1077-05-1679 **M. N. Ellingham** and **Justin Z. Schroeder*** (justin.z.schroeder@vanderbilt.edu). *An orthogonal latin square construction for orientable hamiltonian embeddings of $K_{n,n,n}$.* Preliminary report.

An orientable hamiltonian embedding of a graph G is a drawing of G on an orientable surface such that no edges cross and the boundary of every face is a hamilton cycle. In this talk we develop a connection between latin squares and orientable hamiltonian embeddings of the complete tripartite graph $K_{n,n,n}$. In particular we show that a pair of orthogonal latin squares of order n with one additional property yields an orientable hamiltonian embedding of $K_{n,n,n}$ that is 2-colorable and has faces with some additional structure. The presentation concludes with a construction for such latin squares when $n = 2pq$, where $p, q \geq 2$. (Received September 20, 2011)