



复旦大学数学科学学院
数学综合报告会

报告题目: **Foliations with Kodaira dimension one and some applications on Belyi fibrations**

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报告时间: **2016-09-30 星期五**
16:00 - 17:00

报告地点: **光华楼东主楼 1501**

摘要: A foliation is a global section of the differential sheaf tensoring a line bundle. It can also be regarded as a differential equation. For example, a fibration on a surface gives a foliation with a meromorphic first integral. One can classify all foliations by so-called Kodaira dimension. In this talk, we will investigate the foliations with Kodaira dimension one (e.g., Riccati foliations). In this case, there is an adjoint fibration. We will describe precisely all singular fibers of the adjoint fibration. As an application, we will prove that a Belyi fibration with two singular over \mathbb{P}^1 gives a Riccati foliation and compute its Mordell-Weil group in a joint work with C. Gong and S. L. Tan. Furthermore, we can classify such fibrations on a rational surface.

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