

Acoustic and Biomedical Engineering
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Preface

The present issue of Acta Physica Polonica A is a collection of articles dealing with the problems of acoustic and biomedical engineering. They refer to the two domains of science that are closely connected with each other on various research planes.

They combine reports connected with detection of all undesirable, vexatious or harmful effects of mechanical vibrations of an elastic medium influencing the hearing organs, sense receptors or other elements of human organism with the research aimed at the solutions that could minimize them or aid their correct perception.

This very area of research generates the need for cooperation and exchange of ideas between the acousticians, architects, physicists, physicians and engineers applying the present state of knowledge in these domains. The information concerning the results of the newest studies included in this volume can greatly facilitate this activity. The articles discuss the problems concerning the acoustics of speech, musical acoustics and the process of hearing. They also describe the latest achievements connected with the execution of the constant monitoring of noise that occurs in our environment, and outline the research conducted in the area of hydroacoustics. They present the solutions of the new physical methods applied in medicine as well as indications for the numerical solutions necessary in acoustics. Moreover, they describe the active methods of reduction of vibrations and structural noises and discuss the questions of vibroacoustics, linear acoustics and acoustics of structures.

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We do hope that the works published in this volume will make access to the discussed problems easier and inspire further research thus promoting further development of the areas involved.

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