

Download Linear Algebra Ideas And Applications

Until the 19th century, linear algebra was introduced through systems of linear equations and matrices. In modern mathematics, the presentation through vector spaces is generally preferred, since it is more synthetic, more general (not limited to the finite-dimensional case), and conceptually simpler, although more abstract. Linear Algebra and its Applications publishes articles that contribute new information or new insights to matrix theory and finite dimensional linear algebra in their algebraic, arithmetic, combinatorial, geometric, or numerical aspects. This course covers matrix theory and linear algebra, emphasizing topics useful in other disciplines such as physics, economics and social sciences, natural sciences, and engineering. It parallels the combination of theory and applications in Professor Strang's textbook Introduction to Linear Algebra. CONTENTS iii B The Jordan Form 466 C Matrix Factorizations 473 D Glossary: A Dictionary for Linear Algebra 475 E MATLAB Teaching Codes 484 F Linear Algebra in a Nutshell 486