

Felix Klein Lectures 2020



Quiver moduli and applications

Markus Reineke

Ruhr-Universität Bochum

Dates: Tuesday, 20 October, 2:15-3:45 pm
Wednesday, 21 October, 2:15-3:45 pm
Monday, 26 October, 2:15-3:45 pm
Wednesday, 28 October, 2:15-3:45 pm
Thursday, 29 October, 2:15-3:45 pm

Abstract: Quiver moduli spaces are algebraic varieties encoding the continuous parameters of linear algebra type classification problems. In recent years their topological and geometric properties have been explored, and applications to, among others, Donaldson-Thomas and Gromov-Witten theory have emerged.

The first aim of the lectures is to motivate the study of quiver moduli spaces from the point of view of representation theory, to review their construction via Geometric Invariant Theory, and to discuss several classes of examples. We will proceed by reviewing results on the topology and geometry of these moduli spaces, in particular their cohomology.

Finally, we will discuss applications of quiver moduli spaces to Gromov-Witten and Donaldson-Thomas theory via wall-crossing.



The lectures will be held online. The platform to be used is Zoom.

If you are interested in attending the lectures,
we kindly ask you to follow the instructions to be posted on

<https://www.hcm.uni-bonn.de/fkl-2020-reineke>