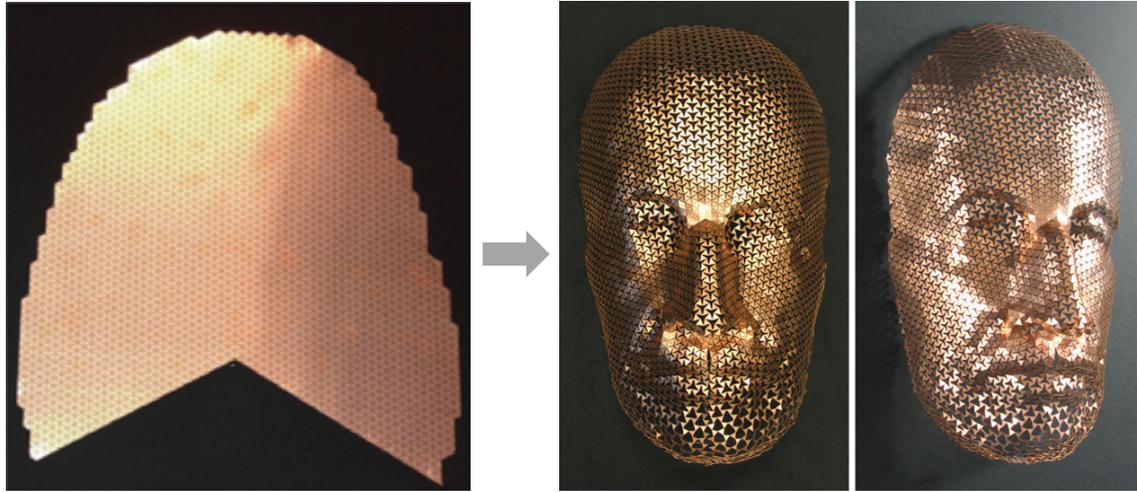


Differential geometry for material and object design

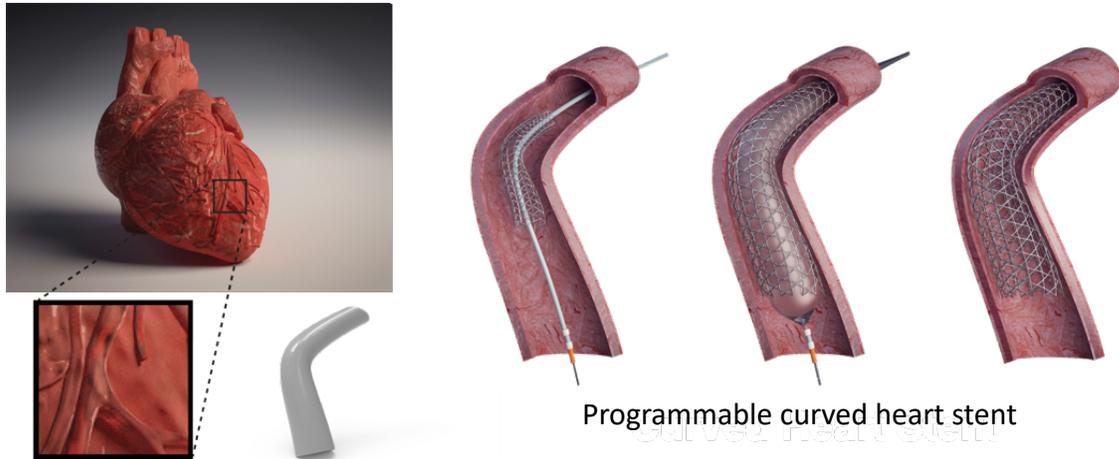
Using the insights from differential geometry to design flat programmable materials with target 3D shape encoded in 2D material.



