

INTERNATIONAL ASSOCIATION OF MATHEMATICAL PHYSICS

President:

Prof. K. Osterwalder
Mathematik Departement
ETH-Zentrum
CH-8092 Zürich, SWITZERLAND



Secretary:

Prof. Ph. Blanchard
Fakultät für Physik
Universität Bielefeld
D-4800 Bielefeld 1, BRD

Vice President:

Prof. S.P. Novikov
Steklov Institute of Math.
Vavilova St. 42
Moscow, V-333, USSR

Treasurer:

Prof. J.T. Lewis
Dublin Institute for
Advanced Studies
Dublin 4, IRELAND

IAMP NEWS BULLETIN

October 1986

PROGRESS REPORT

1. The VIIIth International Congress on Mathematical Physics took place at the University of Marseille, Luminy (France), July 16 – July 24, 1986. It was well attended (~ 500 participants) and successful and IAMP is grateful to the local organizers, M. Mebkhout, Ph. Combes and J.M. Sourrieau for their considerable work and hospitality.
2. On Wednesday, July 23, during the Marseille conference the IAMP General Assembly took place.
3. The IAMP Executive Committee, at its meetings on July 21 and 24, 1986 accepted the Financial Report for 1985 prepared by J. Lewis, Treasurer. It appears below. The Committee also decided to support the IAMP congress, presently held at Marseille, with \$2,000.—.
4. Furthermore, the Executive Committee took the following decisions:
 - a) The next IAMP congress will be held in Swansea, Wales (England) in 1988. The local organizer will be A. Truman. Hereafter, there will be a 3-year interval again.
 - b) It has been suggested that expository articles should be published in the IAMP Bulletin. The Executive Committee has voted against this proposal for reasons that refereeing such articles would be complicated and that they would get lost. People interested in such matters should contact one of the official journals.
 - c) There are several places that would be natural candidates for IAMP conferences who under the present circumstances will find it very hard to make an acceptable proposal, because of monetary restrictions in their country. There will probably soon come the time when no proposal will be at hand that can offer to cover all the costs of an IAMP congress. The IAMP Executive Committee has therefore decided, that in such a case IAMP should be ready to give a larger than usual contribution to the congress, e.g. to pay for part of the travel expenses of the speakers.
 - d) In 1987 elections for a new Executive Committee will be held. For individual recommendations of candidates the instructions given in §14 of the By-Laws have to be followed:

- §14 - An Ordinary Member shall be included in the list of individual recommendations, if the Secretary's office receives before the thirtieth day of April of the election year an individual recommendation, giving the name and address of the recommendee and accompanied by signatures of ten further Ordinary Members of the Association and a letter of consent signed by the recommendee.-
- e) As a general rule, IAMP will offer to future conferences other than the IAMP congress moral support only. If justified, a financial contribution will still be possible, however. Applications for any kind of support should be submitted to the President of IAMP as early as possible. An application form is included in this bulletin.
 - f) The IAMP will publish in its bulletin a list of open jobs in mathematical physics. Please send your advertisements to the President.

K. Osterwalder

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Financial Report 1985

1. Geneva Account (SFr.)

Carried Forward from 1984		13,912.37	
<u>Income:</u> Dues received 1985	1,339.47		
Interest	43.68		
	<u>1,383.15</u>	1,383.15	
		15,295.52	
<u>Expenditure:</u> Bank Charges	12.00		
Conference Support (Groningen)	1,091.50		
Transfer to IAMP (Bielefeld)	<u>12,661.62</u>		
	13,765.12	13,765.12	
Balance at 1-1-'86		SFr. 1,530.40	

2. Princeton Account (US \$)

Carried Forward from 1984		9,055.88	
<u>Income:</u> Dues received 1985	930.00		
Interest:			
Summit Trust Bank	112.55		
Merrill Lynch Trust	<u>520.78</u>		
	1,563.33	1,563.33	
		10,619.21	

Expenditure:

Postage	445.55		
Printing (Bulletin)	672.89		
Conference Support (Como)	<u>500.00</u>		
	1,618.44	1,618.44	
Balance at 1-1-'86		US \$ 9,000.77	

