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The Hong Kong University of Science and Technology

Department of Mathematics

Seminar on Pure Mathematics

Painlevé-Heun correspondence and its q-deformation

by

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Abstract

The Painlevé equations are second order non-linear differential equations which have Painlevé property, and they often appear in mathematical physics. The hypergeometric function is a special solution to the sixth Painlevé equation. The Heun equation is a standard form of the second order linear differential equation which has four regular singularities, and the hypergeometric equation has three regular singularities. In this talk, we briefly review these equations and also explain relationship among them by considering accessory parameters and another differential equation. If time permits, we explain *q*-analogues of hypergeometric equation, Heun equation, Painlevé equation and their relationship.

Date: Tuesday, 6 August 2019

Time: 4:00p.m. - 5:00p.m.

Venue: Room 5504, Academic Building (near Lifts 25-26), HKUST

All are welcome!