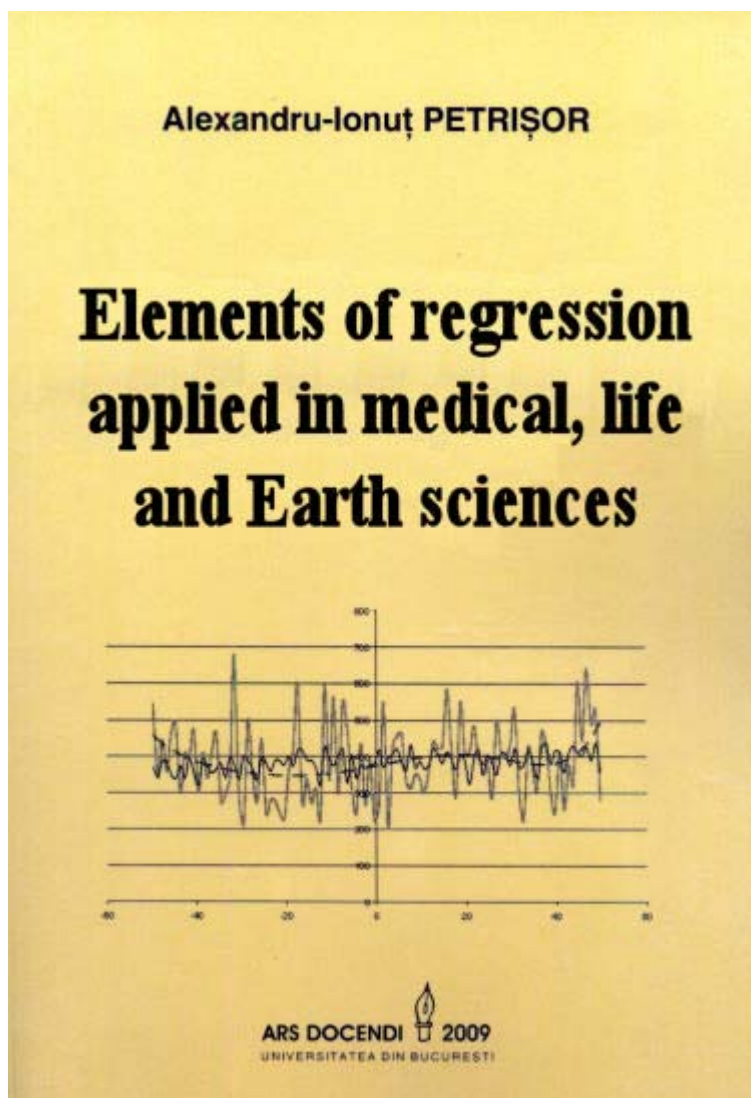


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Elements of regression applied in medical, life and Earth sciences

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Born from the collaboration within the framework of research projects involving specialists in biology, ecology, geography, climatology, medicine, epidemiology, psychology, ethology, pedagogy and other disciplines, this work starts with the definition of regression (functional relationship between one or more correlated variables) in order to present the theoretical background of the statistical methodology used for the experimental design up to the interpretation of results, as well as concrete examples of applying the statistical instruments in the aforementioned fields. The book is addressed to specialists from these domains, especially to researchers, in order not to train them as statisticians, but prove that the scientific approach involves the appeal to a statistician even before starting the research, and facilitate their dialogue between these specialists and statisticians. Studies presented in about twenty peer reviewed papers published in Romanian and international journals, some indexed by Thompson Institute for Scientific Information, to which the author worked alone or as part of a research team, are analyzed with respect of phrasing research questions in statistical terms, using the appropriate statistical methodology, analyzing and interpreting the results. Apart from these, several “statistical jokes” are analyzed in order to prove that the use of some methods when data requirements are not met or inadequately could turn statistics into an instrument employed to prove anything, even the fact that a butterfly flapping its wings in Lausanne, Switzerland could be responsible for rainfalls in Paris.

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