

# The Relativistic Mean-Field Theory

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# Outline

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- 2 Relativistic Quantum Mechanics
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- 4 RMF for nuclear matter
- 5 RMF for finite nuclei

# Introduction

# Why relativistic framework?



# Relativistic Quantum Mechanics

# Relativistic Quantum Mechanics



# Relativistic Quantum Mechanics



# Relativistic Quantum Mechanics





# Relativistic Quantum Mechanics



# Relativistic Quantum Mechanics



## The framework of RMF theory

## RMF



## RMF



## RMF for nuclear matter

# Nuclear matter



## RMF for finite nuclei



# Coordinate space



# Basis expansion



# Applications

