DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

The Hong Kong Polytechnic University
Department of Applied Mathematics

Colloquium

Algebro-geometric solutions for the Sawada-Kotera hierarchy

by

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Abstract

The Sawada-Kotera hierarchy associated with a 3×3 matrix spectral problem is proposed with the aid of Lenard recursion equations. By using the characteristic polynomial of Lax matrix for the Sawada-Kotera hierarchy, we introduce a trigonal curve, from which we derive the associated Baker-Akhiezer function, the meromorphic function and Dubrovin-type equations. Based on the theory of trigonal curves, we construct the explicit theta function representations of the Baker-Akhiezer function and the meromorphic function, by which Its-Matveev formulae of algebro-geometric solutions for the entire Sawada-Kotera hierarchy are obtained.

Date : 16 February, 2017 (Thursday)
Time : 2:00p.m. – 3:00p.m.
Venue : TU801, The Hong Kong Polytechnic University

*** * * ALL ARE WELCOME * * ***