1116-Q6-2674 **Mariana Levin*** (mariana.levin@wmich.edu), Department of Mathematics, Western Michigan University, 1903 W. Michigan Avenue, Kalamazoo, MI 49008, and **John P. Smith III**, **Aaron Levin**, **V. Rani Satyam** and **Younggon Bae**. *The Transition to Proof in Collegiate Mathematics: Examining A Hybrid Lecture/Laboratory Approach at a Large Public Research University.* Preliminary report.

Many undergraduate students majoring in mathematics experience difficulty in learning to prove mathematical propositions. In addition to the substantial differences in the "didactical contract" between computation-heavy lower division classes and proof-intensive upper division courses, students encounter myriad difficulties of a more fine-grained nature, including the use of logic and definitions, the ability to generate and use examples and counterexamples effectively, difficulty understanding the concepts and theorems themselves, and the ability to evaluate arguments created by others. In short, the transition to proof is complex and challenging. Mathematics departments have recognized this problem and experimented with different curricular and instructional approaches to supporting students' entry into proof, including courses dedicated to this transition. This talk will focus on observational data from a hybrid lecture/laboratory "transitions" course at a large public research university, emphasizing the design principles that characterize how the course attempted to shift students' didactical contract. Preliminary student interview data concerning the transitions experienced in the course will be discussed. (Received September 22, 2015)