
MARTIN PINSONNAULT, CRM, Université de Montréal

Symplectic balls in rational ruled 4-manifolds

Many symplectic rigidity phenomena involve either symplectic balls or Lagrangian submanifolds. In this talk, I will explain how the study of integrable complex structures on rational ruled 4-manifolds leads naturally to a homotopy theoretic description of the spaces of embedded symplectic balls. These results, obtained in a joint work with S. Anjos and F. Lalonde, reveal the complexity of these embedding spaces and, conjecturally, should translate into similar complexity results for some spaces of Lagrangian submanifolds.