GRADUATE SEMINAR

Di Lu

A study of Schröder's method for the matrix pth root using power series expansions

PhD Student supervised by Dr.Chun-Hua Guo

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@ 3:30pm
Math lounge CW 307.20

Abstract:When A is a matrix with all eigenvalues in the disk $|z - 1| < 1$, the principal pth root of A can be computed by Schröder's method, among many other methods. In this seminar we present a further study of Schröder's method for the matrix pth root, through an examination of power series expansions of some scalar functions. Specifically, we determine the sign pattern of coefficients and obtain a new and informative error estimate for the matrix sequence generated by the Schröder's method.

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