数学与系统科学研究院

计算数学所学术报告

报告人：Prof. Peter A Clarkson

（ School of Mathematics, Statistics & Actuarial Science,

University of Kent, UK ）

报告题目：

Semi-classical orthogonal polynomials and the Painleve equations

邀请人： 胡星标 研究员

报告时间：2015 年 8 月 9 日（周日）

下午 15:30~16:30

报告地点： 数学院南楼七层

702 会议室

Abstract：

In this talk I shall discuss the relationship between the Painleve equations and orthogonal polynomials with respect to semi-classical weights. It is well-known that orthogonal polynomials satisfy a three-term recurrence relation. I will show that for some semi-classical weights, the coefficients in the recurrence relation can be expressed in terms of Wronskians that arise in the description of special function solutions of a Painleve equation. The orthogonal polynomials discussed will include semi-classical Laguerre and Hermite weights, a generalization of the Freud weight and semi-classical generalizations of the Charlier and Meixner polynomials, which are discrete orthogonal polynomials.

欢迎大家参加！