

Exact Travelling Solutions of Discrete sine-Gordon Equation via Extended Tanh-Function Approach

DAI Chao-Qing¹ and ZHANG Jie-Fang²

¹ Department of Information Physics, School of Sciences, Zhejiang Forestry University, Lin'an 311300, China

² Institute of Nonlinear Physics, Zhejiang Normal University, Jinhua 321004, China
(Received: 2005-10-19; Revised: 2005-12-12)

Abstract: In this paper, we generalize the extended tanh-function approach, which was used to find new exact travelling wave solutions of nonlinear partial differential equations or coupled nonlinear partial differential equations, to nonlinear differential-difference equations. As illustration, two series of exact travelling wave solutions of the discrete sine-Gordon equation are obtained by means of the extended tanh-function approach.

PACS: 02.30.Jr, 05.45.Yv, 02.30.Ik

Key words: discrete sine-Gordon equation, exact travelling wave solution, extended tanh-function approach

[\[Full text: PDF\]](#)

Close