

Modeling and simulation of powder bed additive manufacturing processes

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Among additive manufacturing technologies, powder bed processes, the best known examples being selective laser melting, electron beam melting, and selective laser sintering, represent a particularly difficult challenge for the analyst, due to the multi-field and multi-scale nature of the required models and simulations. This minisymposium welcomes contributions on models and computations related to this category of additive manufacturing processes. Topics include (but are not limited to) basic aspects of multifield (e.g. thermomechanical) and multi-scale formulations (from the powder-scale to the scale of the printed component), numerical implementation aspects, as well as relevant calibration/validation experiments.