

Erik P. van den Ban and Johan A.C. Kolk, Editors

Geometric Aspects of Analysis and Mechanics

In Honor of the 65th Birthday of Hans Duistermaat

Hans Duistermaat, an influential geometer-analyst, made substantial contributions to the theory of ordinary and partial differential equations, symplectic, differential, and algebraic geometry, minimal surfaces, semisimple Lie groups, mechanics, mathematical physics, and related fields. Written in his honor, the invited and refereed articles in this volume contain important new results as well as surveys in some of these areas, clearly demonstrating the impact of Duistermaat's research and, in addition, exhibiting interrelationships among many of the topics.

The well-known contributors to this text cover a wide range of topics: semi-classical inverse problems; eigenvalue distributions; symplectic inverse spectral theory for pseudodifferential operators; solvability for systems of pseudodifferential operators; the Darboux process and a noncommutative bispectral problem; a proof of the Atiyah–Weinstein conjecture on the index of Fourier integral operators and the relative index of CR structures; relations between index theory and localization formulas of Duistermaat–Heckman; non-Abelian localization; symplectic implosion and nonreductive quotients; conjugation spaces; and Hamiltonian geometry. Also included are several articles in memory of Hans Duistermaat.

Contributors:

J.-M. Bismut	J.-C. Hausmann	E. Meinrenken
L. Boutet de Monvel	G. Heckman	P.-E. Paradan
Y. Colin de Verdière	T. Holm	J. Sjöstrand
R.H. Cushman	L.C. Jeffrey	X. Tang
N. Dencker	F. Kirwan	S. Vũ Ngọc
F.A. Grünbaum	E. Leichtnam	A. Weinstein
V.W. Guillemin	B. McLellan	

ISBN 978-0-8176-8243-9



9 780817 682439

► birkhauser-science.com

PM
292

Erik P. van den Ban and Johan A.C. Kolk, Editors



Geometric Aspects of
Analysis and Mechanics

Progress in Mathematics
292

Erik P. van den Ban
Johan A.C. Kolk
Editors

Geometric Aspects of Analysis and Mechanics

In Honor of the 65th Birthday
of Hans Duistermaat

 Birkhäuser