



Department of Mathematics  
The Chinese University of Hong Kong

數學系  
香港中文大學

Phone: (852) 3943 7988 • Fax: (852) 2603 5154 • Email: [dept@math.cuhk.edu.hk](mailto:dept@math.cuhk.edu.hk) (Math. Dept.)  
Room 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

# Seminar

## *A neural network approach to recognize Floer simple manifolds*

*Mr. Antony Fung*  
*University of Cambridge*

### Abstract

Floer simple manifolds are a class of 3-manifolds with torus boundary that has at least two L-space Dehn fillings. A recent work of Hughes had considerable success in training an artificial neural net to recognize quasipositive braids. In this talk, we will present the results of a summer project inspired by Hughes' work. The project, supervised by Dr. Jacob Rasmussen, was an attempt to use an artificial neural network to recognize Floer simple manifolds by inputting data from a datafile of a long list of manifolds provided by Rasmussen's collaborator Nathan Dunfield.

Date: 13 August 2018 (Monday)  
Time: 2:00pm – 3:00pm  
Venue: Room 222, Lady Shaw Building,  
The Chinese University of Hong Kong, Shatin

*All are Welcome*