

1125-C1-910      **Aviva Halani\*** (ahalani@exeter.edu), 20 Main Street, Exeter, NH 03833. *The Evolution of Problem Posing Approaches for Counting Problems.*

For many counting problems, it can be beneficial for students to construct and answer related combinatorics problems by modifying one of the criteria involved in the problem. This presentation focuses on such *Problem Posing* approaches to counting problems and describes a model of how an epistemic student's approaches could evolve as she progresses through a sequence of counting tasks. Data for this study come from two teaching experiments. Open coding was used to identify the students' approaches to conceptualizing the set of elements being counted, called the *solution set*, as they engaged in counting problems. Four Problem Posing approaches emerged from the data analysis. Once these approaches were identified, perturbation experienced by students and the resulting accommodation of their thinking were analyzed. It was found that such perturbation and its resolution was often the result of an instructional intervention. (Received September 13, 2016)