CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES
COLLOQUIUM

Friday, February 2
3:00 – 4:00 PM
Maria Sanford, Room 101

DEFINING RANDOMNESS ALGORITHMICALLY

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Abstract: When shown a binary sequence, most people can intuitively describe it as "random" or "not random." However, as mathematicians, we want a precise mathematical definition of randomness. In this talk, I will characterize randomness with concepts from computability theory using three different intuitive approaches as starting points: unpredictability, incompressibility, and a lack of distinguishing properties. If time permits, I will discuss different formalizations within each approach that result in different kinds of randomness and how well they fit our intuitions about other properties a random sequence should have.

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