Higher-Dimensional Nonlinear Integrable Equations with Variable Coefficients and the Painlevé Analysis

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It is showed mainly that higher-dimensional Korteweg-de Vries, modified Korteweg-de Vries and Nonlinear Schrödinger equations with variable coefficients are integrable in the sense of the Painlevé analysis(; the WTC and Log-WTC methods).

This poster is based on the following manuscripts:

T. Kobayashi and K. Toda, Extensions of nonautonomous nonlinear integrable systems to higher dimensions, Proceedings of 2004 International Symposium on Nonlinear Theory and its Applications, Vol. 1, pp.279 282 (2004)

T. Kobayashi and K. Toda, A generalized KdV-family with variable coefficients in $(2 + 1)$ dimensions, IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, Vol. E88-A, pp.2548 - 2553 (2005)

T. Kobayashi and K. Toda, The Painlevé analysis and reducibility to the canonical forms for nonautonomous soliton equations in higher-dimensions and their exact solutions, Symmetry, Integrability and Geometry: Methods and Application (SIGMA), Vol. 2, paper 063, 10pages (2006)

T. Kobayashi and K. Toda, Extensions of nonautonomous nonlinear integrable systems to higher dimensions, Preprint (2007)