


复旦大学数学科学学院
数学综合报告会

报告题目：Delay differential equations and Nevanlinna theory

报告人：Risto Korhonen 教授 (东芬兰大学)

时间：2020-12-07 星期一 16:00-17:00

地点：Zoom Meeting ID: 864 1343 5035；Passcode: 5jq0H2

报告摘要：

One way in which difference Painlevé equations arise is in the study of difference equations admitting meromorphic solutions of slow growth in the sense of Nevanlinna theory. The idea that the existence of sufficiently many finite-order meromorphic solutions could be considered as a version of the Painlevé property for difference equations was introduced by Ablowitz, Halburd and Herbst. In this talk necessary conditions are obtained for certain types of delay differential equations to admit a transcendental meromorphic solution of hyper-order less than one. The equations obtained include delay Painlevé equations and equations solvable by elliptic functions. We conclude with recent results on the existence of transcendental meromorphic solutions of first-order difference equations, without growth conditions.

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