research at your institute. I wish him all the best for his future.

Please feel free to get in touch with me for any further information.

Best Regards,

Dr. Anupam Agrawal