

**Yue Ren** (Swansea)

**What is tropical geometry**

**Abstract**

This talk gives an introductory overview of the many facets of tropical geometry on the basis of its applications in- and outside mathematics. These applications are the computation of Gromov–Witten invariants in enumerative geometry, the complexity of interior points methods in linear optimization, the topology of tree spaces in phylogenetics, existence of competitive equilibria in product mix auctions, and finiteness of central configurations in celestial mechanics.

We will conclude the talk with a possible future application that is the basis of my UKRI fellowship in Swansea, with special emphasis on recent advances in both theory and software that make it possible.