3. Bielefeld Account (DM)

Carried Forward from 1984		10,954.82	
Transfer from CMP to IAMP		<u>1,820.85</u>	
<u>Income:</u> Dues received 1985	1,819.18		12,775.67
Interest	123.04		
Transfer from IAMP (Geneva)	<u>14,895.62</u>		
	16,847.84	16,847.84	
		<u>29,623.51</u>	
<u>Expenditure:</u> Bank Charges	56.56		
	<u>56.56</u>	56.56	
Balance at 1-1-'86		DM	<u>29,566.95</u>

4. Tokyo Account (¥)

Carried Forward from 1984		408,199.00	
<u>Income:</u> Dues received 1985	5,000.00		
Interest	<u>4,801.00</u>		
	9,801.00	9,801.00	
		<u>418,000.00</u>	
<u>Expenditure:</u> Postage & Printing (Bulletins)	38,040.00		
	<u>38,040.00</u>	38,040.00	
Balance at 1-1-'86		¥	379,960.00

5. Warsaw Account (Zł.)

Carried Forward from 1984		29,811.00	
Dues received 1985/Expenditure		<u>0.00</u>	
Balance at 1-1-'86		Zł.	<u>29,811.00</u>

J.T. Lewis
Treasurer
IAMP
4 July, 1986.

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INTERNATIONAL CONFERENCES

APPLICATION FORM FOR SUPPORT

1. Title of Conference
.....
Location
Organizer : Name
Address
.....
.....
.....
Type of Conference: General.....
Topical.....
Special.....

2. Scientific Value
.....

Date & Place of last
Conference on the subject

Name of some distinguished
invited speakers who have.....
accepted

3. International Character

Is there an international committee advising on the scientific program?
Name of two members

Will participation be sufficiently international (not less than 30%, preferably more than 50%)?

Will the conference be open (must admit physicists of any IAMP member country)?

If closed, what is the principal reason for closing this conference?

Does host country guarantee no visa refusals on grounds of nationality or citizenship?

4. Organization

Are there any conflicts of dates with other conferences on similar subjects?

Total Budget: \$.....

Is there a registration fee? Amount \$.....

Is an IAMP grant requested? Amount \$.....

Reasons

Date Name

6

SPRINGER-VERLAG Berlin Heidelberg New York London Paris Tokyo

TEXTS AND MONOGRAPHS IN PHYSICS

A. Perelomov, Moscow, USSR

Generalized Coherent States and Their Applications

1986. 320 pp. Hard cover DM 123.-. ISBN 3-540-15912-6

H.L.Cycon, R.G. Froese, W. Kirsch, B. Simon

Schrödinger Operators, with Application to Quantum Mechanics and Global Geometry

1987. 2 figs. Approx. 400 pages. Hard cover approx. DM 130.-. ISBN 3-540-16759-5

1987. 2 figs. Approx. 400 pages. Soft cover approx. DM 60.-. ISBN 3-540-16758-7

To appear: February 1987

TRIESTE NOTES IN PHYSICS

Ivan T. Todorov

Conformal Description of Spinning Particles

1986. 74 pp. Soft cover. DM 35.-. ISBN 3-540-16890-7

Mathematics Institute
University of Warwick
Coventry CV4 7AL, England.

SYMPOSIUM ON OPERATOR ALGEBRAS AND APPLICATIONS

1st October 1986 to 31st August 1987.

A symposium will be held during 1986-7 at the above place, with support from the Science and Engineering Research Council, on Operator Algebras and applications and connections with topology and geometry (K-theory, index theory, foliations, differentiable structures, braids, links) with mathematical physics (statistical mechanics and quantum field theory) and topological dynamics.

