报告题目：Geometry of moduli spaces in nonabelian Hodge theory

报告人：黄鹏飞（Universität Heidelberg，Postdoctoral Research Fellow）

时间：2022-01-14 星期五 15:50—16:30

地点：复旦大学光华楼东主楼2201室、腾讯会议755107231

报告摘要：

Over a base variety $X$, nonabelian Hodge theory provides a correspondence among representations of the fundamental group of $X$, flat bundles, and Higgs bundles over $X$. The corresponding three moduli spaces (called Betti, de Rham, and Dolbeault, respectively) are also related to each other. In this talk, firstly I will give a brief introduction to this theory as the background setting, then I will report some recent work on exploring the geometry of these moduli spaces, more precisely: (1) Stratification of the de Rham moduli space (some conjectures of Simpson); (2) Dynamical systems on the Dolbeault moduli space; (3) Generalization of Deligne’s twistor construction; (4) Geometry of the base manifold which parametrizes a family of Higgs bundles.