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Olivia Beckwith* (obeckwi@emory.edu), **Michael Mertens** (mmertens@math.uni-koeln.de)
and **Christine Bessenrodt** (bessen@math.uni-hannover.de). *Recent results on partitions.*

In this talk I will present results from two projects on integer partitions. The first project is about the maximal values of a multiplicative extension of the k -regular partition function. With Christine Bessenrodt, we prove an explicit formula for these maximal values that is analogous to results shown by Bessenrodt and Ono for $p(n)$. The second project concerns the parts of partitions in residue classes. For large n , how many parts should one expect to be equivalent to $r \pmod{m}$? One might expect that the preference for smaller numbers to appear as parts limits the uniformity with which the parts over all partitions of n are distributed across residue classes. In joint work with Michael Mertens, we use the Circle Method to answer this question. (Received February 06, 2018)