1067-22-1247 **Sam Evens*** (sevens@nd.edu). *Intersections of Schubert cells and orbits of real semisimple Lie groups on the flag variety.*

This talk is based on joint work with Jiang-Hua Lu. Let G be a complex semisimple Lie group with real form G_0 and Borel subgroup B. We regard B as the identity coset eB in G/B, and assume that the G_0-orbit G_0eB is open in G/B. In this talk, I will explain an algorithm for determining whether an arbitrary G_0-orbit on G/B meets a Schubert cell BwB, for w in the Weyl group. I will explain additional results about the geometry of the intersections of these orbits and their closures. (Received September 20, 2010)