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T. J. Christiansen* (christiansent@missouri.edu), Department of Mathematics, University of Missouri, Columbia, MO 65211. *Resonances and Schrödinger operators.*

Physically, *resonances* may correspond to decaying waves, in contrast to eigenvalues, which correspond to periodic waves in many models. Mathematically, much less is known about the behavior of resonances than that of eigenvalues of a self-adjoint operator.

We give an introduction to resonances, concentrating on the case of the Schrödinger operator on \mathbb{R}^d . We discuss a number of questions related to the distribution of resonances. Among other things, we show how the use of complex-valued potentials can help prove results about resonances of Schrödinger operators with real-valued potentials. (Received August 10, 2012)