



2nd ed. 2018, XXX, 733 p. 380 illus., 266 illus. in color.

Printed book

Softcover

59,99 € | £54.99 | \$74.99

^[1]64,19 € (D) | 65,99 € (A) | CHF

66,00

eBook

51,16 € | £43.99 | \$59.99

^[2]51,16 € (D) | 51,16 € (A) | CHF

52,50

Available from your library or
[springer.com/shop](https://www.springer.com/shop)

MyCopy ^[3]

Printed eBook for just

€ | \$ 24.99

[springer.com/mycopy](https://www.springer.com/mycopy)

Alessandro De Angelis, Mário Pimenta

Introduction to Particle and Astroparticle Physics

Multimessenger Astronomy and its Particle Physics Foundations

Series: Undergraduate Lecture Notes in Physics

- Provides a balanced, university-level introduction to both (astro)particle physics and multimessenger astrophysics
- Updated to reflect the most recent discoveries
- Written by experimentalists actively working in the field of astroparticle physics and with extensive experience in particle physics

This book introduces particle physics, astrophysics and cosmology. Starting from an experimental perspective, it provides a unified view of these fields that reflects the very rapid advances being made. This new edition has a number of improvements and has been updated to describe the recent discovery of gravitational waves and astrophysical neutrinos, which started the new era of multimessenger astrophysics; it also includes new results on the Higgs particle. Astroparticle and particle physics share a common problem: we still don't have a description of the main ingredients of the Universe from the point of view of its energy budget. Addressing these fascinating issues, and offering a balanced introduction to particle and astroparticle physics that requires only a basic understanding of quantum and classical physics, this book is a valuable resource, particularly for advanced undergraduate students and for those embarking on graduate courses. It includes exercises that offer readers practical insights. It can be used equally well as a self-study book, a reference and a textbook.

Lifelong 40% discount for authors



Order online at [springer.com](https://www.springer.com) / or for the Americas call (toll free) 1-800-SPRINGER / or email us at: customerservice@springernature.com. / For outside the Americas call +49 (0) 6221-345-4301 / or email us at: customerservice@springernature.com.

The first € price and the £ and \$ price are net prices, subject to local VAT. Prices indicated with [1] include VAT for books; the €(D) includes 7% for Germany, the €(A) includes 10% for Austria. Prices indicated with [2] include VAT for electronic products; 19% for Germany, 20% for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted. [3] No discount for MyCopy.