

Data set title: Parameter Optimization Files (COMSOL Multiphysics 6.0) for Dimensioning of Biomimetic Beams under Bending

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Context: The research data contains four parameter optimization files (1-4) of two types of biomimetic beams (RD1 and RD2). The files contain the simulation files and results for the parameter optimization of the designs for various bending load cases. The parametric designs consider certain manufacturing constraints of the PBF-LB/M process. File 5 contains the parameter optimization of a solid cylindrical beam which was used as a reference design. Files 6 and 7 contain information about the mesh convergence study. Mph-files can be opened with the software COMSOL Multiphysics 6.0.

Contents of data set:

- 0_Readme.pdf
- 1_RD1_bending_140-700.mph
- 2_RD1_bending_800-3500.mph
- 3_RD2_bending_140-700.mph
- 4_RD2_bending_800-3500.mph
- 5_SC_bending_140-3500.mph
- 6_RD2_mesh_con_parametric_sweep.mph
- 7_mesh_con_evaluation_overview.pdf

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