1086-VO-1031   **Qingxia Li** (`liq@lincolnu.edu`), 701 S Providence Road, Apt 1I, Columbia, MO 65203, and **Matthew Doughty*** (`mateo-505@hotmail.com`), 914 Carol Street, Jefferson City, MO 65101. *Semisimple Lie Theory and Optimization.* Preliminary report.

In the first part of my presentation, we will discuss the duality framework and convex and non convex subdifferentials in Semisimple Lie Theory. Then we will apply this theory in optimization problems where the controlability is tractable. (Received September 18, 2012)