

1067-90-1054 **Illya V. Hicks*** (ivhicks@rice.edu), 6100 Main St., Houston, TX 77005. *Computing Matroidal Branchwidth.*

This talk gives a general overview of practical computational methods for computing branch decompositions and the branchwidth of matroids. The concept of branch decompositions and its related invariant branchwidth were first introduced by Robertson and Seymour in their proof of the Graph Minors Theorem and can easily be generalized for any symmetric submodular set function. Subsequently, branch decompositions have been shown to be useful for solving NP-hard problems modeled on graphs such as the traveling salesman problem and graph minor containment. Hence, computing branch decompositions of matroids may prove equally beneficial for solving NP-hard problems modeled on matroids. This talk is based on joint work with Jing Ma, Susan Margulies, Nolan McMurray, and Elif Ulusal. (Received September 17, 2010)