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Altri autori (Persone)	Di FonzoTommaso
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Nota di contenuto	Cover; Abstract; Contents; I. Introduction; II. The Denton PFD Benchmarking Method; III. The Enhanced Denton PFD Method for Extrapolation; A. An Approximation of the Enhanced PFD Method; IV. An Example with Artificial Data; Tables; 1. Extrapolation Using Forecast BI Ratios (Example 6.2, QNA Manual, 2001); 2. Enhanced Denton PFD: Comparison Between the Shortcut and the Analytical Solution; 3. Enhanced Denton PFD: Comparison with the Indicator Series; 4. Basic Denton PFD vs. Enhanced Denton PFD: MSD of Quarterly Growth Rates 5. Enhanced Denton PFD: Comparison Between the Analytical Solution and the Shortcut Version with Different BI RatiosV. An Application to Real-Life Data; 6. Forecasting Manufacturing Value Added in 2009 Using IPI: a Comparison Between PFD and EPFD; VI. Conclusions; References
Sommario/riassunto	Statistical offices have often recourse to benchmarking methods for compiling quarterly national accounts (QNA). Benchmarking methods employ quarterly indicator series (i) to distribute annual, more reliable series of national accounts and (ii) to extrapolate the most recent quarters not yet covered by annual benchmarks. The Proportional First Differences (PFD) benchmarking method proposed by Denton (1971) is a widely used solution for distribution, but in extrapolation it may suffer when the movements in the indicator series do not match consistently the movements in the target annual benchmarks. For this reason, an enhanced formula for extrapolation was recommended by the IMF’s Quarterly National Accounts Manual: Concepts, Data Sources, and Compilation (2001). We discuss the rationale behind this technique, and propose a matrix formulation of it. In addition, we present applications of the enhanced formula to artificial and real-life benchmarking examples showing how the extrapolations for the most recent quarters can be improved.

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Struck String; 5.5 Bernoulli's Solution; 5.6 Time-Independent Problems; 5.7 Time-Dependent Problems; 5.8 Historical Epilogue; Exercises; CHAPTER 6. ORTHOGONAL SYSTEMS; 6.1 Fourier Series and Parseval's Identity; 6.2 An Approximation Problem; 6.3 The Uniform Convergence of Fourier Series; 6.4 Convergence in the Mean; 6.5 Applications to the Vibrating String; 6.6 The Riesz-Fischer Theorem; Exercises
CHAPTER 7. FOURIER TRANSFORMS7.1 The Laplace Equation; 7.2 Fourier Transforms; 7.3 Properties of the Fourier Transform; 7.4 Convolution; 7.5 Solution of the Dirichlet Problem for the Half-Plane; 7.6 The Fourier Transform Method; Exercises; CHAPTER 8. LAPLACE TRANSFORMS; 8.1 The Laplace Transform and the Inversion Theorem; 8.2 Properties of the Laplace Transform; 8.3 Convolution; 8.4 The Telegraph Equation; 8.5 The Method of Residues; 8.6 Historical Epilogue; Exercises; CHAPTER 9. BOUNDARY VALUE PROBLEMS IN HIGHER DIMENSIONS; 9.1 Electrostatic Potential in a Charged Box 9.2 Double Fourier Series9.3 The Dirichlet Problem in a Box; 9.4 Return to the Charged Box; 9.5 The Multiple Fourier Transform Method; 9.6 The Double Laplace Transform Method; Exercises; CHAPTER 10. BOUNDARY VALUE PROBLEMS WITH CIRCULAR SYMMETRY; 10.1 Vibrations of a Circular Membrane; 10.2 The Gamma Function; 10.3 Bessel Functions of the First Kind; 10.4 Recursion Formulas for Bessel Functions; 10.5 Bessel Functions of the Second Kind; 10.6 The Zeros of Bessel Functions; 10.7 Orthogonal Systems of Bessel Functions; 10.8 Fourier-Bessel Series and Dini-Bessel Series
10.9 Return to the Vibrating Membrane

Sommario/riassunto

Fourier Analysis and Boundary Value Problems provides a thorough examination of both the theory and applications of partial differential equations and the Fourier and Laplace methods for their solutions. Boundary value problems, including the heat and wave equations, are integrated throughout the book. Written from a historical perspective with extensive biographical coverage of pioneers in the field, the book emphasizes the important role played by partial differential equations in engineering and physics. In addition, the author demonstrates how efforts to deal with these problems hav