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ACM Transactions on Mathematical Software

AIAA Journal

BIT

Communications on Pure and Applied Mathematics

IMA Journal of Numerical Analysis

Journal of Computational Physics

Journal of Computational and Applied Mathematics

Journal of Scientific Computing

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SIAM Journal on Numerical Analysis

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The following list comprises most of the the standard books on the numerical solution of ordinary differential equations. Henrici, Stetter, and Dekker & Verwer represent the theoretical end of the spectrum, Shampine & Gordon the practical. The pamphlet by Sand and Østerby is a delightful compendium of plots of stability regions. Coddington & Levinson and Bender & Orszag present the mathematical theory of ordinary differential equations from the pure and applied points of view, respectively. Lambert and Gear are perhaps the best general introductions to numerical methods for o.d.e.'s, while Butcher's book is a more detailed treatise containing 100 pages of references up to 1982. The books by Keller and by Ascher, Mattheij & Russell treat boundary-value o.d.e. problems (not covered in this book). For perspective, historical notes, and sense of humor one cannot do better than Hairer, Nørsett and Wanner.

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