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**Generalized holomorphic bundles, Part I**

This is the first part of a joint talk with Shengda Hu.

Generalized holomorphic bundles, introduced by Gualtieri in 2004, are the analogues of holomorphic vector bundles in the generalized geometry setting. For some generalized complex structures, these bundles correspond to co-Higgs bundles, flat bundles or Poisson modules. I will give an overview of what is known about generalized holomorphic bundles, and describe their moduli spaces in some specific examples.