

Algebraic cycles on Hitchin fibrations

Tuesday, March 4, 2025 4:00 PM (1 hour)

Recent studies of the Hitchin fibration suggest that, from the cohomological perspective, it behaves like an abelian scheme. In this talk, I will discuss this phenomenon and provide supporting evidence. In particular, I will discuss a proof of the motivic decomposition conjecture of Corti-Hanamura for the Hitchin fibration, where the desired algebraic cycles are constructed using a combination of techniques from derived categories, K-theory, and Springer theory. The counter-part of this result for abelian schemes was established by Deninger and Murre over three decades ago. This work is based on joint work with Davesh Maulik and Qizheng Yin.

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