



June 1982

IAMP NEWS BULLETIN

Progress Report

1. Elsevier North Holland Publishing Co. Inc. has become an associate member of IAMP.
2. Starting with this issue, the IAMP News Bulletin will be assembled in Bielefeld under the direction of L. Streit. E. Lieb is the editor. Items to be announced in the News Bulletin can still be sent to G. Anderson and D. Robinson as before, but the simplest and fastest course is to send them to Bielefeld as follows: Mrs. Rosemarie Pludra, c/o Prof. L. Streit, Fakultät fuer Physik, Universität Bielefeld, Universitätsstraße, D-4800 Bielefeld 1, Federal Republic of Germany.
3. From now on all correspondence on membership and dues matters will be handled jointly by W. Hunziker and K. Osterwalder. All communications on these matters (including application for new membership, address changes, etc.) should henceforth be sent to Prof. W. Hunziker, Theoretische Physik, E.T.H.-Hoenggerberg, CH-8093 Zuerich, Switzerland. Payment of dues (US \$ 10 or Sfr 20 or equivalent) should be made to the regional collection centers as before. Please, make sure that no currency conversion charges arise at the expense of IAMP: if necessary, please add an appropriate amount to your payment.

Elliott Lieb

Payment Procedure

It is recommended to pay 3 years dues at a time for saving of handling costs. Dues can be paid in different currencies as follows:

1. Swiss Francs.  
Send money to the following account:  
Crédit Suisse, Geneva  
No. 0251.238.577  
The amount for one year dues is 20 Swiss Francs.
2. U.S. Dollars.  
Write a check payable to IAMP and sent it to  
Mrs. Grace Anderson  
c/o Prof. A. S. Wightman  
Jadwin Hall  
Post Office Box 708  
Princeton University  
Princeton, N.J. 08544  
USA.

The amount for one year dues is \$ 10.00.  
(The account number: 17589  
Bank: Nassau Savings and Loan  
194 Nassau Street, Princeton, N.J.)

3. German Mark.  
Amount of Annual Dues = DM 24.--  
Method of Payment: Make your payment in German marks directly to the account  
No. 9400144  
Sparkasse Bielefeld  
4800 Bielefeld 1, FRG  
of the International Association for Mathematical Physics  
Important: Be sure that your payment includes the following information  
"AMP dues of (name)....., (membership no.)....., for 19...., 19...., 19..."
4. French Francs.  
This is applicable if you are staying in France or have an account in France.  
Amount of Annual Dues = 60,00 Ffr  
Account number = Paul Belgodère, compte chèques postaux  
PARIS 3819 32 Z  
(This is an account of Paul Belgodère, who uses this account also for other Societies.)  
Methods of payment: Use "chèque postal", "Chèque bancaire" or "mandat-lettre de versement" to send money to  
Monsieur Paul Belgodère  
Institut Henri Poincaré  
11 rue Pierre et Marie Curie  
75231 PARIS Cedex 05  
To show who has paid dues for what period, please fill in the form\*at the top of next sheet and send it together with your payment to Mr. Belgodère.  
Important Remarks:  
1. Do not forget to fill in the form and sent it together with your payment.  
2. Deadline is December 31, 1982. At the beginning of January, Mr. Belgodère will send all the dues to our Treasurer Osterwalder.
5. Japanese Yen.  
This is applicable if you are staying in Japan or if you have an account in Japan. The account of IAMP is  
Dai-ichi Kangyo Bank, Shibuya Branch  
No. 162-1205885 (Shigetoshi Kuroda)  
The amount for one year dues is Yen 2,500.
6. Polish Zloties.  
The account of IAMP is No. 2857,1424  
Bank Handlowy w Warszawie S.A.  
ul. Chałubińskiego 8  
00-950 WARSZAWA (Poland)  
The amount for one year dues is 300 Zl.

\* To be filled in and sent to Mr. Belgodère:

Your Name ..... Membership Number.....

Address/Affiliation.....

Amount submitted ..... Ffr for 1980 - 1981 - 1982 dues

(circle appropriate years)

Conferences

Recent Advances in Field Theory and Statistical Mechanics (Les Houches Summer School): Les Houches, France. 2 August - 10 September, 1982.  
Further information: Ecole d'été de physique théorique, 74310 Les Houches, France  
Telephone (50) 54 41 33 and 54 40 69.

Symposium on Algebraic Field Theory and Rings of Unbounded Operators: Göttingen, 6 - 11 Sept. 1982.  
Further information: H.J. Borchers, Institut für Theoretische Physik, Universität Göttingen, Bunsenstr. 9  
D-3400 Göttingen, FRG

Scientific Conference for a sixtieth birthday celebration for A.S. Wightman, (being planned), Princeton, September 23 - 24, 1982.  
Further information: Mrs. Grace Anderson, Physics Department, Princeton University, Princeton, NJ 08544, USA.

American Mathematical Society, Eastern Division Meeting, Oct. 30/31 1982 at College Park, Maryland. There will be a special session on Mathem. Physics. Those who wish to present 20 minute talks should contact (by mid August)  
Evans M. Harrell  
Department of Mathematics  
THE JOHNS HOPKINS UNIVERSITY  
Baltimore, Maryland 21218 USA.

