

Northeastern University



Mathematics Department

Geometry, Physics, and Representation Theory Seminar

Chris Elliott

Institut des Hautes Études Scientifiques

Thursday, November 15, 2:50-3:50 pm, Lake Hall 509

The Multiplicative Hitchin System in Supersymmetric Gauge Theory

Abstract

Multiplicative Higgs bundles are an analogue of ordinary Higgs bundles where the Higgs field takes values in a Lie group instead of its Lie algebra. In this talk I'll discuss two contexts where multiplicative Higgs bundles appear in supersymmetric gauge theory. I'll explain how hyperkähler structures on these moduli spaces arise physically and mathematically and relate to the theory of Poisson Lie groups, and finally I'll introduce a speculative multiplicative analogue of the geometric Langlands conjecture. This is based on joint work in progress with Vasily Pestun.