2D layout for auxetic mask

Fabricated auxetic surface

M. Konaković et al. Beyond Developable: Computational Design and Fabrication with Auxetic Materials. ACM SIGGRAPH 2016

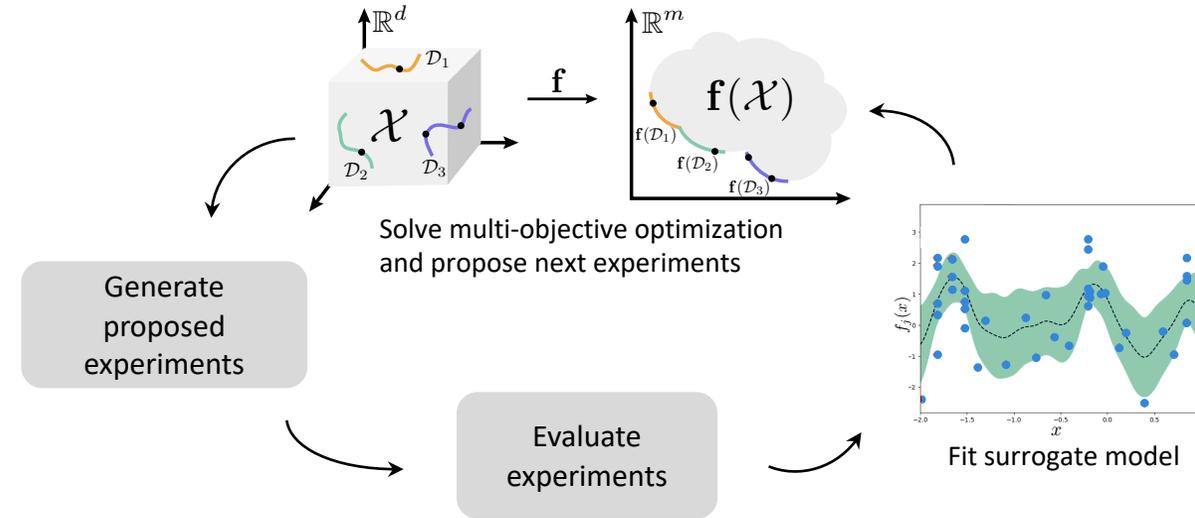


Programmable curved heart stent

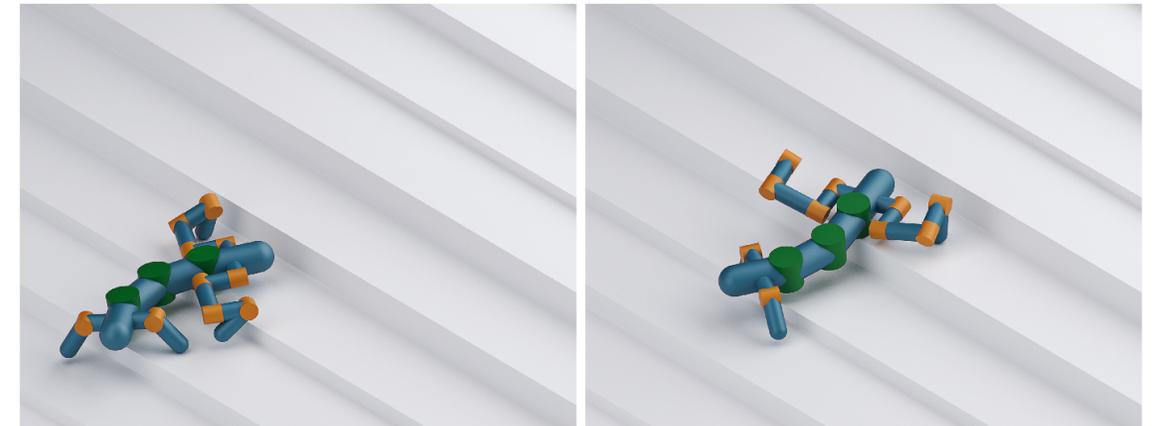
M. Konaković Luković et al. Rapid Deployment of Curved Surfaces via Programmable Auxetics. ACM SIGGRAPH 2018

Machine learning for material and robot design

Using machine learning algorithms to guide material discovery and automatically design novel robot structures.



M. Konaković Luković et al. Diversity-Guided Multi-Objective Bayesian Optimization With Batch Evaluations. NeurIPS 2020



Robot automatically designed with graph grammar and optimized for give terrains

A. Zhao et al. RoboGrammar: Graph Grammar for Terrain-Optimized Robot Design. ACM SIGGRAPH Asia 2020