1056-54-1055   **Adam C McDougall*** (`acmcdoug@math.uiowa.edu`), Department of Mathematics, 14 MacLean Hall, The University of Iowa, Iowa City, IA 52252. *Defining Khovanov Homology in 3-Manifolds Using a Diagramless Theory.*

In 2000, Khovanov defined a link homology which can be viewed as a categorification of the Jones polynomial. Today, the study of Khovanov homology and other link homologies are quite common. To define a link homology one typically builds chain modules from a given projection of that link (called a 'diagram'). Extra work must be done to show this is a link invariant. Additionally, generalizing such homology theories to other 3-manifolds can be a very difficult problem.

In this talk, a diagramless link homology is defined that is related to the Khovanov homology of the given link. Unlike diagram-based homology theories, this diagramless homology can be defined for links in most 3-manifolds. (Received September 21, 2009)