High-Dimensional Schwarzian Derivatives and Painlevé Integrable Models

ZHANG Shun-Li,[1] TANG Xiao-Yan,[1] and LOU Sen-Yue[1,2]

[1] Physics Department, Shanghai Jiao Tong University, Shanghai 200030, China
[2] Department of Physics, Ningbo University, Ningbo 315211, China
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Abstract: Because all the known integrable models possess Schwarzian forms with Möbious transformation invariance, it may be one of the best ways to find new integrable models starting from some suitable Möbious transformation invariant equations. In this paper, we study the Painlevé integrability of some special (3+1)-dimensional Schwarzian models.

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