Study Guide for Numerical Analysis Exams

Number systems and errors in digital computation, machine unit round off error. References: [1,2]

Numerical solution of nonlinear equations. References: [1,2]

Interpolation theory and applications. References: [1,2]

Numerical integration in one or more dimensions. References: [1,2]

Spline theory and applications in computer graphics. References: [1,2,3,4]

Numerical differentiation. References: [2,5]

Remainder theory and Peano's Theorem. References: [2,5]

Approximation theory and applications. References: [1,2]

Direct and iterative methods for linear systems. References: [1,2]

Algebraic eigenvalue problem. References: [1,2]

Numerical solution of systems of ordinary differential equations. References: [1,2]


Solution of systems of nonlinear equations. References: [1,2]

Optimization and nonlinear least squares techniques. References: [1,2]

References


[Reviewed with no changes November 2022]