The Institute of Mathematical Sciences
The Chinese University of Hong Kong

數學科學研究所
香港中文大學

Joint Harvard-CUHK-YMSC Differential Geometry Seminar

A knot Floer stable homotopy type

Abstract: Given a grid diagram for a knot or link K in the three-sphere, we construct a spectrum whose homology is the knot Floer homology of K. We conjecture that the homotopy type of the spectrum is an invariant of K. Our construction does not use holomorphic geometry, but rather builds on the combinatorial definition of grid homology. We inductively define models for the moduli spaces of pseudo-holomorphic strips and disk bubbles, and patch them together into a framed flow category. The inductive step relies on the vanishing of an obstruction class that takes values in a complex of positive domains with partitions. (This is joint work with Sucharit Sarkar.)

By
Professor Ciprian Manolescu
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Date:	**February 16, 2022 (Wednesday)**
Time:	**9:30am – 10:30am (Hong Kong Time)**
Zoom Link:	**https://cuhk.zoom.us/j/99199383345**
	(Meeting ID: 991 9938 3345; Passcode: 20220216)

All are Welcome