

Classifying abstract Higgs bundles

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I will report on an ongoing joint work with Dima Arinkin and Ron Donagi which seeks to develop a systematic approach for studying principal Higgs bundles in the abstract coefficient-free setting. I will discuss the associated Hitchin maps and the comparison with the traditional Higgs moduli. This provides a universal framework for understanding how compactifications, Fourier-Mukai dualities, and Chern filtrations for Hitchin fibrations are affected by the change of the coefficients of the Higgs bundles.