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Laura De Marco* (demarco@math.uic.edu). *Combining complex and arithmetic dynamics: a study of critically-finite maps.*

Questions about complex dynamical systems have traditionally been answered with techniques from analysis (complex or geometric). In the last 5 or 10 years, methods from arithmetic and algebraic geometry have begun to play a central role – and the result is an active new research area, the “arithmetic of dynamical systems” (to borrow the title of Silverman’s textbook on the subject). The questions themselves have evolved, inspired by results from arithmetic geometry. In this talk, I will present new joint work with Matt Baker, where we study “special points” within the moduli space of complex polynomial dynamical systems. (Received September 25, 2012)