



Softcover reprint of the original 1st ed.  
1975, VIII, 376 p.

### Printed book

Softcover

129,99 € | £114.00 | \$159.00

<sup>[1]</sup>139,09 € (D) | 142,99 € (A) | CHF  
143,00

### eBook

107,09 € | £91.00 | \$119.00

<sup>[2]</sup>107,09 € (D) | 107,09 € (A) | CHF  
122,50

Available from your library or  
[springer.com/shop](http://springer.com/shop)

### MyCopy <sup>[3]</sup>

Printed eBook for just

€ | \$ 24.99

[springer.com/mycopy](http://springer.com/mycopy)

G.E.O. Giacaglia, A.C. Stickland (Eds.)

# Satellite Dynamics

Symposium São Paulo/Brazil June 19–21, 1974

Series: IUTAM Symposia

This volume includes original papers presented at the 4th Symposium on Satellite Dynamics held at the XII Annual Plenary Meeting of COSPAR. At a time where it might be thought that very few problems were left unsolved in celestial mechanics, we discover that new and more challenging questions must be answered. The precision of observations reaches the centimeter level and physical phenomena which had been disregarded come into play. We need a better treatment of atmospheric drag, radiation forces, and a better knowledge of the earth's gravitational field. Time has to be precisely defined as well as reference systems, including improved values for precision and nutation. The question of resonances introduced by nonzonal harmonics was to be carefully investigated. Numerical integration techniques must be optimized and means of controlling their errors improved. Analytical techniques must be made appropriate for computer processing. Presently existing methods of solutions of differential equations of interest to celestial mechanics are getting cumbersome as all these new facts come to light. It is clear that entirely new and more effective methods are necessary. These methods must, among other requirements, take into account the essential nonlinear character of the equations. Finally, the motion about the center of mass of a satellite is becoming an essential need for the thorough understanding and description of the orbital motion.

Order online at [springer.com](http://springer.com) / or for the Americas call (toll free) 1-800-SPRINGER / or email us at: [customerservice@springernature.com](mailto:customerservice@springernature.com). / For outside the Americas call +49 (0) 6221-345-4301 / or email us at: [customerservice@springernature.com](mailto:customerservice@springernature.com).

The first € price and the £ and \$ price are net prices, subject to local VAT. Prices indicated with [1] include VAT for books; the €(D) includes 7% for Germany, the €(A) includes 10% for Austria. Prices indicated with [2] include VAT for electronic products; 19% for Germany, 20% for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted. [3] No discount for MyCopy.

