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**Jinghan Meng\*** ([jmeng@mail.usf.edu](mailto:jmeng@mail.usf.edu)), University of South Florida, Department of Math and Statistics, 4202 East Fowler Ave, TAMPA, FL 33620, and **Wen-Xiu Ma** ([wma3@usf.edu](mailto:wma3@usf.edu)), University of South Florida, Department of Math and Statistics, 4202 East Fowler Ave, TAMPA, FL 33620. *Bi-integrable couplings of the Kaup-Newell hierarchy.*

In this talk, we will present our recent research on bi-integrable couplings of soliton equations. An application of the presented non-semisimple Lie algebra gives bi-integrable couplings of the Kaup-Newell hierarchy. Hamiltonian structures will be generated to guarantee existence of infinitely many commuting symmetries and conserved quantities. (Received January 16, 2012)