

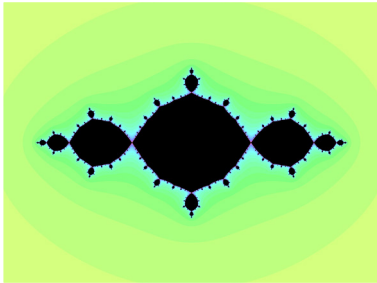
Dr. Laura DeMarco

Henry S. Noyes Professor of Mathematics
Northwestern University

Dr. DeMarco earned her PhD from Harvard in 2002, and her undergraduate degree in mathematics and physics from the University of Virginia. DeMarco is an expert on complex and arithmetic dynamics and has received numerous awards and honors, including the AMS Satter Prize in 2017, a Simons Fellowship in 2015-2016, an NSF-CAREER Award in 2008, and a Sloan Fellowship in 2008. She became a fellow of the AMS in 2012, and in 2018, she was an Invited Speaker at the International Congress of Mathematicians.



COMPLEX DYNAMICS AND ELLIPTIC CURVES



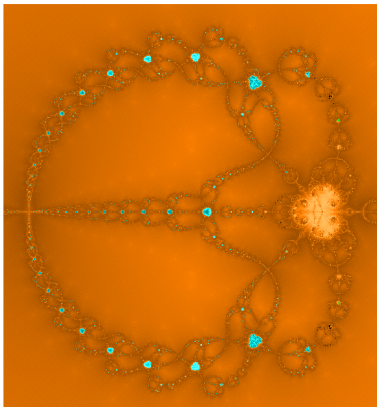
Tuesday, February 18, 2020

1360 East Hall, 4:00 p.m. - 5:00 p.m.

Reception to follow in East Hall upper atrium

Wednesday, February 19, 2020

1360 East Hall, 4:00 p.m.- 5:30 p.m.



In these two talks, I will present connections between the theory of dynamical systems and certain problems in arithmetic geometry. On the dynamical side -- specifically in the study of iteration of rational functions (Julia sets, bifurcations, the Mandelbrot set) but originating in the mathematical study of planetary motion -- the first connections to number theory were observed about 100 years ago. On the arithmetic side, it was probably the 1960s when dynamical ideas were first used as tools to understand the arithmetic geometry of elliptic curves and abelian varieties. My goal is to provide examples of how these relationships developed and where they have brought us today. *(The first talk is designed for a very general audience, and the second talk will be at the level of a Department Colloquium.)*

