

Human chest model reacting on an impulsive force measured by means of standard energy harvesting circuit

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The investigated system consisting of a rheological model of human chest and a dynamical system of energy harvesting will be coupled and subject to an impulsive action of external impact force. The problem focuses on application of a proper function of control that would minimize deformation of the chest cage caused by the impact loading. Because of difficulties appeared in measurement of the impact force exciting the rheological system of human chest it is proposed to use an energy harvesting circuit with an energy storage system. Such element in a form of the energy storage device will be placed between the impacting mass surface and the posterior surface of the chest at a