Accepted Manuscript

Topology optimization of self-supporting structures with polygon features for additive manufacturing

Weihong Zhang, Lu Zhou

PII: \$0045-7825(18)30039-2

DOI: https://doi.org/10.1016/j.cma.2018.01.037

Reference: CMA 11757

To appear in: Comput. Methods Appl. Mech. Engrg.

Received date: 14 September 2017 Revised date: 10 December 2017 Accepted date: 19 January 2018



Please cite this article as: W. Zhang, L. Zhou, Topology optimization of self-supporting structures with polygon features for additive manufacturing, *Comput. Methods Appl. Mech. Engrg.* (2018), https://doi.org/10.1016/j.cma.2018.01.037

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Highlights

- A topology optimization method capable of including overhang constraints directly in the geometry description and obtaining self-supporting structures is presented.
- Polygon-featured holes are introduced as basic design primitives whose movements, deformations and intersections allow to control the structural topology.
- The influences of the critical overhang angle and build direction are investigated.

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