Geometry of Riemann Surfaces

Madrid, 24th-26th May 2023

Speaker: John Parker, Durham University.

Title: Fenchel-Nielsen coordinates for $SL(3, \mathbb{C})$ representations of surface groups.

Abstract: Fenchel and Nielsen gave global coordinates for the Teichmueller space of a surface of genus g at least 2. These coordinates are given geometrically by lengths and twists. They have been generalised to quasi-Fuchsian, convex projective and complex hyperbolic representations of surface groups. In this talk I will describe how to define Fenchel-Nielsen coordinates for $SL(3, \mathbb{C})$ representations, and how these specialise to give all of the above sets of coordinates. This is joint work with Rodrigo Davila.