

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research
Department of Mathematics*

Analysis Seminar

Quantum correspondence for Painlevé VI

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Abstract

The wave vector of the scalar Lax pair of Fuchs for PVI obeys a generalized heat equation whose coefficients are independent of the PVI field (Suleimanov 1994). Its identification to a time-dependent Schrödinger equation of quantum mechanics however required an ad hoc ordering of the products of position and impulsion operators. We remove this ambiguity by showing that the quantum Hamiltonian is the natural quantization of the logarithmic derivative of the tau-function of Painlevé (1906), not of the tau-function of Chazy (1911), because the latter breaks the parity invariance in one of the four θ_j 's.
arXiv:1710.04944

Date: November 21, 2017 (Tuesday)

Time: 4:00 - 5:00pm

Venue: Room 210, Run Run Shaw Bldg., HKU

All are welcome