Franklin & Marshall College
and
Millersville University

A *Virtual* Joint Colloquium in Mathematics

Thursday, September 17th, 2020, 4:00–5:00pm EDT

`https://fandm.zoom.us/j/99693312773`

Professor Nicholas R. Baeth, Franklin & Marshall College

When integers do not factor uniquely

Abstract: The Fundamental Theorem of Arithmetic states that every integer larger than 1 is either prime or can be uniquely expressed as a product of primes. However, the phenomenon of *unique* factorization is not universal, even in subsets of the positive integers. The extent to which factorization is not unique depends on the structure of prime elements in the subset. By considering several example sets of positive integers, each closed under multiplication, we will explore the meaning(s) of 'primeness' and investigate ever-increasing degrees of nonunique factorization.

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