Expected participants include:

H. Araki, R.J. Archbold, M.F. Atiyah, C.J.K. Batty, J.V. Bellissard, O. Bratteli, A.L. Carey, E. Christensen, A. Connes, J. Cuntz, E.G. Effros, G.A. Elliott, U. Haagerup, D.E. Handelman, R. Herman, C.A. Hurst, V.P.R. Jones, B.E. Johnson, R.V. Kadison, G.G. Kasparov, J. Kraus, W. Krieger, E.C. Lance, J.T. Lewis, G. Luke, R. Longo, G. Pedersen, M. Pimsner, R.J. Plymen, S. Popa, A.N. Pressley, M.A. Rieffel, D.W. Robinson, J. Roe, S. Sakai, G. Segal, G. Sewell, A. Sinclair, G. Skandalis, M. Spera, E. Størmer, S. Stratila, R.F. Streater, M. Takesaki, J. Tomiyama, A. Verbeure, D. Voiculescu, A. Wassermann, S. Wassermann, E.J. Woods, J.D.M. Wright, F.J. Yeadon.

The following special events are planned to be held at Warwick during the year :

Informal Opening Workshop 20-25 October 1986.

Workshop on Operator Algebras 23-28 March 1987.

*Workshop on Cyclic Homology and K-theory
is tentatively planned for the beginning of April 1987.*

Details of these events and other special happenings will be advertised in due course. Unfortunately, no student accommodation will be available in October, but it is available for the Workshop in March, and the tentative Workshop in April.

Further information may be obtained from :

D.E. Evans,
Mathematics Institute,
University of Warwick,
Coventry CV4 7AL,
England.

Warwick Symposium on Operator Algebras & Applications 1986-7

	O	N	D	J	F	M	A	M	J	J	A
	C	O	E	A	E	A	P	A	N	L	U
	T	V	C	N	B	R	R	Y	E	Y	G
H. Araki (RIMS, Kyoto)											←→
J.V. Bellissard (Marseilles)										←→	
O. Bratteli (Trondheim)											←→
L.G. Brown (Purdue)											
A.L. Carey (Adelaide)											←→
E. Christensen (Copenhagen)											←→
A. Connes (IHES, Paris)											
J. Cuntz (Marseilles)											2 months sometime
E.G. Effros (UCLA)											
G.A. Elliott (Copenhagen)											←→
U. Haagerup (Odense)											←→
D.E. Handelman (Ottawa)											←→
R. Herman (Penn. State)											←→
N. Higson (Pennsylvania)											←→
N.M. Hugenholtz (Groningen)											←→
C.A. Hurst (Adelaide)											←→
V.F.R. Jones (Berkeley)											2 months sometime
R.V. Kadison (Pennsylvania)											←→
G.G. Kasparov (Chernoglovka)											1 month sometime
J. Kraus (SUNY, Buffalo)											←→
W. Krieger (Heidelberg)											←→
J.T. Lewis (IAS, Dublin)											4 months sometime
R. Longo (Rome)											←→
A. Loring (Berkeley)											←→
G.K. Pedersen (Copenhagen)											1 month sometime or maybe longer
M. Pimsner (INCREST, Bucharest)											3 months sometime
S. Popa (INCREST, Bucharest)											3 months sometime
M.A. Rieffel (Berkeley)											←→
D.W. Robinson (Canberra)											2-3 months sometime
S. Sakai (Nihon, Tokyo)											←→
G. Skandalis (Paris)											1-2 months sometime
M. Spera (Rome)											←→
E. Størmer (Oslo)											1 month sometime
S. Stratila (INCREST, Bucharest)											3 months sometime
M. Takesaki (UCLA)											←→
J. Tomiyama (Niigata)											←→
A. Verbeure (Leuven)											←→
D. Voiculescu (INCREST, Bucharest)											3 months sometime
E.J. Woods (Queen's, Kingston)											←→

11th June 1986.

**Workshop on
LORENTZ TRANSFORMATIONS AND SPACETIME GEOMETRY**

*** All-weather Physics ***

College Park, Maryland (near Washington, DC)

27 - 30 May 1987

The purpose of this Workshop is to recognize the researchers on spacetime symmetries of elementary particles and their interactions, in preparation for the International Symposium on Spacetime Symmetries (College Park, Maryland, 24-28 May 1988) in commemoration of the 50th anniversary of Eugene P. Wigner's fundamental paper on the Inhomogeneous Lorentz Group completed in 1937 and published in 1939.

