1135-17-67 **Florin Panaite** (florin.panaite@imar.ro), **Paul T. Schrader*** (stpaul@bgsu.edu) and **Mihai Staic** (mstaic@bgsu.edu). *Hom-Tensor Categories and the Hom-Yang-Baxter Equation.*

It is known that tensor categories provide the appropriate categorical framework for Hopf algebras. *Hom-algebras(coalgebras)* are algebraic structures that satisfy a generalized associativity(coassociativity) condition. In this presentation we introduce a new type of category called a *hom-tensor category* and show how it provides the appropriate setting for the category of modules over a hom-bialgebra. We then study the notion of a *hom-braided category* and argue that this is the right setting for the category of modules over quasitriangular hom-bialgebras. We also discuss how the hom-Yang-Baxter equation fits into this framework. (Received July 18, 2017)