Di Zhang

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Education

University of Science and Technology of China Sept 2019 – Current
PhD in Applied mathematics, advised by Ligang Liu

Wuhan University of Technology Sept 2015 – May 2019
B.S. in Material Shaping & Control

Honors and Awards

2023 China National Scholarship

Peer-reviewed Publications

Modeling and fabrication with specified discrete equivalence classes July 2021
Zhong-Yuan Liu, Zhan Zhang, ***Di Zhang***, Chunyang Ye, Ligang Liu, Xiao-Ming Fu
ACM Transaction on Graphics (SIGGRAPH), 40(4)

Large-Scale Worst-Case Topology Optimization Oct 2022
Di Zhang, Xiaoya Zhai, Xiao-Ming Fu, Heming Wang, Ligang Liu
Computer Graphics Forum (Pacific Graphics), 41(7)

An optimized, easy-to-use, open-source GPU solver for large-scale inverse homogenization problems Sept 2023
Di Zhang, Xiaoya Zhai, Ligang Liu, Xiao-Ming Fu
Structural and Multidisciplinary Optimization, 66(9)

Porous structure optimization via non-uniform thermal diffusion Aug 2024
Hang Dong, ***Di Zhang***, Xiaoya Zhai, Jian-Nan Xiao, Xiao-Ming Fu
Computer Methods in Applied Mechanics and Engineering, 428

Publications under review

The analytically optimal asymptotic bulk modulus of triply periodic minimal surfaces Sept 2024
Di Zhang, Tian Wu, Qing Fang, Xiaoya Zhai, Xiao-Ming Fu, Ligang Liu

- Theoretical justification of the optimal bulk modulus observed in TPMS shell lattice

The optimal asymptotic conductivity of triply periodic minimal surfaces Oct 2024
Di Zhang, Ligang Liu

- Theoretical justification of the optimal conductivity of TPMS

Projects

homo3d github.com/lavenklau/homo3d

- An efficient parallel solver for inverse homogenization problem
- Tools Used: C++, CUDA

Technologies

Languages: C++, C, Python, MATLAB
Tools: Rhino & Grasshopper, HPC/SLURM