

Department of Mathematics The Chinese University of Hong Kong



Phone: (852) 3943 7988-9 • Fax: (852) 2603 5154 • Email: dept@math.cuhk.edu.hk Rm. 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

Representation and Number Theory Seminar

Coulomb Branches, Chiral Differential Operators, and Equivariant Localization in Factorization Homology

by

Dr. Dylan BUTSON University of Oxford

Abstract:

I'll explain the motivation and construction of the action of the Braverman-Finkelberg-Nakajima (BFN) Coulomb branch algebra associated to a *G* representation N on the vertex algebra of chiral differential operators on the quotient stack N/G, whenever the latter is defined, following a conjecture of Costello-Gaiotto. Further, I'll state a generalization of the classical Atiyah-Bott localization theorem in the setting of equivariant chiral homology, and explain its relationship with the action constructed in the first part of the talk via the equivariant chiral- E_2 algebra of endomorphisms of the unit in the BFN variant of the coherent Satake category.

Date : November 2, 2021 (Tuesday) Time : 4:00pm – 5:00pm (Hong Kong SAR) Zoom link : <u>https://cuhk.zoom.us/j/97838822137?pwd=ZTVvSC9abmNjR3RCcS9FTzJNTVhXdz09</u> Meeting ID: 978 3882 2137 Passcode : sesame

All are Welcome