Geometry from Dynamics, Classical and Quantum

José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi

Geometry from Dynamics, Classical and Quantum

José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi

Geometry from Dynamics, Classical and Quantum José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi

This book describes, by using elementary techniques, how some geometrical structures widely used today in many areas of physics, like symplectic, Poisson, Lagrangian, Hermitian, etc., emerge from dynamics. It is assumed that what can be accessed in actual experiences when studying a given system is just its dynamical behavior that is described by using a family of variables ("observables" of the system). The book departs from the principle that "dynamics is first" and then tries to answer in what sense the sole dynamics determines the geometrical structures that have proved so useful to describe the dynamics in so many important instances. In this vein it is shown that most of the geometrical structures that are used in the standard presentations of classical dynamics (Jacobi, Poisson, symplectic, Hamiltonian, Lagrangian) are determined, though in general not uniquely, by the dynamics alone. The same program is accomplished for the geometrical structures relevant to describe quantum dynamics. Finally, it is shown that further properties that allow the explicit description of the dynamics of certain dynamical systems, like integrability and super integrability, are deeply related to the previous development and will be covered in the last part of the book. The mathematical framework used to present the previous program is kept to an elementary level throughout the text, indicating where more advanced notions will be needed to proceed further. A family of relevant examples is discussed at length and the necessary ideas from geometry are elaborated along the text. However no effort is made to present an "all-inclusive" introduction to differential geometry as many other books already exist on the market doing exactly that. However, the development of the previous program, considered as the posing and solution of a generalized inverse problem for geometry, leads to new ways of thinking and relating some of the most conspicuous geometrical structures appearing in Mathematical and Theoretical Physics.

⬇ **Download** Geometry from Dynamics, Classical and Quantum ...pdf

📄 **Read Online** Geometry from Dynamics, Classical and Quantum ...pdf

Download and Read Free Online Geometry from Dynamics, Classical and Quantum José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi

---

From reader reviews:

Reginald McDade:

The book Geometry from Dynamics, Classical and Quantum can give more knowledge and also the precise product information about everything you want. Exactly why must we leave a good thing like a book Geometry from Dynamics, Classical and Quantum? Several of you have a different opinion about e-book. But one aim that will book can give many data for us. It is absolutely suitable. Right now, try to closer with your book. Knowledge or data that you take for that, it is possible to give for each other; you can share all of these. Book Geometry from Dynamics, Classical and Quantum has simple shape nevertheless, you know: it has great and big function for you. You can appear the enormous world by open and read a guide. So it is very wonderful.

Elisa Hall:

Reading a book tends to be new life style within this era globalization. With studying you can get a lot of information that could give you benefit in your life. With book everyone in this world can easily share their idea. Books can also inspire a lot of people. Plenty of author can inspire all their reader with their story as well as their experience. Not only the story that share in the ebooks. But also they write about the ability about something that you need case in point. How to get the good score toefl, or how to teach your kids, there are many kinds of book which exist now. The authors on earth always try to improve their skill in writing, they also doing some exploration before they write to the book. One of them is this Geometry from Dynamics, Classical and Quantum.

Samantha Graham:

This Geometry from Dynamics, Classical and Quantum is great guide for you because the content that is full of information for you who else always deal with world and still have to make decision every minute. This kind of book reveal it info accurately using great arrange word or we can point out no rambling sentences within it. So if you are read this hurriedly you can have whole data in it. Doesn't mean it only provides straight forward sentences but difficult core information with splendid delivering sentences. Having Geometry from Dynamics, Classical and Quantum in your hand like finding the world in your arm, info in it is not ridiculous one. We can say that no book that offer you world with ten or fifteen minute right but this guide already do that. So , this is certainly good reading book. Hey Mr. and Mrs. hectic do you still doubt which?

Wendy Fuller:

You can spend your free time you just read this book this book. This Geometry from Dynamics, Classical and Quantum is simple to develop you can read it in the park, in the beach, train and also soon. If you did not get much space to bring typically the printed book, you can buy the actual e-book. It is make you simpler to read it. You can save the book in your smart phone. Consequently there are a lot of benefits that you will get

when you buy this book.

Download and Read Online Geometry from Dynamics, Classical and Quantum José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi #LABK1DYM6QW

Read Geometry from Dynamics, Classical and Quantum by José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi for online ebook

Geometry from Dynamics, Classical and Quantum by José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Geometry from Dynamics, Classical and Quantum by José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi books to read online.

Online Geometry from Dynamics, Classical and Quantum by José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi ebook PDF download

Geometry from Dynamics, Classical and Quantum by José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi Doc

Geometry from Dynamics, Classical and Quantum by José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi Mobipocket

Geometry from Dynamics, Classical and Quantum by José F. Carinena, Alberto Ibort, Giuseppe Marmo, Giuseppe Morandi EPub