



The Institute of Mathematical Sciences
The Chinese University of Hong Kong

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數學科學研究所
香港中文大學

Phone: (852) 3943 8038 • Email: ims@ims.cuhk.edu.hk
Unit 601, 6/F., Academic Building No. 1, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

Joint Harvard-CUHK-YMSC Differential Geometry Seminar

Cohomology of the moduli of Higgs bundles via positive characteristic

Abstract: In this talk, I will survey the $P=W$ conjecture, which describes certain structures of the cohomology of the moduli space of Higgs bundles on a curve in terms of the character variety of the curve. I will then explain how certain symmetries of this cohomology, which are predictions of this conjecture, can be constructed using techniques from non-abelian Hodge theory in positive characteristic. Based on joint work with Mark de Cataldo, Junliang Shen, and Siqing Zhang.

By

Professor Davesh Maulik

Massachusetts Institute of Technology

Date: January 26, 2022 (Wednesday)

Time: 9:30am – 10:30am (Hong Kong Time)

Zoom Link: <https://cuhk.zoom.us/j/99708889880>
(Meeting ID: 997 0888 9880; Passcode: 20220126)

All are Welcome