Computational Fabrication to Design Optimization

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Host: Bernd Bickel

I have proposed a new space-filling curve, connected Fermat spirals, showing their compelling properties as a tool path fill pattern for layered fabrication. We then extend connected Fermat spirals to the fine and rough machining stages of subtractive manufacturing, along with solving some interesting decomposition problems. Regarding computational design, I have been working on a new halftoning technique for designing fabricated perforated lampshades that project continuous grayscale images onto the surrounding walls. Recently, I have worked on a carpentry compiler that compiles a high-level geometric language (HL-HELM) to a low-level fabrication instruction language (LL-HELM). The compiler performs multi-objective optimization on the low-level instructions to generate Pareto-optimal candidates.Join the talk here.

Tuesday, February 9, 2021 05:00pm - 06:00pm
Online via Zoom

This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: https://ista.ac.at/en/campus/how-to-get-here/ The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.