

1. Record Nr.	UNINA9910861097903321
Autore	Rao Balkrishna C
Titolo	Frugal Engineering : Advent, Design and Production of Frugal Products // by Balkrishna C. Rao
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819997008 9819997003
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (247 pages)
Collana	Design Science and Innovation, , 2509-5994
Disciplina	658.5
Soggetti	Engineering design Sustainability Chemical engineering Environmental engineering Engineering Design Environmental Process Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Advent Of Frugal Innovations -- Frugal Innovatons And Sustainable Development -- Grassroots Frugal Innovations -- Engineering Frugal -- Engineering Of Frugal Products.
Sommario/riassunto	This book presents a novel method of engineering to create advanced frugal products from scratch. It outlines a frugal design and frugal manufacturing approach, and delineates concepts and principles underlying different types of frugal innovations. The contents present advanced frugal innovations (AFIs) in a variety of sectors bringing out their widespread presence in rich and emerging economies of the world. This book discusses applications of such innovations in aerospace, automotive, healthcare, particle-physics, and other important sectors, emphasizing the significant potential of frugal engineering. AFIs are not jugaad, rather, they are engineered to harness frugality with cutting-edge research using classical and modern scientific principles. Frugal engineering uses advances in science and other knowledge-areas, including 3D printing, biomimetics, artificial intelligence, Industry 4.0, and others, to frugalize

pillars of engineering in modern problems. This book will be of interest to academics, industry professionals, policymakers, product designers and developers, among others. It introduces the reader to the wonderful world of frugal engineering. In doing so, this book shines light on the significant difference that meticulous creation of these innovations through systematic application of science, engineering, and other knowledge-bases can make to the cause of sustainable development. Frugal engineering of AFIs is indispensable to achieving the sustainable development goals. We can help manage our every growing need for energy and resources effectively by going frugal in the current age of climate change.
