Mechanical Comparison of Arrangement Strategies for Topological Interlocking Assemblies

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Dec 2023

Topological Interlocking

The Versatile Block

Mathematics ○●○○

Wallpaper Groups

Planar Assemblies of the Versatile Block

Finite Element Method

Problem formulation

Simulation Setup

Stresses

Combinatorial Method

Combinatorial Results

[1] Reymond Akpanya et al. "Topological Interlocking, Truchet Tiles and Self-Assemblies: A Construction-Kit for Civil Engineering Design". In: Proceedings of Bridges 2023: Mathematics, Art, Music, Architecture, Culture. Ed. by Judy Holdener et al. Phoenix, Arizona: Tessellations Publishing, 2023, pp. 61–68. ISBN: 978-1-938664-45-8. URL: http://archive.bridgesmathart.org/2023/bridges2023-61.html.