

University of Macau

Faculty of Science and Technology

Department of Mathematics

FST-SEM/00066/2015

Asymptotic analysis of orthogonal polynomials via three-term recurrence relations

By

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Date: 23 July 2015 (Thursday)

Time: 15:00 p.m. - 16:00 p.m.

Venue: E11- 1006

Abstract

We study a group of orthogonal polynomials satisfying certain three-term recurrence relations with coefficients being linear or quadratic in the polynomial degree. Plancherel-Rotach type asymptotic formulas of the orthogonal polynomials as the polynomial degree tends to infinity are obtained by successive approximation and matching principle. Applications are given to asymptotic analysis of associated orthogonal polynomials.

Biography

Dr. Xiang-Sheng Wang received his Ph.D. from City University of Hong Kong in 2009, with dissertation work on asymptotic analysis of orthogonal polynomials. During 2009 and 2013, he was conducting postdoctoral research at several universities in Hong Kong and Canada. Since 2013, Dr. Wang has been working at Southeast Missouri State University as an Assistant Professor in Mathematics. His research interests lie in the interdisciplinary area of asymptotic analysis, differential equations, dynamical systems and mathematical biology.

All are Welcome!

FST Seminar - MAT - "Asymptotic analysis of orthogonal polynomials via three-term recurrence relations" at 15:00pm on 23 July 2015 (Thursday), E11-1006