

1. Record Nr.	UNINA9910585999603321
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Titolo	Piezoelectric Electromechanical Transducers for Underwater Sound . Part III Calculating transducers of different types . Part IV Some aspects of transducers designing / / Boris S. Aronov
Pubbl/distr/stampa	Boston, MA : , : Academic Studies Press, , [2022] ©2022
ISBN	1-64469-827-7
Edizione	[1st ed.]
Descrizione fisica	1 online resource (vii, 262 pages)
Disciplina	681.2
Soggetti	Piezoelectric transducers Underwater acoustics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Frontmatter -- PREFACE -- Table Of Contents -- Part III Calculating Transducers of Different Types -- CHAPTER 7 Cylindrical Transducers -- CHAPTER 8 Spherical Transducers -- CHAPTER 9 Flexural Plate Transducers -- CHAPTER 10 Length Expander Transducers and Their Modifications -- Part IV Some Aspects of Transducers Designing -- CHAPTER 11 Effects of Operational and Environmental Conditions -- CHAPTER 12 Hydrostatic Pressure Equalization -- CHAPTER 13 Projectors Designing Related Issues -- CHAPTER 14 Sensors Designing Related Issues -- CHAPTER 15 Combining Finite Element Analysis with Analytical Method -- Afterword -- LIST OF SYMBOLS -- APPENDIX A. Properties of Passive Materials -- APPENDIX B. Properties of Piezoelectric Ceramics -- APPENDIX C. Special Functions
Sommario/riassunto	The book presents a broad-scope analysis of piezoelectric electromechanical transducers and the related aspects of practical transducer design for underwater applications. It uses an energy method for analyzing transducer problems that provides the physical insight important for the understanding of electromechanical devices. Application of the method is first illustrated with transducer examples that can be modeled as systems with a single degree of freedom, (such as spheres, short cylinders, bars and flexural disks and plates made of

piezoelectric ceramics). Thereupon, transducers are modeled as devices with multiple degrees of freedom. In all these cases, results of modeling are presented in the form of equivalent electromechanical circuits convenient for the calculation of the transducers' operational characteristics. Special focus is made on the effects of coupled vibrations in mechanical systems on transducer performance. The book also provides extensive coverage of acoustic radiation including acoustic interaction between the transducers. The book is inherently multidisciplinary. It provides essential background regarding the vibration of elastic passive and piezoelectric bodies, piezoelectricity, acoustic radiation, and transducer characterization. Scientists and engineers working in the field of electroacoustics and those involved in education in the field will find this material useful not only for underwater acoustics, but also for electromechanics, energy conversion and medical ultrasonics.

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