

Communications in
**Mathematical
Physics**

Volume 69 Number 2 1979

- K. Yajima The Quasi-Classical Limit of Quantum Scattering Theory 101
- B. Gaveau Fonctions Propres et Non-Existence Absolue d'Etats Liés dans Certains Systèmes Quantiques 131
- D. Bessis A New Method in the Combinatorics of the Topological Expansion 147
- A. B. Zamolodchikov Z_4 -Symmetric Factorized S -Matrix in Two Space-Time Dimensions 165
- C. H. Taubes $O(2)$ Symmetric Connections in an $SU(2)$ Yang-Mills Theory 179

Indexed in Current Contents



Springer-Verlag
Berlin Heidelberg New York

Commun. Math. Phys.
ISSN 0010-3616 CMPHAY 69 (2) 101 - 194 (1979)

October (II) 1979

Communications in Mathematical Physics

Copyright

It is a fundamental condition that submitted manuscripts have not been published and will not be simultaneously submitted or published elsewhere. By submitting a manuscript, the authors agree that the copyright for their article is transferred to the publisher if and when the article is accepted for publication. The copyright covers the exclusive rights to reproduce and distribute the article, including reprints, photographic reproductions, microform or any other reproductions of similar nature, and translations.

Photographic reproduction, microform, or any other reproduction of text, figures, or tables from this journal is prohibited without permission obtained from the publisher.

Special Regulations for the USA. The Article Fee Code on the first page of an article in this journal indicates the copyright owner's consent that in the USA copies may be made for personal or internal use, provided the stated fee for copying beyond that permitted by Section 107 or 108 of the United States Copyright Law is paid through the Copyright Clearance Center, Inc., P. O. Box 8891, Boston, MA 02114.

If a code does not appear, copies of the article may be made without charge, provided permission is obtained from the publisher.

The copyright owner's consent does not extend to copying for general distribution, for promotion, for creating new works, or for resale. Specific written permission must be obtained from the publisher for such copying.

Authors should mark manuscripts according to the "Instructions to Authors" and may send manuscripts to:

<i>Prof. H. Araki</i> , Research Institute for Mathematical Sciences, Kyoto University, Kyoto, 606, Japan	<i>Mathematical methods with direct relevance to physics</i>
<i>Prof. E. Brézin</i> , Service de Physique Théorique, CEN Saclay, B. P. 2, F-91190 Gif-sur-Yvette, France	<i>Quantum fields and statistical mechanics</i>
<i>Prof. R. Geroch</i> , E. Fermi Institute, University of Chicago, 933 East 56 Street, Chicago, IL 60637, USA	<i>General relativity, cosmology</i>
<i>Prof. J. Ginibre</i> , Laboratoire de Physique Théorique et Hautes Energies, Université de Paris IX, Batiment 211, F-91405 Orsay, France	<i>Quantum mechanics</i>
<i>Prof. J. Glimm</i> , The Rockefeller University, 1230 York Avenue, New York, NY 10021, USA	<i>Fluid mechanics</i>
<i>Prof. R. Haag</i> , II. Institut für Theoretische Physik, Luruper Chaussee 149, D-2000 Hamburg 50, Federal Republic of Germany	<i>Conceptual structure</i>
<i>Prof. A. Jaffe</i> , Lyman Laboratory of Physics, Harvard University, Cambridge, MA 02138, USA	<i>Chief Editor</i>
<i>Prof. J. L. Lebowitz</i> , Department of Mathematics, Rutgers University, New Brunswick, NJ 08903, USA	<i>Nonequilibrium statistical mechanics</i>
<i>Prof. E. Lieb</i> , Physics Department, Princeton University, P. O. Box 708, Princeton, NJ 08540, USA	<i>Equilibrium statistical mechanics</i>
<i>Prof. J. Moser</i> , New York University, Courant Institute of Mathematical Sciences, 251 Mercer Street, New York, NY 10012, USA	<i>Classical dynamical systems</i>
<i>Prof. K. Osterwalder</i> , E. T. H. Zentrum, CH-8092 Zürich, Switzerland	<i>Constructive quantum field theory and general theory of quantized fields</i>
<i>Prof. D. Ruelle</i> , IHES, F - 91440 Bures-sur-Yvette, France	<i>Dissipative dynamical systems</i>
<i>Prof. B. Simon</i> , Jadwin Physics Laboratory, Princeton University, Princeton, NJ 08540, USA	<i>Scattering theory and atomic physics</i>
<i>Prof. Ya. G. Sinai</i> , L. D. Landau Institute for Theoretical Physics, Academy of Sciences, Vorobyevskoe Shosse, 2, 117334 Moscow, USSR	<i>Statistical physics and dynamical systems</i>
<i>Prof. R. Stora</i> , from Sept. 1, 78 to Aug. 31, 80. CERN, Theory Division, CH-1211 Geneva 23, Switzerland	<i>Lagrangian quantum field theory</i>

100 offprints of each article will be supplied to the author free-of-charge and additional copies may be obtained at cost price if ordered before the issue goes to press.

Subscription Information

Volumes 64-70 (3 issues each) will appear in 1979. The price of each volume is DM 158.— or \$ 79.00. Information about obtaining back volumes and microform editions is available upon request.

North America. Subscription rate: \$ 576.50, including postage and handling. Subscriptions are entered with prepayment only. Orders should be addressed to: Springer-Verlag New York Inc., Service Center Secaucus, 44 Hariz Way, Secaucus, NJ 07094, USA, Telephone (201) 348-4033, Telex 0023 125994.

All Other Countries. Subscription rate: DM 1106,—, plus postage and handling. Orders can either be placed with your bookdealer or sent directly to: Springer-Verlag, Heidelberg Platz 3, D-1000 Berlin 33.

Springer-Verlag
Journal Production Dept. I
Postfach 105280
D-6900 Heidelberg 1
Telephone (06221) 487328
Telex 04-61690

Springer-Verlag
Heidelberg Platz 3
D-1000 Berlin 33
Telephone (030) 822001
Telex 01-83319

Springer-Verlag New York Inc.
175 Fifth Avenue
New York, NY 10010, USA
Telephone (212) 477-8200
Telex 0023232235