

## Integrable Heisenberg Ferromagnet Equations with Self-Consistent Potentials

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**Abstract :** In this paper, we consider some integrable Heisenberg Ferromagnet Equations with self-consistent potentials. We study their Lax representations. In particular we derive their equivalent counterparts in the form of nonlinear Schrödinger type equations. We present the integrable reductions of the Heisenberg Ferromagnet Equations with self-consistent potentials. These integrable Heisenberg Ferromagnet Equations with self-consistent potentials describe nonlinear waves in ferromagnets with some additional physical fields.

**Keywords :** Heisenberg Ferromagnet equations, soliton equations, equivalence, Lax representation

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