Contribution of Linear Algebra and Matrix in Mathematics: An Analytical Study

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Abstract: *In this we are presenting a study on the linear algebra and matrix in mathematics. Linear Algebra is the branch of mathematics concerned with the study of vectors, vector spaces also called linear spaces, linear maps also called linear transformations, and systems of linear equations. Vector spaces are a central theme in modern mathematics: thus, linear algebra is widely used in both abstract algebra and functional analysis. Linear algebra also has a concrete representation in analytic geometry and it is generalized in operator theory. It has applications in the natural sciences and the social sciences. Since nonlinear models can often be approximated by linear ones..*

Keywords: Linear Algebra, Matrix, Linear Spaces, n-Tuples, Vectors, Linear   Equation

REFERENCES

[1] Anton, Howard, "Elementary Linear Algebra," 5th ed., New York: Wiley, ISBN 0-471-84819-0, 1985.

[2] Art in, Michael, "Algebra," Prentice Hall, ISBN 978-0-89871-510-0991.

[3] Baker, Andrew J., "Matrix Groups: An Introduction to Lie Group Theory," Berlin, DE; New York, NY: Springer-Verilog, ISBN 978-1-85233-470-3, 2003.

[4] Abu III, David, Teeth en, Lloyd N., "Numerical linear algebra, Philadelphia, PA: Society for Industrial and Applied Mathematics," ISBN 978-0-89871-361-9, 1995.

[5] Beauregard, Raymond A., Farleigh, John B., "A First Course in Linear Algebra: with Optional Introduction to Groups, Rings, and Fields," Boston: Houghton Mifflin Co., ISBN 0-395-14017-X, 1973. 6 Brasher, Otto, "Linear Algebra with Applications (3rd Ed.),

[7] Bronson, Richard," Matrix Methods: An Introduction," New York: Academic Press, LCCN 70097490.1970.

[8] Bronson, Richard," Schism's outline of theory and problems of matrix operations," New York: McGraw-Hill, ISBN 978-0-07-007978-6, 1989.

[9] Brown, William C.," Matrices and vector spaces" New York, NY: Marcel Dekker, ISBN, 1991