1123-05-359 **Jonathan S Bloom*** (bloomjs@lafayette.edu), Lafayette College, Math Department, 1 Pardee Drive; Room 230 Pardee Hall, Easton, PA 18042, and **Dan Saracino** (dsaracino@colgate.edu), Colgate University, Department Math, Hamilton, NY 13346. *On a systematic study of avoidance within integer partitions.*

One of the most famous integer partition identities states that the number of partitions (of n) into odd parts is equal to the number of partitions (of n) into distinct parts. This identity is part of a huge class of integer partition identities that have been well studied over the years. In a series of seminal papers, authored by A. Garsia, S. Milne, and J. Remmel and published in the early 1980's, a general framework for constructing bijections for such identities emerged. One of the key ideas behind this work was in viewing restricted classes of partitions in terms of what they "avoid". For example, integer partitions with distinct parts "avoid" the parts $\{11, 22, 33, \ldots\}$.

This concept of avoidance (with respect to parts) naturally suggests the following related notion. Given two partitions σ and μ we say that σ *contains* μ if one can delete rows and columns from σ (viewed as a Young diagram) to obtain μ. In this talk we take up the systematic study of this definition. In doing so we reveal a significant amount of unexpected structure involving integer partitions. (Received August 30, 2016)