



# Classical Dynamics of Particles and Systems

*Jerry B. Marion, Stephen T. Thornton*

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## **Classical Dynamics of Particles and Systems** Jerry B. Marion , Stephen T. Thornton

This best-selling classical mechanics text, written for the advanced undergraduate one- or two-semester course, provides a complete account of the classical mechanics of particles, systems of particles, and rigid bodies. Vector calculus is used extensively to explore topics. The Lagrangian formulation of mechanics is introduced early to show its powerful problem solving ability.. Modern notation and terminology are used throughout in support of the text's objective: to facilitate students' transition to advanced physics and the mathematical formalism needed for the quantum theory of physics. CLASSICAL DYNAMICS OF PARTICLES AND SYSTEMS can easily be used for a one- or two-semester course, depending on the instructor's choice of topics.

## **Classical Dynamics of Particles and Systems Details**

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## From Reader Review Classical Dynamics of Particles and Systems for online ebook

### Nadia says

this book going 2 b da same...i'll really need it soon n of cos wil b by my side almost all da time during study week..hehe..perhaps..emm..look at what they hv comment on this book..it's helpful..s long s u know d best way 2 use it..of cos (^^,)

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### Nathaniel Shim says

Found old text book. good read again ..no more exams :(

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### Jon says

The fourth edition is outstanding, I used it in my undergraduate mechanics courses, and still use it as a reference. Not as comprehensive as Goldsmith, but more comprehensible.

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### ala says

Ugh. Why is this book the standard for undergrad mechanics? I guess Goldstein could be a bit much and Landau is kind of lacking in terms of examples. But, ugh, I say. Uuuuuugghhh!

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### Jon says

Not suitable as an undergrad text book in my opinion. I consistently got confused in later chapters by either vague wording and a rather tedious mathematical formalism (too many summations and indices where not needed in my experience).

It is also not appropriate for digital use and has a format that's uneasy on the eyes compared to more modern textbooks.

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### Astrila says

It was just okay... not always clear. There are probably better books out there, but it's not the worst either.

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## **Jorge-IngFis says**

Para echar un vistazo a los ejercicios no está mal pero los desarrollos teóricos no consiguen que llegues a entender las formulaciones lagrangiana y hamiltoniana, probablemente porque trata de exponerlas demasiado rápido y no las dedica el espacio necesario, además están muy simplificadas. El Goldstein es mucho más formal y explica todo mucho mejor, lo malo que si no has cursado antes la asignatura puedes verte perdido por falta de algún ejemplo o ejercicio resuelto en algunos puntos.

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## **Tim Robishaw says**

Terrible.

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## **Carlos says**

Muy bueno

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## **trivialchemy says**

The approach to particle dynamics at this level marks the first exposure for a physics student to a completely self-contained physical theory. And in this particular book, the presentation is as much an aesthetic accomplishment as didactic. With modern notation in stunning typeset, Thornton and Marion guide the student from the most rudimentary linear dynamics of single particles in inertial frames to chaotic oscillations to Hamiltonian dynamics and the study of rigid bodies based upon Eulerian angles.

The microcosm of Hamiltonian and Lagrangian dynamics is especially brilliant, the more so viewed through the lens of the previous chapters' comprehensive theoretical exposition of dynamics from the Newtonian precepts. If there is any weakness it may be the foray into the calculus of variations, which was so eager to demonstrate applications it failed to even explain the formal concept of a functional. But this is so slight a flaw as to hardly bear mentioning. If you are a physics student, buy this book. It's beautiful.

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## **bamdad Hosseini says**

its a great text book. most of the chapters are described well in detail except the third chapter which is about Variational methods. i think he should have described it more. the exercises are good

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**Mohamed IBrahim says**

one of the worst academic text you can find  
to be honest some chapters were good but some other like central force chapter was horrible  
I think we can use this book for revision and for getting problems ( which is good ) not for a primary textbook for any classical mechanics course

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**Craig says**

If you complete every problem in this book you will pass your classical mechanics Ph.D. qualifying exam. I promise.

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