Integrable (3+1)-dimensional system with an algebraic nonisospectral Lax pair

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Abstract**:**

We present a first example of an integrable (3+1)-dimensional dispersionless system with nonisospectral Lax pair involving algebraic, rather than rational, dependence on the spectral parameter, thus showing that the class of integrable (3+1)-dimensional dispersionless systems with nonisospectral Lax pairs is significantly more diverse than it appeared before. The Lax pair in question is of a novel type, discovered in our earlier work, and is related to contact geometry; we will review the construction in question to make the talk reasonably self-contained. For further details please see A. Sergyeyev, Integrable (3+1)-dimensional system with an algebraic Lax pair, Appl. Math. Lett. 92 (2019), 196–200, arXiv:1812.02263.