### Food For Thought Seminar

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#### Symmetric functions, quasisymmetric functions, and pattern avoidance

#### Abstract:

Quasisymmetric functions and symmetric functions are important tools in algebraic combinatorics, especially in representation theory. On the other side of combinatorics, pattern avoidance is a subject in enumerative combinatorics which focus on counting the number of combinatorial structures avoiding a certain collection of patterns. It turns out that those two not-so-related subjects have interesting connections. In this talk, we will first introduce symmetric functions and, quasisymmetric functions, and discuss known results. Then, we will move on to basic definitions on pattern-avoiding permutations, as well as their known results. Finally, we will explore the relationship between the two subjects.

## Tuesday, April 26, 2016 1:00 PM AP&M 7421