1064-53-213 **Marianty Ionel** and **Thomas A. Ivey***, Department of Mathematics, College of Charleston, 66 George St., Charleston, SC 29424. *Ruled Austere 4-folds and Holomorphic Curves.* Preliminary report.

Austere submanifolds in Euclidean space are those for which the eigenvalues of the second fundamental form, in any normal direction, are symmetrically arranged around zero. In this talk, I will discuss work with Marianty Ionel on classifying 4-dimensional austere submanifolds which are real Kahler submanifolds and admit a ruling by 2-planes. These can be sorted into cases according to the rank of the second fundamental form; in each case, the submanifold determines, and is partially determined by, a holomorphic curve in a compact homogeneous 'twistor' space. (Received September 09, 2010)