A PHENOMENOLOGICAL MODEL OF PASSIVE CONTROL OF VIBRATIONS OF BEAMS VIA SHUNTED PIEZOELECTRIC TRANSDUCERS

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ABSTRACT

A phenomenological electromechanical analytical model of beams with piezoelectric transducers shunted with a passive electrical network with general impedance is presented and discussed. A case study is considered and the damping performance of a cantilever beam with a piezoelectric patch shunted with a resistance tuned to damp the first mode is investigated.