

HiPerDuCT Programme Grant

Final report: Pseudo-Ductility in Helical Lattice Structures

An analytical investigation of the non-linear elastic response of helical lattice structures demonstrated that pseudo-ductile responses can be obtained [1]. The feasible region of pseudo-ductility was determined based on the tunable parameters that govern the system response, including the form factor, geometric and stiffness ratios.

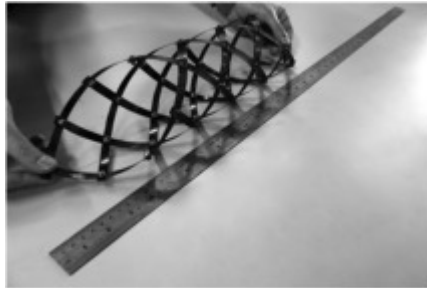


Figure 1. Helical lattice structure

Reference

[1] O'Donnell MP, Weaver PM, Pirrera A 2016. Can tailored non-linearity of hierarchical structures inform future material development? *Extreme Mechanics Letters* 7:1-9.