

DYNAMICS OF THE STANDARD MODEL

Describing the fundamental theory of particle physics and its applications, this book provides a detailed account of the Standard Model, focusing on techniques that can produce information about real observed phenomena.

The book begins with a pedagogic account of the Standard Model, introducing essential techniques such as effective field theory and path-integral methods. It then focuses on the use of the Standard Model in the calculation of physical properties of particles. Rigorous methods are emphasized, but other useful models are also described.

This second edition has been updated to include recent theoretical and experimental advances, such as the discovery of the Higgs boson. A new chapter is devoted to the theoretical and experimental understanding of neutrinos, and major advances in CP violation and electroweak physics have been given a modern treatment. This book is valuable to graduate students and researchers in particle physics, nuclear physics and related fields. This title, first published in 2014, has been reissued as an Open Access publication on Cambridge Core.

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SECOND EDITION

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CAMBRIDGE
UNIVERSITY PRESS



Shaftesbury Road, Cambridge CB2 8EA, United Kingdom
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Cambridge University Press is part of Cambridge University Press & Assessment,
a department of the University of Cambridge.

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www.cambridge.org

Information on this title: www.cambridge.org/9781009291002

DOI: [10.1017/9781009291033](https://doi.org/10.1017/9781009291033)

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When citing this work, please include a reference to the DOI [10.1017/9781009291033](https://doi.org/10.1017/9781009291033)

First published 2014
Reissued as OA 2022

A catalogue record for this publication is available from the British Library.

ISBN 978-1-009-29100-2 Hardback
ISBN 978-1-009-29101-9 Paperback

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