

Research interest in additive manufacturing

Dr. Sana Hassan is an industrial engineer with PhD in Manufacturing engineering. She has 15 years of teaching and research experience. Currently she is looking forward for some host organization, where she can use her knowledge, skills and experience to contribute in additive manufacturing field.

Additive manufacturing integrates computer-aided design, material processing, and molding technology. Through software and numerical control system, special metal materials, non-metallic materials, and medical and biological materials are stacked layer by layer using extrusion, sintering, melting, light curing, spraying, and other methods to manufacture the manufacturing technology of parts. Recently remanufacturing has emerged as an effective strategy to promote sustainability, reduce waste, and enhance resource efficiency in modern manufacturing processes. Metal AM enables the production of replacement parts with high geometrical complexity and tight tolerances. On the other hand, surface treatment techniques, such as polishing and coating, can improve the surface properties of additively manufactured parts.

I would like get in touch with some host organization, specialized in AM domain, where I can become part of the research team and contribute in the development, testing and post processing of the AM parts. I have experience of working with discrete energy process, DED is a metal additive manufacturing process that involves depositing metal wire onto a substrate using a focused energy source, such as a laser or an electron beam, which melts the material as it is deposited. I have worked with wire arc additive manufacturing, using a CNC controlled MIG welding setup. Mild steel samples were prepared followed by their mechanical testing and characterization.

Sustain FIT is a wonderful opportunity to work in the European country to boost my professional and research portfolio. I am willing to work on hybrid mode, where a portion of the work could be done in Pakistan and remaining in the host organization. Or I am open for relocation as well.

Regards

Dr. Sana Hassan

Assistant Professor

Institute of Industrial Engineering and Management

University of the Punjab

Sana.iqtm@pu.edu.pk, iqtmsana@gmail.com