Piezo1D 1.0

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Piezo1D is a comprehensive software package that allows 1-dimensional electromechanical device modeling using both Mason's Model and the KLM Equivalent Circuit Model. The software accommodates losses in material properties, complex-valued electrical circuit components at electrical ports and open or arbitrary complex impedance acoustic ports. Outputs are updated instantaneously as the model is changed or components adjusted. Some outputs of the model include complex impedance spectra, insertion loss, pulse echo, stress and velocity at any face, heat generation in layers where there is loss and radiated power. 1-Dimensional modeling can be extended to cases of parallel layers where faces of the parallel layers satisfy specific boundary conditions. Arbitrary analysis results can be generated in both time and frequency domain using user-define equations.