# QUANTUM FIELD THEORY IN A NUTSHELL

A. ZEE

Kavli Institute for Theoretical Physics
University of California at Santa Barbara

PRINCETON UNIVERSITY PRESS
PRINCETON AND OXFORD

# Contents

## PART III
## RENORMALIZATION AND GAUGE INVARIANCE



## PART IV
## SYMMETRY AND SYMMETRY BREAKING



## PART V
## FIELD THEORY AND COLLECTIVE PHENOMENA

## PART VI
## FIELD THEORY AND CONDENSED MATTER



## PART VII
## GRAND UNIFICATION



## PART VIII
## GRAVITY AND BEYOND

## APPENDIXES