The topics will include Representations of the Poincaré Group, Lorentz-deformed Hadrons and Nuclei, Wigner Rotations, Group Contractions and Ultrarelativistic or Nonrelativistic Limit, Dirac's Constraint Mechanics, Charged Particles in Electromagnetic Fields, Free Electron Lasers, Relativistic Thermodynamics and Statistical Mechanics, Relativistic Phase Space, Canonical and Geometric Quantization, Higher Dimensional Theories, Quantum Field Theory in Curved Space, Quantum Gravity, and the Early Universe.

The Local Organizing Committee consists of

Y. S. Kim, Dept. of Physics, Univ. of Maryland, College Park, Maryland
20742, U.S.A. -- Tel.(301)454-3542,

W. W. Zachary, Naval Research Laboratory (Code 4603-S), Washington, DC
20375, U.S.A. -- Tel.(202)767-2572.

If you wish to present a paper at the Workshop, type your abstract using the following format, and attach it to your registration form.

Relativistic Invariance and Quantum Phenomena. EUGENE P. WIGNER,
Princeton Univ. The principal theme of this discourse is -----

----- single spaced, 15cm wide, 12cm high -----

The Local Organizing Committee will review your abstract in March of 1987, and place your paper in an appropriate session.

College Park is within the Greater Washington area. Since this area is a very attractive spot for tourists during the spring months, it is essential that you make your hotel reservation before the spring rush. Please make your own arrangement using the enclosed form.

PREPRINTS (RECEIVED IN MURRAY HILL)

Tom Kennedy and Elliott H. Lieb, Departments of Mathematics and Physics,
Princeton University, Princeton, NJ 08544
AN ITINERANT ELECTRON MODEL WITH CRYSTALLINE OR MAGNETIC LONG RANGE ORDER

A MODEL FOR CRYSTALLIZATION: A VARIATION ON THE HUBBARD MODEL

Jurg Frohlich, Theoretical Physics, ETH-Honggerberg, CH-8093 Zurich, Switzerland,
and Elliott H. Lieb and Michael Loss, Department of Physics, Princeton
University, Princeton, NJ 08544
STABILITY OF COULOMB SYSTEMS WITH MAGNETIC FIELDS: I. THE ONE-ELECTRON
ATOM

Elliott H. Lieb and Michael Loss, Department of Physics, Princeton University,
Princeton, NJ 08544
STABILITY OF COULOMB SYSTEMS WITH MAGNETIC FIELDS: II. THE MANY-ELECTRON
ATOM AND THE ONE-ELECTRON MOLECULE

Michael Loss and Horng-Tzer Yau, Department of Physics, Princeton University,
Princeton, NJ 08544
STABILITY OF COULOMB SYSTEMS WITH MAGNETIC FIELDS: III. ZERO ENERGY
BOUND STATES OF THE PAULI OPERATOR

Elliott H. Lieb, Departments of Mathematics and Physics, Princeton University,
Princeton, NJ 08544, and Walter E. Thirring, Institut fur Theoretische
Physik, University of Vienna, Boltzmanngasse 5, A-1090 Vienna, Austria
THE UNIVERSAL NATURE OF VAN DER WAALS FORCES FOR COULOMB SYSTEMS

Pierre -A. Vuillermot, Mathematics Department, The University of Texas,
Arlington, Texas, 76019
NONEXISTENCE OF SPATIALLY LOCALIZED FREE VIBRATIONS FOR A CLASS OF NON-
LINEAR WAVE EQUATIONS

Dimitris Valougeorgis, Center for Transport Theory and Mathematical Physics,
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
24061
A CONCISE SOLUTION CONCERNING SHEAR FLOW PROBLEMS IN CYLINDRICAL GEOMETRY

C. Burnap, Department of Mathematics, University of North Carolina at Charlotte,
Charlotte, NC 28223
CAUCHY PROBLEMS INVOLVING NON-SELFADJOINT OPERATORS

