



复旦大学数学科学学院 数学综合报告会

午间学术报告会（一百二十三）

报告题目：**Linearizability of power series over a non-archimedean field of positive characteristic**

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报告时间：2020-10-16 星期五 12:00-13:00

报告地点：光华东主楼 2201

摘要：

ABSTRACT. In 1983, Herman and Yoccoz proved that every power series $f(z) = z(\lambda + \sum_{i=1}^{\infty} a_i z^i) \in \mathbb{Q}_p[[z]]$, with $|\lambda| = 1$ and λ not a root of unity, is linearizable. Then they asked the same question for power series over a non-Archimedean field \mathcal{K} of positive characteristic p . In fact, four years later, Herman conjectured oppositely that most power series over such field \mathcal{K} are more likely to be non-linearizable.

In this talk, I will introduce my current result on this topic, a criterion of power series $f(T) = T(\lambda + \sum_{i=1}^{\infty} a_i T^i) \in \mathcal{K}[[T]]$, with $|\lambda| = 1$, $0 < |1 - \lambda| < 1$ and λ not a root of unity, to be non-linearizable; and its applications on two families of polynomials. This result supports Herman's conjecture.

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