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### THE DEFINITION OF THE SCIENCE OF ACOUSTICS AND ITS PRACTICAL SIGNIFICANCE

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**Abstract.** For last 15 years the author investigates the history and implementation processes of the science of acoustics. First of all these questions of definition and practical significance were discussed and analysed in the conferences and symposiums of Lithuanian researches of the science of acoustics. The author is going to present the regulatory which was accepted by Lithuanian researches. The same question was analysed in international congresses as well: ICA 2007, Spain, ICA 2010, Australia and ICA 2013, Canada. Most of the scientists agreed with the definition of the science of acoustics. There were some authors who were tended to differentiate low and high frequency sounds, separate them according to their characteristics and analysis.

The author of this presentation has deep experience in experimental and analytical activity. The acoustics as the separate branch of physics expanded to the different branches of science and gained new technologies of applications. It is recommend to define the science of acoustics as all movements, fluctuations, oscillations, sounds in different environments having their excitation frequencies in the range of 0.1 Hz – 400 KHz. All these movements and sounds are characterized by common law of the wave's dissemination and mathematical equations with small exceptions.

The presentation is illustrated with new results of the science of acoustics. There is ability to confirm the new definition of the science of acoustics.

**Keywords:** acoustics, history, the science of the waves, new definition.