A 20414 D

Communications in
Mathematical Physics

Volume 154 Number 2 1993

T. Nakashima — Crystal Base and a Generalization of the Littlewood–Richardson Rule for the Classical Lie Algebras 215

Y. Guo — Global Weak Solutions of the Vlasov–Maxwell System with Boundary Conditions 245

M. R. Adams, M. J. Bergvelt — The Krichever Map, Vector Bundles Over Algebraic Curves, and Heisenberg Algebras 265

B. McInnes — The Quotient Construction for a Class of Compact Einstein Manifolds 307

A. Uribe, S. Zelditch — Spectral Statistics on Zoll Surfaces 313

T. C. Dorlas — Orthogonality and Completeness of the Bethe Ansatz Eigenstates of the Nonlinear Schroedinger Model 347

J. A. Smoller, A. G. Wasserman, S.-T. Yau — Existence of Black Hole Solutions for the Einstein-Yang/Mills Equations 377

J. Mickelsson — Vacuum Expectation Values of Products of Chiral Currents in 3 + 1 Dimensions 403

S. L. Shatashvili — Correlation Functions in the Itzykson-Zuber Model 421

Indexed in *Current Contents*
Evaluated and abstracted for *PHYS* on *STN*

CMPHAY 154 (2) 215–432
June (I) 1993
Printed on acid-free paper

Springer International

Acta Informatica

Archive for
Mathematical Logic

Communications in
Mathematical Physics

Economic Theory

Inventiones mathematicae

Journal of
Mathematical Biology

Mathematische Annalen

Mathematische Zeitschrift

Numerische Mathematik

Probability Theory
and Related Fields

Theoretica Chimica Acta

Acta Informatica

Archive for
Mathematical Logic

Communications in
Mathematical Physics

Economic Theory

Inventiones mathematicae

Journal of
Mathematical Biology

Mathematische Annalen

Mathematische Zeitschrift

TEX users do it with Springer macros

If you are used to preparing your manuscripts with plain-TEX, you may be interested to hear that we have created a macro package for the layout of the journals listed here.

Articles may now be submitted as plain-TEX files using our macros. They will be phototypeset directly from your TEX-file, thus cutting down proofreading and publishing times.

The macros plus AMS fonts are available on 3.5" DOS diskettes and are free of charge.

Please order your copy by writing to

Springer-Verlag
Journal Production
Post Box 10 52 80
W-6900 Heidelberg, FRG

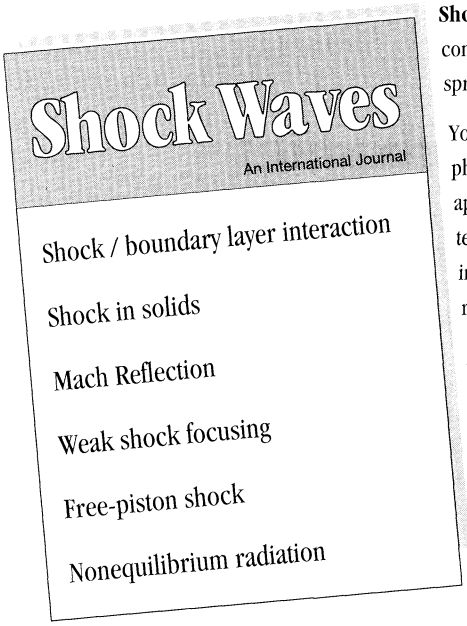
e-mail: Springer @dhdspri6.bitnet

An e-mail to svserv@dhdspri6 containing *help* will provide you with info on our **mailserver**.

Please do not forget to indicate the journal for which you are intending to submit your manuscript.

LATEX stylefiles are in preparation.

Up-to-date results focused in one journal ...



Shock Waves - An International Journal collates reviews, contributed papers, and short notes from the field, at present spread throughout the literature, in one focused journal.

You will find essential and current results on shock-wave phenomena from both the fundamental research and the applications points of view, the most recent experimental techniques, and a comprehensive overview of the developments in the field. Each issue is rounded off by news and meeting reports of interest to the shock-wave community.

