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## **INFLUENCE OF SOUND FREQUENCY ON HUMAN BODY STABILITY**

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### **Abstract**

Kistler Force Plate (FP) (model 9286AA) with the corresponding software Bioware (2812A1-3, Version: 3.2.6.104), along with other equipment: an audio system Hercules 5.1 70, a sound generator Agilent 33220 A and a sound meter Spark 706 were used for the research described in the present paper. The audio system was used to generate sounds at different frequencies; the sound generator verified the audio system and the sound meter were used to achieve a sound pressure level. The software contains a number allowed the calculation of all the variables obtained in the form of amplified electrical signals from the piezoelectric sensors incorporated in the FP. The parameters used from Bioware are the biplanar forces of the floor plan, while the subjects in a static position underwent different sound frequencies. These parameters have been collected during different standard intervals (30 seconds and 90 seconds) of time at a frequency of 100Hz. There has been used a couple of new parameters along with others, from the scientific literature in order to evaluate the stability of the subjects influenced by the frequency of the sound. The results obtained suggest an influence of the sound frequency on to the subjects in comparison with no sound situation. The study was taken at Transylvania University of Brasov.

*Key words:* Kistler, sound frequency, stability

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