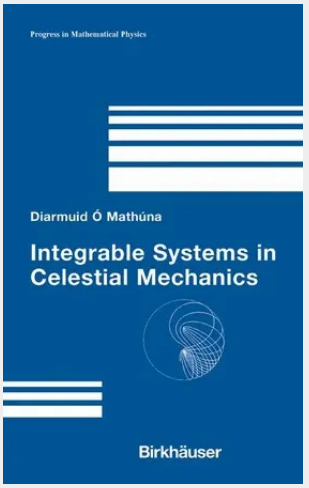
Ó'Mathúna

Integrable Systems in Celestial Mechanics



Direct involvement with the subject area of the present work dates from my years with NASA at its Electronics Research Center (ERC) in Cambridge, M- sachusetts, in the 1960s. However, my approach to the problems of mathem- ical physics had been shaped earlier in my time as a graduate student in the Mathematics Department at MIT. The passage of time tends merely to further enhance my appreciation of that graduate study program, where I had the b- e?t of the intensive courses from Norman Levinson, C.-C. Lin, Jurgen ¨ Moser, and Eric Reissner. In the case of Reissner, my years as research assistant were a formative apprenticeship — one could say on the “shop-?oor”. The stimulus to organize my convictions in book form came from my friends at Birkh¨ auser Boston, and I wish to thank Ann Kostant for providing me with the opportunity and support in producing it; a special thanks goes to Edwin Beschler, formerly of Birkh¨ auser, for his consistent encouragement over the years. In the course of writing, I had the good-humored support and invaluable help from my one-time teacher and long-time friend, Vincent Hart. He read each chapter as it was written and his sharp eye picked up my many slips and errors. More signi?cantly, his persistent questioning on the original form of Chapter 3 forced me to address all parameter ranges and provide solution forms to cover all possibilities for the case of negative energy.

This work presents a unified treatment of three important integrable problems relevant to both Celestial and Quantum Mechanics. Under discussion are the Kepler (two-body) problem and the Euler (two-fixed center) problem, and the Vinti (Earth-satellite) problems. The analysis of these problems is shown to follow a definite shared pattern yielding exact forms for the solutions and the work highlights shared features in the unified treatment of the three problems.

106,99 €
99,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9780817640965
Medium: Buch
ISBN: 978-0-8176-4096-5
Verlag: Birkhäuser
Erscheinungstermin: 12.08.2008
Sprache(n): Englisch
Auflage: 1. Auflage 2008
Serie: Progress in Mathematical Physics
Produktform: Gebunden
Gewicht: 489 g
Seiten: 234
Format (B x H): 160 x 241 mm

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)