Request for preprints

"Project No. 2", an international research year of mathematicians and physicists will be hosted by the Center for Interdisciplinary Research, Bielefeld University, September 1983 - August 1984. Among the scientists in residence will be:

- S. Albeverio (Bochum), H. Araki (Kyoto), E. Balslev (Aarhus), D. Buchholz (Hamburg), J. Challifour (Bloomington), G. Dell'Antonio (Roma), E. Dynkin (Ithaca), J.P. Eckmann (Genf), G. Emch (Rochester), J. Fröhlich (Paris, Zürich), F. Gesztesy (Graz), F. Guerra (Roma), R. Haag (Hamburg), T. Hida (Nagoya), R. Höegh-Krohn (Oslo, Marseille), M. Jimbo (Kyoto), G. Jona-Lasinio (Roma), D. Kastler (Marseille), S. Kusuoka (Tokyo), T. Miwa (Kyoto), P. Pfister (Lausanne), M. Reed (Durham), R. Sénéor (Paris), M. Sirugue-Collin (Marseille), M. Sirugue (Marseille), F. Strocchi (Pisa), I.T. Todorov (Sofia), R. Vilela Mendes (Lisbon), J. Westwater (Seattle).

To make your work available to this group, please, send your recent and upcoming (p) reprints to

Librarian  
Zentrum für interdisziplinäre Forschung (ZIF)  
Wellenberg 1  
D-4800 Bielefeld 1

Information regarding the research year can be had from L. Streit at the Center for interdisciplinary Research Bielefeld

BOOKS

I. Kay and H.E. Moses  
Inverse Scattering Papers: 1955-1963  
Math Sci Press (53 Jordan Road, Brookline, MA 02146) 1982, \$30

PREPRINTS

- G. Bencze and C. Chandler (Dept. of Phys. and Astro, U. of New Mexico, Albuquerque, NM 87131 USA) and A.G. Gibson (Dept. of Math and Stat., U. of New Mexico, Albuquerque, NM 87131 USA)  
MULTIPARTICLE SCATTERING THEORY AND THE METHOD OF COUPLED REACTION CHANNELS
- K. Gustafson and R. Hartman (Dept. of Math., U. of Colorado, Boulder, CO 80309 USA) DIVERGENCE-FREE BASES FOR FINITE ELEMENT SCHEMES IN HYDRODYNAMICS to appear, SIAM J. on Norm. Anal.
- K.E. Gustafson and B.E. Eaton (Dept. of Math /Dept. of Chem. Eng., U. of Colorado Boulder, CO 80309 USA)  
EXACT SOLUTIONS AND IGNITION PARAMETERS IN THE ARRHENIUS CONDUCTION THEORY OF GASEOUS THERMAL EXPLOSION, to appear ZAMP
- K. Gustafson and M. Seddighin (Dept. of Math. U. of Colorado, Boulder, CO 80309 USA) NONPERTURBING ALGEBRAS
- L.P. Horwitz and F. Röhrlich (Dept. of Physics, Syracuse University, Syracuse NY 13210 USA, and ETH Zurich)  
SCATTERING IN CONSTRAINT RELATIVISTIC QUANTUM DYNAMICS
- T. Kawai (Dept. of Physics, Osaka City University, Osaka 558 Japan)  
A FIVE DIMENSIONAL UNIFICATION OF THE VIERBEIN AND ELECTROMAGNETIC FIELDS II - GEOMETRIC STRUCTURE WITH REGARD TO AFFINE CONNECTION OF THE BUNDLE SPACE
- H. Leinfelder ( Dept. of Math, Princeton University, Princeton, N.J. 08544 USA)  
GAUGE INVARIANCE OF SCHRÖDINGER OPERATORS AND RELATED SPECTRAL PROPERTIES
- R.G. Newton (Dept. of Physics, Indiana U., Bloomington, IN 47405 USA)  
BOUNDS ON THE NUMBER OF BOUND STATES FOR THE SCHRÖDINGER EQUATION IN ONE AND TWO DIMENSIONS  
and  
ON A GENERALIZED HILBERT PROBLEM
- J. Patera and R.T. Sharp (Centre de Recherche de Math Appl., U. of Montreal, Case Postale 6128, Montreal, Quebec, Canada H3C 3J7)  
SIGNATURES OF ALL FINITE REPRESENTATIONS OF SU(p,q),  $p+q \leq 4$
- M.B. Ruskai (Dept. of Math, U. of Lowell, Lowell, MA 01854 USA)  
ABSENCE OF DISCRETE SPECTRUM IN HIGHLY NEGATIVE IONS II. EXTENSIONS TO FERMIONS, to appear in CMP