Essential to all physicists, chemists, and engineers working in
- aerodynamics and gas dynamics
- physical chemistry
- shock waves in condensed matter
- detonation, explosion and reactive flows
- computational fluid dynamics
- hypervelocity impact and dynamic high-pressure research
- plasma physics
- shock wave therapy

PURDUE UNIVERSITY
JUL 19 1993
LIBRARY

Editor-in-Chief: I.I. Glass, Ontario, Canada

Managing Editors: R A. Graham, Albuquerque, USA

H Grönig, Aachen, FRG, K Takayama, Sendai, Japan

In cooperation with an international Editorial Board

Springer

Prices are subject to change without notice All prices for books and journals include 7% VAT In EC countries the local VAT is effective

d&p 809 MNTZ/E/1

ORDER FORM

☐ Please bill me

☐ Please charge my credit card

☐ Eurocard/Access/MasterCard

☐ American Express

☐ Visa/Barclaycard/BankAmericard

☐ Diners Club

Number

| | | | | | | | | | | | | | | | | |

Valid until:_____

Please hand this order form to your bookseller
or return to:
Springer-Verlag, Marketing Communication,
Tiergartenstr. 17, W-6900 Heidelberg, F.R.G.

Shock Waves ISSN 0938-1287 Title No. 193

☐ Please enter my subscription beginning with 1993, Vol 3 (4 issues) DM 298,- (suggested list price) plus carriage charges: FRG DM 7,49 other countries DM 14,-

☐ Please send me a free sample copy

Name/Address:

Date. Signature:

Please note. I realize that I may cancel this order within ten days by writing to the address on the order form, whereby the postmark date will suffice as proof that the cancellation was made within the deadline I confirm my understanding of this by my second signature

Second Signature

Statistical Physics

I

M. Toda, R. Kubo, N. Saito

Equilibrium Statistical Mechanics

2nd ed. 1992. XVI, 252 pp. 90 figs. (Springer Series in Solid-State Sciences, Vol. 30)
Softcover DM 62,– ISBN 3-540-53662-0

The fundamentals of equilibrium statistical mechanics are discussed in this text, which focuses on basic physical aspects. No previous knowledge of thermodynamics or the molecular theory of gases is assumed. Illustrative examples based on simple materials and photon systems elucidate the central ideas and methods.
This book not only offers an elementary introduction to statistical physics but also sets the stage for likely future developments. A fluent exposition of the general principles is given in the first half, while the second deals with two of the most fascinating subjects in this area: phase transitions and ergodic problems.

II

R. Kubo, M. Toda, N. Hashitsume

Nonequilibrium Statistical Mechanics

2nd ed. 1991. XVI, 279 pp. 28 figs. (Springer Series in Solid-State Sciences, Vol. 31)
Softcover DM 62,– ISBN 3-540-53833-X

This text, the second volume of a two-volume set, treats statistical theories of non-equilibrium states from the viewpoint of the fluctuation-dissipation theorem, mainly in the framework of linear response theory. It begins by introducing the fundamental concepts and methods of stochastic theories. The classical theory of Brownian motion is generalized into a standard theory for fluctuation , relaxation, and response. The problem of coarse graining is treated on the basis of the stochastic Liouville equation and the damping theory formalism uses the projection operator method. One chapter is devoted to phenomenological treatments of relaxation and another to linear response theory. The final chapter is an introduction to the fieldtheoretic Green's function method.

Springer

Prices are subject to change without notice All prices for books and journals include 7 % VAT In EC countries the local VAT is effective

tm 772 MNT/E/1

Springer-Verlag ☐ Heidelberger Platz 3, W-1000 Berlin 33, F R Germany ☐ 175 Fifth Ave , New York, NY 10010, USA ☐ 8 Alexandra Rd , London SW19 7JZ, England ☐ 26, rue des Carmes, F-75005 Paris, France ☐ 37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan ☐ Room 701, Mirror Tower, 61 Mody Road, Tsimshatsui, Kowloon, Hong Kong ☐ Avinguda Diagonal, 468-4 ^{0} C, E-08006 Barcelona, Spain ☐ Wesselényi u 28, H-1075 Budapest, Hungary