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Nota di contenuto	Cover -- Title -- Copyright -- Foreword to the Second Edition -- Table of Contents -- Foreword to the First Edition -- Preface -- Acknowledgments -- Nomenclature -- Chapter 1. Introduction -- Chapter 2. Review of Fundamentals -- Chapter 3. Rocket Propulsion -- Chapter 4. Aircraft Gas Turbine Engine -- Chapter 5. Parametric Cycle Analysis of Ideal Engines -- Chapter 6. Component Performance -- Chapter 7. Parametric Cycle Analysis of Real Engines -- Chapter 8. Engine Performance Analysis -- Chapter 9. Turbomachinery -- Chapter 10. Inlets, Nozzles, and Combustion Systems -- Appendix A. Altitude Tables -- Appendix B. Gas Turbine Engine Data -- Appendix C. Data for Some Liquid-Propellant Rocket Engines -- Appendix D. Air and (CH ₂) _n Properties at Low Pressure -- Appendix E. Turbomachinery Stresses and Materials -- Appendix F. About the Software -- Appendix G. Answers to Selected Problems -- References -- Index -- Supporting Materials -- Back Cover.
Sommario/riassunto	This text provides a complete introduction to gas turbine and rocket propulsion for aerospace and mechanical engineers. Building on the very successful Elements of Gas Turbine Propulsion, textbook coverage

has been expanded to include rocket propulsion and the material on gas dynamics has been dramatically improved. The text is divided into four parts: basic concepts and gas dynamics; analysis of rocket propulsion systems; parametric (design point) and performance (off-design) analysis of air breathing propulsion systems; and analysis and design of major gas turbine engine components (fans, compressors, turbines, inlets, nozzles, main burners, and afterburners). Design concepts are introduced early (aircraft and rocket performance in an introductory chapter) and integrated throughout. Written with extensive student input on the design of the book, the book builds upon definitions and gradually develops the thermodynamics, gas dynamics, rocket engine analysis, and gas turbine engine principles. The book contains over 100 worked examples and numerous homework problems so concepts are applied after they are introduced. Over 600 illustrations and pictures show basic concepts, trends, and design examples. Eight computer programs accompany the text, which allow for rapid calculation of trends, "what if" questions, conceptual design, homework problems, and homework verification. The software runs in the Windows operating system on PC-compatible systems.
