1.	Record Nr.	UNINA9911007099303321
	Titolo	Advanced engineering thermodynamics / / Adrian Bejan
	Pubbl/distr/stampa	Hoboken, N.J., : Wiley, c2016 Hoboken, New Jersey : , : John Wiley & Sons, Inc., , 2016 ©2016
	ISBN	9781119281047 1119281040 9781523110001 1523110007 9781119281030 1119281032 9781119245964 1119245966
	Edizione	[4th ed]
	Descrizione fisica	1 online resource (789 p.)
	Classificazione	501.26 426.5 621.40225
	Disciplina	621.402/1
	Soggetti	Thermodynamics
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Includes bibliographical references and index
	Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
	Nota di contenuto	Cover; Title Page; Copyright; Contents; Preface to the First Edition; Preface to the Second Edition; Preface to the Third Edition; Preface; Acknowledgments; Chapter 1 The First Law; 1.1 Terminology; 1.2 Closed Systems; 1.3 Work Transfer; 1.4 Heat Transfer; 1.5 Energy Change; 1.6 Open Systems; 1.7 History; References; Problems; Chapter 2 The Second Law; 2.1 Closed Systems; 2.1.1 Cycle in Contact with One Temperature Reservoir; 2.1.2 Cycle in Contact with Two Temperature Reservoirs; 2.1.3 Cycle in Contact with Any Number of Temperature Reservoirs 2.1.4 Process in Contact with Any Number of Temperature Reservoirs2. 2 Open Systems; 2.3 Local Equilibrium; 2.4 Entropy Maximum and

Sommario/riassunto	Moving effortlerssly among analysis, essay and graphics, this streamlined edition of Adrian Bejan's powerful presentation is aimed at students in all areas of engineering, physics and life sciences. An advanced, practical approach to the first and second laws of thermodynamicsAdvanced Engineering Thermodynamics bridges the gap between engineering applications and the first and second laws of thermodynamics. Going beyond the basic coverage offered by most textbooks, this authoritative treatment delves into the advanced topics of energy and work as they relate to various engineering fields. This practical approach describes real-world applications of thermodynamics concepts, including solar energy, refrigeration, air conditioning, thermofluid design, chemical design, constructal design, and more. This new fourth edition has been updated and expanded to include current developments in energy storage, distributed energy systems, entropy minimization, and industrial applications, linking new technologies in sustainability to fundamental thermodynamics concepts. Worked problems have been added to help students follow the thought processes behind various applications, and additional homework problems give them the opportunity to gauge their knowledge. The growing demand for sustainability and energy efficiency has shined a spotlight on the real-world applications of thermodynamics. This book helps future engineers make the fundamental connections, and develop a clear understanding of this

complex subject. Delve deeper into the engineering applications of thermodynamics Work problems directly applicable to engineering fields Integrate thermodynamics concepts into sustainability design and policy Understand the thermodynamics of emerging energy technologiesCondensed introductory chapters allow students to quickly review the fundamentals before diving right into practical applications. Designed expressly for engineering students, this book offers a clear, targeted treatment of thermodynamics topics with detailed discussion and authoritative guidance toward even the most complex concepts. Advanced Engineering Thermodynamics is the definitive modern treatment of energy and work for today's newest engineers.