

1125-05-1101 **Emily Meehan*** (emeehan@ncsu.edu). *Baxter posets*.

In this talk, we define a family of combinatorial objects, which we call Baxter posets. We prove that the Baxter numbers count Baxter posets by demonstrating that Baxter posets are the adjacency posets of diagonal rectangulations. Several known families of Baxter objects are closely related to Catalan combinatorics, and we motivate the definition of Baxter posets by summarizing some of these relationships. Given a diagonal rectangulation, we will describe the cover relations in the associated Baxter poset. If time allows, we will also describe a method for obtaining the Baxter permutation associated to a Baxter poset. (Received September 14, 2016)