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Netra P Khanal* (nkhanal@ut.edu). *A dual-Petrov-Galerkin method for extended fifth-order Korteweg-de Vries type equations.*

The dual-Petrov-Galerkin method is applied to several integrable and non-integrable fifth-order KdV type equations. The method is implemented to compute the solitary wave solutions of these equations and the numerical results imply that this scheme is capable of capturing, with very high accuracy, the details of these solutions with modest computational costs. (Received August 23, 2011)