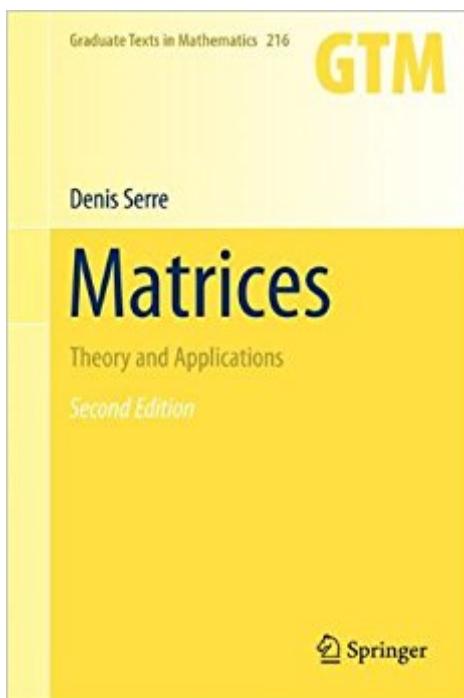


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# Matrices: Theory And Applications (Graduate Texts In Mathematics)



## Synopsis

In this book, Denis Serre begins by providing a clean and concise introduction to the basic theory of matrices. He then goes on to give many interesting applications of matrices to different aspects of mathematics and also other areas of science and engineering. With forty percent new material, this second edition is significantly different from the first edition. Newly added topics include:  $\diamond$  Dunford decomposition,  $\diamond$  tensor and exterior calculus, polynomial identities,  $\diamond$  regularity of eigenvalues for complex matrices,  $\diamond$  functional calculus and the Dunfordâ Taylor formula,  $\diamond$  numerical range,  $\diamond$  Weyl's and von Neumannâ TM's inequalities, and  $\diamond$  Jacobi method with random choice. The book mixes together algebra, analysis, complexity theory and numerical analysis. As such, this book will provide many scientists, not just mathematicians, with a useful and reliable reference. It is intended for advanced undergraduate and graduate students with either applied or theoretical goals. This book is based on a course given by the author at the Ã‰cole Normale SupÃ©rieure de Lyon.

## Book Information

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From the reviews of the second edition:"This is a first-year graduate text that will be of considerable value to students with any of a wide variety of potential research objectives. Both the proofs and the general explanations are unusually detailedâ There are 165 well-designed exercises, many of which provide additional information on topics treated in the text." (Mathematical Reviews)"The main motivation of the author is to â obtain a textbook that is suitable for a wide range of applications

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offering a range of topics, and presenting some fascinating and perhaps not familiar parts of the subject. Even those familiar with the subject may find something new here, and a good student, willing to work hard, could find it a rewarding book for self-study. • (John D. Dixon, Zentralblatt MATH, Vol. 1206, 2011)

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