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Michael E. Zieve* (zieve@umich.edu), Department of Mathematics, University of Michigan, 530 Church Street, Ann Arbor, MI 48109-1043. *The happy marriage between arithmetic geometry and dynamical systems.*

The past two decades have witnessed the discovery of new connections between dynamical systems, number theory, and algebraic geometry. This has led to new results about complex dynamical systems, new results about maps on rational points induced by morphisms between algebraic varieties, and dynamical generalizations of major results about algebraic groups. I will explain these developments, with a focus on polynomials in one variable. (Received May 21, 2011)