Philip de Smedt, Instituut voor theoretische Fysica, B-3030 Heverlee, Belgium,
and Department of Mathematics, Rutgers University, New Brunswick, NJ 08903
THE EFFECT OF REPULSIVE INTERACTIONS ON BOSE-EINSTEIN CONDENSATION

Gerald A. Goldin, Department of Mathematics, Rutgers University, New Brunswick,
NJ 08903, and Ralph Menikoff and David H. Sharp, Theoretical Division,
Los Alamos National Laboratory, Los Alamos, NM 87545
ON UNUSUAL STATISTICS AND QUANTUM POINT VORTICES

J. Glimm, Courant Mathematics and Computing Laboratory, New York University,
New York, NY 10012, and D. H. Sharp, Theoretical Division, Los Alamos
National Laboratory, Los Alamos, NM 87545

NUMERICAL ANALYSIS AND THE SCIENTIFIC METHOD

- M. A. del Olmo, M. A. Rodriguez, and P. Winternitz, Centre de recherches mathematiques, Universite de Montreal, C.P. 6128, Succ. a, Montreal, Quebec, Canada H3C 3J7
SUPERPOSITION FORMULAS FOR RECTANGULAR MATRIX RICCATI EQUATIONS
- D. W. Rand and P. Winternitz, (address above)
ODEPAINLEVE -- A MACSYMA PACKAGE FOR PAINLEVE ANALYSIS OF ORDINARY DIFFERENTIAL EQUATIONS
- D. W. Rand, (address above)
RATIONAL CANONICAL FORMS OF SQUARE MATRICES USING PASCAL
- E. Deumens, Quantum Theory Project, Departments of Chemistry and Physics, University of Florida, Gainesville, Florida 32611, and H. Warchall, Department of Mathematics, University of Rochester, Rochester, NY 14627
EXPLICIT CONSTRUCTION OF ALL SPHERICALLY SOLITARY WAVES FOR A NONLINEAR WAVE EQUATION IN MULTIPLE DIMENSIONS

PREPRINTS (RECEIVED IN MURRAY HILL)

- R. Weder, Department of Mathematics, The University of Utah, Salt Lake City, Utah 84112
THE LIMITING ABSORPTION PRINCIPLE AT THRESHOLDS
- A. L. Carey, Department of Mathematics, IAS, Australian National University, Canberra, A. C. T., Australia, K. C. Hannabuss, Balliol College, Oxford, England
TEMPERATURE STATES ON LOOP GROUPS, THETA FUNCTIONS AND THE LUTTINGER MODEL
- S. J. Summers, Department of Mathematics, University of Rochester, Rochester, NY 14627, and R. Werner, Fachbereich Physik, Universitat Osnabruck, D-4500 Osnabruck, FRG
BELL'S INEQUALITIES AND QUANTUM FIELD THEORY
- I. GENERAL SETTING
- II. BELL'S INEQUALITIES ARE MAXIMALLY VIOLATED IN THE VACUUM
- G. Battle, Department of Mathematics, Cornell University, Ithaca NY 14850, and P. Federbush, Department of Mathematics, Ann Arbor, MI 48109,
ONDELETES AND PHASE CELL CLUSTER EXPANSIONS, A VINDICATION
- D. David, D. Levi, and P. Winternitz, Centre de Recherches Mathematiques, Universite de Montreal, C.P. 6128, Succ. A, Montreal, Quebec, Canada H3C 3J7,
BACKLUND TRANSFORMATIONS AND THE INFINITE DIMENSIONAL SYMMETRY GROUP OF THE KADOMTSEV-PETVIASHVILI EQUATION
- T. Balaban, Department of Mathematics, Northeastern University, Boston MA 02115, and A. Jaffe, Harvard University, Cambridge, MA 02138
CONSTRUCTIVE GAUGE THEORY
- J. Dimock, Department of Mathematics, SUNY at Buffalo, Buffalo, NY 14214
INFRARED ASYMPTOTIC FREEDOM FOR THE PSEUDOSCALAR YUKAWA MODEL AT THE CRITICAL POINT
- M. Aizenman, Department of Mathematics, Rutgers University, New Brunswick, NJ 08903, and R. Holley, Department of Mathematics, University of Colorado, Boulder, Colorado 80309
RAPID CONVERGENCE TO EQUILIBRIUM OF STOCHASTIC ISING MODELS IN THE DOBRUSHIN SHLOSMAN REGIME
- M. Aizenman and R. Fernandez, Department of Mathematics, Rutgers University, New Brunswick, NJ 08903
ON THE CRITICAL BEHAVIOR OF THE MAGNETIZATION IN HIGH-DIMENSIONAL ISING MODELS
- M. Aizenman, Department of Mathematics, Rutgers University, New Brunswick, NJ 08903, and C. M. Newman, Department of Mathematics, University of Arizona, Tucson, Arizona 85721
DISCONTINUITY OF THE PERCOLATION DENSITY IN ONE DIMENSIONAL $1/(x-y)^2$ PERCOLATION MODELS
- J. T. Chayes, L. Chayes, J. P. Sethna, Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca, New York 14853, and D. J. Thouless, Department of Physics, University of Washington, Seattle, Washington 98195
A MEAN FIELD SPIN GLASS WITH SHORT-RANGE INTERACTIONS

