

SIDE 14.2



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Consistency of discrete equations on lattices of type D

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Content :

Consistency of discrete equations on higher dimensional lattices constitutes a central element of integrable systems theory. The consistency of discrete equations defined on the squares and cubes of lattices of type B and the octahedra of lattices of type A have been studied extensively and with great success. However, it appears that the consistency of discrete equations naturally defined on lattices of type D or discrete equations which are defined on a larger number of vertices of a lattice has been explored to a significantly lesser degree. In this talk, we present some thoughts on this matter and illustrate them by considering linear and nonlinear (5-point) Laplace-type equations, a nonlinear 14-point equation and the 9-point (generalised) discrete Tzitzeica equation. Coincidentally, two Polish connections will be made.

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