Analysis of Origami-Inspired Metamaterials using Digital Image Correlation

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Duration: 1 year

This project tracks the movement of origami-inspired materials. One component of the project involves 3D printing the origami shapes, deforming them, and tracking the change in shape of the origami using digital image correlation. Digital image correlation uses images from two synchronous cameras to measure the locations of points in 3D space. The duties for this Meng project will include calibrating the cameras, extracting data from the photos, and analyzing the results. The camera calibration and data collection are done in Matlab. The results will be compared to data collected from a Solidworks model. Knowledge of Matlab and Solidworks is useful and some basic linear algebra knowledge is required to manipulate the data. Enthusiasm and a willingness to learn is the most important asset.

Note: This entire project can be done remotely.