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Douglas E Norton* (douglas.norton@villanova.edu), Department of Mathematical Sciences, Villanova University, 800 Lancaster Avenue, Villanova, PA 19085. *Phase Portraits from Varying Parameters in Families of Systems of Differential Equations.*

The phase plane provides a context in which to represent some qualitative properties of solutions of systems of differential equations in two variables. A phase portrait traditionally provides a visual representation of a particular solution of a particular system or several solutions with different initial conditions. In this report on continuing investigations, we explore some graphical representations of solution curves of systems that are close in parameter space and that share common initial conditions. We present examples in which the patterns and information carried differ from the usual phase diagrams and explore the potential for new and potentially aesthetically pleasing representation of dynamical information about families of systems. (Received September 11, 2010)