

Review of the book “Understanding Banach Spaces”

Editor: Daniel González Sánchez

This book is a compilation of twenty-five contributions that falls within the frameworks of Functional and Numerical Analysis. The use and application of several properties of Banach spaces applied to several Numerical problems is the guiding thread of the book. In particular, the solution of nonlinear equations defined in Banach spaces is one of the main objectives in most of the chapters. The study of the convergence of different iterative processes for solving nonlinear equations considered in most of these chapters, together with other numerical aspects such as radii of convergence, computational costs, efficiency and so on. Other topics considered in this book are fractional inequalities, the solution of differential equations with parameters in a Banach space, convexity problems or interpolation in Banach spaces.

In my opinion, there is currently a need for books devoted to this topic because, although there exists a huge number of research publications concerning Numerical method defined in Banach spaces, most of them are paper published in Scientific Journals. The idea of a unifying publication can allow the reader to have an idea of the state-of-the-art in this field. To reinforce this idea, we can highlight that there are 18 authors collaborating in this publication. If we add the number of authors cited in the references, the potential reader can have a wide panorama of subjects and researchers in this field of Mathematics.

The editor is one of the main specialists in the study of iterative methods, mainly in the theoretical convergence study in Banach spaces. He has made a good job for joining under the same title the work of different researchers. He has been very careful with the typographic questions to obtain a unified look of the book.