1125-35-280 **Wen-Xiu Ma*** (mawx@cas.usf.edu), Department of Mathematics and Statistics, Tampa, FL 33620. *Integrable Hamiltonian equations from matrix loop algebras.*

We will talk about a zero curvature formulation to integrable Hamiltonian equations associated with matrix loop algebras, both semisimple and non-semisimple. Hamiltonian structures and Liouville integrability will be established by either the trace identity or the variational identity. The two real three dimensional Lie algebras, sl(2,R) and so(3,R), will be used to show illustrative examples of integrable Hamiltonian equations. (Received August 22, 2016)