

ZMATH 2011c.01018

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Advanced engineering mathematics with MATLAB. 3rd edition.

Boca Raton, FL: CRC Press (ISBN 978-1-4398-1624-0/hbk). 1079 p. (2011).

This third edition of this engineering mathematics course including new examples and problems is structured in 17 chapters: 1. complex variables; 2. First-order differential equations; 3. Higher ordinary differential equations; 4. Fourier series; 5. The Fourier transform; 6. The Laplace transform; 7. The Z-transform; 8. The Hilbert transform; 9. The Sturm-Liouville problem; 10. The wave equation; 11. The heat equation; 12. Laplace's equation; 13. Green's functions; 14. Vector calculus; 15. Linear algebra; 16. Probability; 17. Random processes. *Cristinel Mortici (Targoviste)*

Classification: U25 I15 K65 M55 R25

Keywords: textbooks for engineers; complex numbers; line integrals; Cauchy integral formula; residues; complex variables; ordinary differential equations; Euler-Cauchy equation; Fourier series; Fourier transform; Z-transform; Hilbert transform; Sturm-Liouville problem; wave equation; heat equation; Laplace equation; Laplace transform; Heaviside expansion theorem; Dirac delta function; Green functions; Helmholtz equation; vector calculus; line integrals; surface integral; Green lemma; Stokes formula; random process; birth and death processes; random walk; Markov chains; mean and variance; random variables; MATLAB