Dresden Memorial Lecture Series
Amanda Folsom

➤ Monday, October 24

Patterns in numbers

There are patterns in numbers all around us. How could something as basic as 1 + 1 = 2 have fascinated us for centuries? In mathematics it's sometimes the case that the most fundamental or easy to state problems are the hardest to understand or solve. We will explain how the seemingly simple concepts of adding and counting have led to some very beautiful and very difficult problems and ideas in mathematics - both past and present.

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➤ Tuesday, October 25

Bicentennial Professor of Mathematics
Department of Mathematics & Statistics
Amherst College

Symmetry, almost

Some definitions of the word symmetry include "correct or pleasing proportion of the parts of a thing," "balanced proportions," and "the property of remaining invariant under certain changes, as of orientation in space." One might think of snowflakes, butterflies, and our own faces as naturally symmetric objects – or at least close to it. Mathematically one can also conjure up many symmetric objects: even and odd functions, fractals, certain matrices, and modular forms, a type of symmetric complex function. All of these things, mathematical or natural, arguably exhibit a kind of beauty in their symmetries, so would they lose some of their innate beauty if their symmetries were altered? Alternatively, could some measure of beauty be gained with slight symmetric imperfections? We will explore these questions from past to present guided by the topic of modular forms and their variants. What can be gained by perturbing modular symmetries in particular?

Lecture: 4:30–5:30 p.m.
Refreshments: 4:15 p.m
Science Center 101
(Chang Hou Hall)