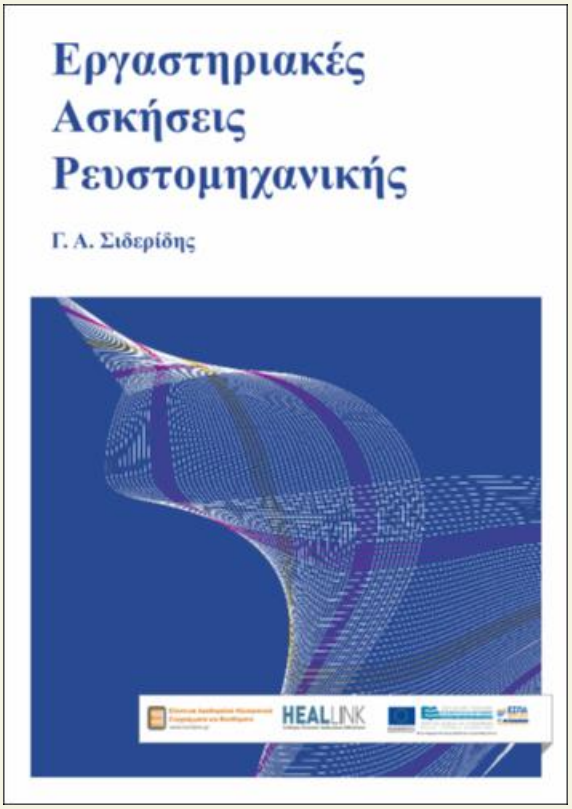

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Abstract

The present textbook is intended for use primarily by undergraduate students. However, as it refers to some widely used fluid measurement methods, this textbook will also be useful to professional engineers engaged in relevant practices. A series of laboratory experiments are presented associated with (a) methods of determining the values of quantities related to liquids at rest and in motion (density, viscosity, pressure, velocity, discharge rate, etc), (b) ways of employing measuring instruments and devices (pressure gauges, pitot tubes, various flowmeter types, etc), (c) experimental investigations of operational characteristics of devices whose function relies on the flow of fluids through them (pumps, fans). In each experiment, the relevant theoretical background is listed first, followed by an extensive description of the laboratory set-up used and its operation. Instructions are then given for performing the experimental procedure and recording the experimental data. Finally, directions are specified for the calculation of the required quantities and the presentation of the results produced. Theoretical results are correlated with experimental ones aiming at establishing reliable methods for determining the values of important flow parameters.

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