- J. T. Chayes, L. Chayes, J. R. Franz, J. P. Sethna, Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca, New York 14853 , and S. A. Trugman, Department of Physics, Princeton University, Princeton, NJ 08540
ON THE DENSITY OF STATES FOR THE QUANTUM PERCOLATION PROBLEM
- J. T. Chayes and L. Chayes, Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca, New York 14853
BULK TRANSPORT PROPERTIES AND EXPONENT INEQUALITIES FOR RANDOM RESISTOR AND FLOW NETWORKS
- THE MEAN FIELD BOUND FOR THE ORDER PARAMETER OF BERNOULLI PERCOLATION
- J. T. Chayes, L. Chayes, Laboratory of Atomic and Solid State Physics, Cornell University, Ithaca, New York 14853 , and R. Durrett, Department of Mathematics, Cornell University, Ithaca NY 14853
INHOMOGENEOUS PERCOLATION PROBLEMS AND INCIPIENT INFINITE CLUSTERS
- CRITICAL BEHAVIOR OF THE TWO-DIMENSIONAL FIRST PASSAGE TIME
- J. R. Klauder, AT&T Bell Laboratories, Murray Hill, NJ 07974
SOME RECENT RESULTS ON WAVE EQUATIONS, PATH INTEGRALS, AND SEMICLASSICAL APPROXIMATIONS
- COHERENT STATES AND THE GLOBAL, UNIFORM APPROXIMATION OF WAVE EQUATION SOLUTIONS
- GLOBAL, UNIFORM SEMICLASSICAL APPROXIMATIONS FOR QUANTUM SYSTEMS ON THE HALF LINE
- I. Daubechies, Theoretical Physics, Vrije Universiteit Brussel, Pleinlaan 2, B-1050 Brussels, Belgium, J. R. Klauder, AT&T Bell Laboratories, Murray Hil, NJ 07974, and T. Paul , Centre de Physique Theorique Section 2, CNRS, Luminy Case 907 , F-13288 Marseille Cedex, France
WIENER MEASURES FOR PATH INTEGRALS WITH AFFINE KINEMATIC VARIABLES

U.F.T. 100

100

DUBLIN INSTITUTE FOR ADVANCED STUDIES

School of Theoretical Physics, 10 Burlington Road, Dublin 4, Ireland. Telephone 680748. Telegrams: DIAS DUBLIN. Telex: 31687 DIAS EI.

