

Seed and soliton solutions of quadrilateral integrable lattices

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In recent years a classification of integrable difference equations on quad-graphs was given. This includes some known, but also some novel lattice equations, including a lattice system associated with an elliptic curve (Adler's lattice equation). The problem of finding even elementary solutions that can be used as starting point for Bäcklund transformations turns out to be non-trivial for some of these equations. A systematic resolution of this problem, leading to the first explicit solutions of these lattice equations, including for the elliptic case, will be explained.