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## Method of descent for integrable lattices

**Oleg Bogoyavlenskij**  
Department of Mathematics  
Queen’s University  
Kingston (Ontario), K7L 3N6  
CANADA

bogoyavl@mast.queensu.ca

### **Abstract**

A method of descent for constructing integrable Hamiltonian systems is developed. The derived infinite-dimensional and finite-dimensional lattices possess Lax representations with a spectral parameter and have large families of first integrals. Examples of Liouville-integrable 4-dimensional and 5-dimensional Hamiltonian Lotka–Volterra systems are presented.