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**Oscillations of Cantilevers** J.D. TAYLOR, GAYATRI KESKAR, JAY GAILLARD, RAZVAN CIOCAN, MALCOLM SKOVE, APPARAO RAO, Clemson University — Resonance vibration of micro and nano sized cantilevers can be used to measure elastic constants and mass, detect absorbed material, and form part of mechanically resonant filters in electronic devices. We have measured the harmonic content of cantilevers driven by electrostatic forces containing two harmonically related terms, as well as nonlinear terms and parametric terms. The results are compared to numerical simulations of the forces between the cantilever and the counter electrode and the resulting motion of the cantilever.

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