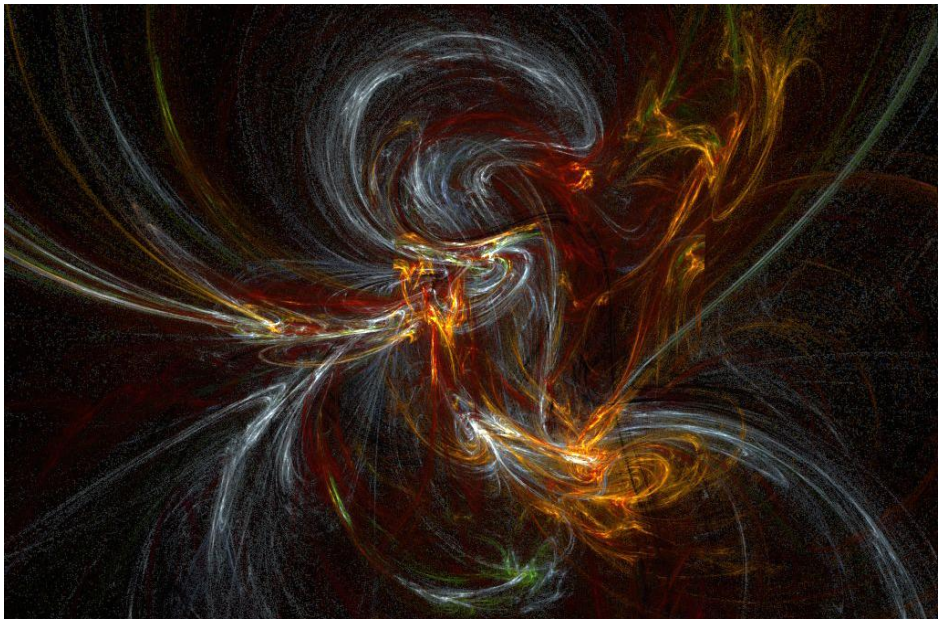
The SUMO Speaker Series for Undergraduates

(food from Pizza Chicago)
Wednesday, November 18th
4:15-5:05, room 380C

Ramsey Theory: Amongst enough chaos, can we find order?

Professor Melanie Wood



ABSTRACT:

Suppose we are given a plane with all its lattice points colored either red or blue. Can we always find a rectangle with all four vertices colored the same color? If that's too easy, then we can try to find a square with all of its vertices the same color. All of a sudden, the problem is much harder and leads us to a more general question. Given enough "stuff", colored in some manner that we have no control over, when can we find a monochromatic version of some structure? We'll discuss versions of this question ranging from concrete to abstract, and we'll even see what this says about winning strategies for higher-dimensional tic-tac-toe.

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