

Student Works

Current Calls (Studienarbeit or Masterarbeit)

The Effect of Powder Properties on the Temperature Distribution in SLS 3D Printing Process

Type of work: Simulation (Remote) Supervision: Mohammad Mojaddarasil, M.Sc.



Motivation:

- To assess the effect of powder properties on improving temperature distribution of the manufacturing powder bed, eventually leading to better quality of manufactured parts.
- The properties include powder type, porosity, thermal conductivity, virgin/recycled, etc.
- More information: <https://link.springer.com/article/10.1007/s11665-022-07329-8>

Content of the work:

- The full, validated model has already been developed in ANSYS-Fluent software. Simulations with various powder parameters should be done.
- Further development of the model would be beneficial, especially with regard to using certain boundary conditions instead of modeling the working gas. More information: <https://link.springer.com/article/10.1007/s11665-024-09861-1>

If you are interested: mohammad.mojaddarasil@tu-braunschweig.de

