

## The Hong Kong University of Science and Technology

### **Department of Mathematics**

### **Seminar on Applied Mathematics**

*d*D (*d*-dimensional) flows and cylindrically reduced passive scalars

by

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#### <u>Abstract</u>

I will first discuss briefly the fundamental results of *d*-dimensional (*d*D) ideal flows, where *d* can be a non-integer number and can be greater than 3. Then I will talk about 2D and 3D passive scalars from the point of view of cylindrical reduction from *d*D flows. The differences between 2D helical passive scalar and active scalar will be emphasized. If time permits, I will present the extension of the Taylor-Proudman theorem to 4D.

Date: Time: Venue:

# Friday, 12 April 2019 3:00p.m. – 4:00p.m. Room 2408 Academic Building, (Lifts 17-18), HKUST

All are welcome!