

VIBRATION DAMPING WITH COUPLED MASSES IN PARALLEL

Péter Szuchy

Department of Mechanical Engineering, Faculty of Engineering, University of Szeged, Mars
tér 7. 6724, Szeged, Hungary

szpeter@mk.u-szeged.hu

ABSTRACT

The author is going to introduce his latest result in vibration reduction research with “wallpaper”-like metastructure. At the beginning the dynamic adsorbers and the acoustic metamaterials are briefly presented then translational model of the “wallpaper”-like metastructure is shown. The motion equations of the mathematical model are written and solved by rotating vectors. The bent cantilever model with elastic support method is presented. The damping ability of the system is shown during a simulation of a 3D solid body model.

Keywords: “wall-paper”-like metastructure, acoustic metamaterial, rotating vectors, elastic support