



THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY

Department of Mathematics

## PHD STUDENT SEMINAR

**Apply threshold dynamics algorithm to  
minimal compliance problem in topology optimization**

By

**Miss Luyu CEN**

### Abstract

Inspired by the simple two-step threshold dynamics algorithm which iteratively does convolution and thresholding to simulate the motion of grain boundaries, we developed an algorithm to approach the minimal compliance problem in topology optimization with proved unconditional energy stability. However, the algorithm alone usually locates a local minimum which could be improved further. We discuss some possible remedies to get a better result that is comparable to the results obtained by existing optimization methods.

**Date : 3 May 2022 (Tuesday)**

**Time : 11:15am**

**Zoom Meeting : <https://hkust.zoom.us/j/92901384010> (Passcode: hkust)**

*All are Welcome!*