

A holomorphic triple (E_1, E_2, φ) , on a smooth projective curve C over the complex numbers, consists of a pair of coherent sheaves $E_1, E_2 \in \mathbf{Coh}(C)$ and a morphism $\varphi: E_1 \rightarrow E_2$. We consider the abelian category $\mathbf{TCoh}(C)$ of holomorphic triples. The aim of this talk is to study Bridgeland stability conditions on $D^b(\mathbf{TCoh}(C))$, including the stability conditions on $\mathbf{TCoh}(C)$ studied by Bradlow and García-Prada. Using semiorthogonal decompositions on $D^b(\mathbf{TCoh}(C))$, we describe the stability manifold $\text{Stab}(\mathbf{TCoh}(C))$.
This is joint work with Eva Martínez Romero and Arne Rüffer.