

Séminaire d'algèbre, topologie et géométrie
Jeudi 18 janvier à 14h
Salle I

Tim Kirschner

Universität Duisburg-Essen

Deformations of twistor spaces of $K3$ surfaces

Twistor spaces of $K3$ surfaces are, noticeably non-Kähler, compact complex manifolds of dimension 3 that come equipped with a holomorphic submersion to the complex-projective line. These spaces play a fundamental role in the moduli theory of $K3$ surfaces. In my talk I will explain this role and review the definition/construction of twistor spaces for general hyperkähler manifolds. Then, based on joint work in progress with Ana-Maria Breca (Bayreuth), Martin Schwald, and Daniel Greb (both Essen), I present new results concerning the deformations of twistor spaces of $K3$ surfaces. Moreover, I will touch upon open problems and possible research directions.