1023-55-1604 **Edna Fanny Jasso-Hernandez*** (fanny@gwu.edu), Mathematics Department at GWU, 1922 F St. NW, Old Main, Room 102, Washington, DC 20052, and **Yongwu Rong**. *Khovanov Type Categorification for the Tutte Polynomial.*

In this talk we will explain how to construct a homology theory that recovers the Tutte polynomial of a graph. This work is inspired by earlier works by Khovanov, Helme-Guizon and Rong. Our construction is more general than the one for the chromatic polynomial because the Tutte polynomial for a graph contains the chromatic polynomial. We will also show properties of these homology groups that can be considered as a categorification for the deletion-contraction rule for the Tutte polynomial. Connections with Khovanov's knot homology, as well as other properties, will be discussed. (Received September 26, 2006)