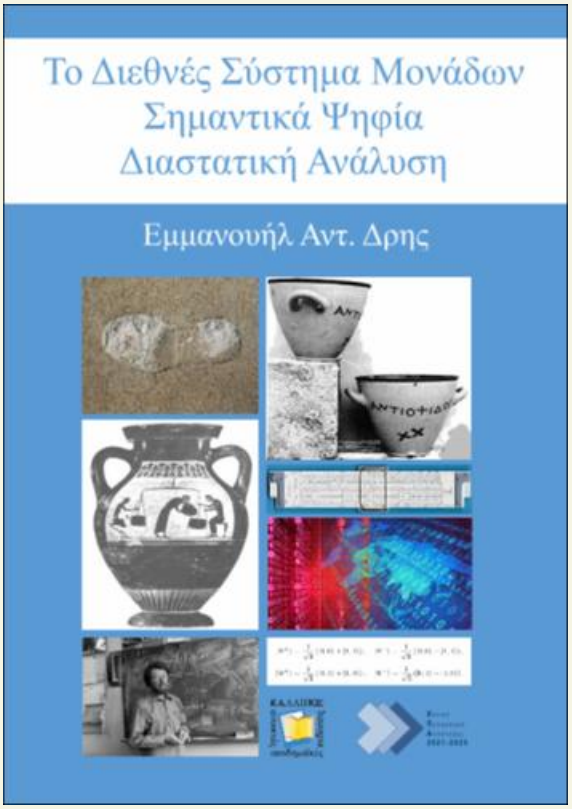

METADATA

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Abstract

The textbook consists of three chapters, just as they are mentioned in the title. The book was initially written in order to fill a void of such a topic in the Greek scientific literature. There is not a systematic description of these three subjects in Greek. The first chapter, which is also the largest, is dealing with the systems of units, mainly with the International System of Units (SI). It is important that we refer to the latest version of the SI that has been in use since May 20th, 2019. The difference is that the SI is based on seven basic physical constants that define the fundamental units of measurement. The values of the constants are fixed, given with no uncertainty. The derived units are defined by the fundamental units in the usual way. Precise definitions are given for the various concepts that are relevant to the subject. The second, and most concise chapter, deals with the significant figures. The meaning of significant digits is given in a clear manner, along with the use in calculations. Many people are confused about what significant figures and decimal figures are. The third chapter deals with the dimensional analysis. It is a fact that many physicists (mainly theorists) and engineers use dimensional analysis without knowing the theoretical background of the method. Engineers working with fluids are more experts in the subject and with deeper knowledge. The deeper knowledge helps in the better use of the method for more complicated problems. The textbook could be used/read separately or together with others that are related with subjects we referred to above.

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