DOCUMENT LIST XXVI: January - June 1986

- DIAS-STP-86-01: T. GARAVAGLIA: Finite temperature quantum electrical network theory. For NATO ASI Workshop, Como, Sept. 1985, on *The Fundamental Aspects of Quantum Mechanics*.
- 02: *J. R. McCONNELL: Proprietà dielettriche nei solidi.
- 03: J. R. McCONNELL: Correlation and nuclear magnetic relaxation times. To appear in *Physica A*.
- 04: P. A. HORVATHY: The Wu-Yang factor and the non-Abelian Aharonov-Bohm experiment.
- 05: F. W. HEHL & J. D. McCREA: Bianchi identities and the automatic conservation of energy ... To appear in *Found. Phys.*
- 06: J. L. SYNGE: The nine-point circle in the Minkowskian plane. To appear in *C.R. Math. Rep. Acad. Sci. Canada*.
- 07: J. L. SYNGE: Euclid and Minkowski juxtaposed. *C. R. Rep. Acad. Sci. Canada* 8 (1986), 171-180.
- 08: R. MUSTO, L. O'RAIFEARTAIGH, & A. WIPF: The U(1)-anomaly, the non-compact index theorem, and the (Supersymmetric) BA-Effect.
- 09: P. A. HORVATHY & J. H. RAWNSLEY: On the stability of monopoles.
- 10: *G. M. O'BRIEN & D. H. TCHRAKIAN: Localised instantons in four dimensions.
- DIAS-STP-86-11: M. van den BERG, J. T. LEWIS, & J. V. PULÉ: The large-deviation principle and some models of an interacting boson gas.
- 12: J. T. LEWIS: Why do bosons condense?
- 13: *M. van den BERG, J. T. LEWIS, & J. V. PULÉ: The existence of the pressure for a model of an interacting boson gas.
- 14: *T. GARAVAGLIA: Spontaneous symmetry breaking in the composite vector boson model.
- 15: M. van den BERG, J. T. LEWIS, & M. LUNN: On the general theory of Bose-Einstein condensation and the state of the free boson gas. To appear in *Helvetica phys. Acta*.
- 16: J. L. BIRMAN & A. I. SOLOMON: Spectrum generating algebras in condensed matter physics. Invited review, *Spectrum Generating Algebras in Physics*, Ed. A. Bohm & Y. Ne'eman, World Pr 1986/7.
- 17: A. I. SOLOMON & J. L. BIRMAN: Mechanism for generation of triplet superconductivity.
- 18: J. KATRIEL, A. I. SOLOMON, G. D'Ariano, & M. RASETTI: Multiboson Holstein-Primakoff squeezed states for SU(2) and SU(1,1).
- 19: A. I. SOLOMON & J. L. BIRMAN: Many fermion Green functions and dynamical algebra. Talk, 14th Internat. Coll. Group Theoretical Methods in Physics, Seoul, Aug. 1985.

Preprints (unless marked * - not available) or reprints will be sent out, as long as supplies are available, to requests. Apply to the Secretary.

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Preprint received in Tokyo

- T. Shigeta, Dept. Math., Tokyo Metropolitan Univ., Fukazawa,
Setagaya-ku, Tokyo 158 Japan
Linear evolution equations and a mixed problem for singular or
degenerate wave equations
- T. Ozawa, Res. Inst. Math. Sci., Kyoto Univ., Kyoto, 606 Japan
New L^p -estimates for solutions to the Schrödinger equations
and time asymptotic behavior of observables
- N. Hayashi, Dept. of Appl. Phys., Waseda Univ., Tokyo 160 Japan, and
Y. Tsutsumi, Faculty of Integrated Sciences, Hiroshima Univ.,
Hiroshima 730 Japan
Scattering theory for Hartree type equations
- T. Kawai, Dept. Phys., Osaka City Univ., Sumiyoshi-ku, Osaka
558 Japan
(3+1)-structure of space-time in Poincaré gauge theory of
gravity
- N. Hayashi, Dept. of Appl. Phys., Waseda Univ., Tokyo 160 Japan, and
Y. Tsutsumi, Faculty of Integrated Sciences, Hiroshima Univ.,
Hiroshima 730 Japan
Remarks on the scattering problem for nonlinear Schrödinger
equations
- M. Ikawa, Dept. Math., Osaka Univ., Osaka 560 Japan
Decay of solutions of the wave equation in the exterior of
several convex bodies

PREPRINTS RECEIVED IN BIELEFELD

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INTEGRABLE TWO-DIMENSIONAL GENERALIZATION OF THE SINE- AND SINH-GORDON EQUATIONS
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