- F.E. Schroeck (Dept. of Math., Florida Atlantic U., Boca Raton, FL 33431 USA)  
ON THE STOCHASTIC MEASUREMENT OF INCOMPATIBLE SPIN COMPONENTS
- B. Simon (Depts. of Math. and Phys., Calif. Inst. of Technology, Pasadena CA 91125 USA) CONTINUITY OF THE DENSITY OF STATES IN MAGNETIC FIELD, submitted to J. Phys.  
and  
SCHRÖDINGER SEMIGROUPS, submitted to Bull. Am. Math. Soc.
- A.I. Solomon (Fac. of Math., The Open Univ., Milton Keynes, UK) and J.L. Birman (Dept. of Phys., City Coll., CUNY, N.Y., NY 10031 USA) DYNAMICAL GROUP MODEL OF THE CDW STATE  
and  
DYNAMICAL GROUP SO(6) AND COEXISTENCE: SUPERCONDUCTIVITY AND CHARGE DENSITY WAVES
- A. Truman (Dept. of Math. Heriot-Watt U., Riccarton, Edinburgh EH14 4AS, Scotland) with I. Davies, ON THE LAPLACE EXPANSION OF CONDITIONAL WIENER INTEGRALS AND THE BENDER-WU FORMULA FOR  $\chi^2_N$ -ANHARMONIC OSCILLATORS  
and  
LAPLACE EXPANSIONS OF CONDITIONAL WIENER INTEGRALS AND APPLICATIONS TO QUANTUM PHYSICS  
with D. Elworthy  
and  
A CAMERON-MARTIN FORMULA FOR FEYNMAN INTEGRALS  
and  
THE DIFFUSION EQUATION AND CLASSICAL MECHANICS: AN ELEMENTARY FORMULA
- H. Warchall (Dept. of Phys., U. of California, Berkeley, CA 94720 USA) IMPLEMENTATION OF AUTOMORPHISM GROUPS IN CERTAIN REPRESENTATIONS OF THE CANONICAL COMMUTATION RELATIONS, submitted to CMP
- R. Benguria and M.C. Depassier (Depto. Fisica, Univ. de Chile, Casilla 5487, Santiago, Chile) UPPER AND LOWER BOUNDS FOR EIGENVALUES OF NON-LINEAR ELLIPTIC EQUATIONS: I. THE LOWEST EIGENVALUE (April 1982)
- G.A. Raggio (Lab. für Physik, Chemie, ETH-Z, CH-8092 Zuerich, Switzerland) REMARKS ON STATISTICAL INFERENCE IN QUANTUM THEORY
- S. Albeverio Mathematisches Institut, Ruhr-Universität Bochum, D-4630 Bochum 1, FRG  
F. Gesztesy Inst.f.Theor.Phys., Karl-Franzens-Universität Graz, A-8010 Graz, Austria  
R. Högh-Krohn Matematisk Institutt, Universitet i Oslo, Blindern-Oslo 2, Norge  
L. Streit Fakultät für Physik, Universität Bielefeld, D-4800 Bielefeld 1, FRG  
CHARGED PARTICLES WITH SHORT RANGE INTERACTIONS

- L. O'Raifeartaigh  
S.Rouhani  
L.P.Singh\*  
Dublin Institute for Advanced Studies,  
Dublin 4, Ireland  
\*Permanent Address: Physics Dept., Utkal Univer:  
Bhubaneswar - 751004, India  
ON THE FINITELY SEPARATED TWO MONOPOLE SOLUTION
- Gérard Clément  
Groupe de Physique théorique  
Institut des Sciences exactes  
Université de Constantine  
Constantine, Algeria  
SCATTERING OF KLEIN-GORDON AND MAXWELL WAVES  
BY AN ELLIS GEOMETRY
- Lyazid Chetouani and  
Gérard Clément  
Physique théorique  
Institut des Sciences exactes  
Université de Constantine  
Constantine, Algeria  
GEOMETRICAL OPTICS IN THE ELLIS GEOMETRY
- Norbert K. Falck and  
Allen C. Hirshfeld  
Institut für Physik Universität Dortmund  
D-4600 Dortmund 50  
DIRAC-BRACKET QUANTIZATION OF A CONSTRAINED  
NONLINEAR SYSTEM: THE RIGID ROTATOR
- Norbert K. Falck and  
Allen C. Hirshfeld  
Institut für Physik Universität Dortmund  
D-4600 Dortmund 50  
THE QCD HAMILTONIAN AND NONLINEAR QUANTUM  
MECHANICS
- Jürgen Potthoff  
Fakultät für Physik Universität Bielefeld  
D-4800 Bielefeld 1  
STOCHASTIC PATH-ORDERED EXPONENTIALS
- Allan I. Solomon  
and  
Joseph L. Birman  
Faculty of Mathematics, The Open University,  
Milton Keynes, UK
- D.P.L. Castrigiano  
Department of Physics, City College, CUNY,  
New York, NY 10031 USA  
DYNAMICAL GROUP MODEL OF THE CDW STATE
- Institut für Mathematik der Techn. Univ.München  
D-8000 München 2, Theresienstr. 37  
A COVARIANT DESCRIPTION OF PARTICLE POSITION

Joseph L. Birman  
and  
Allan I. Solomon  
and  
Dublin Institute for Advanced Studies, Dublin 4, Ireland

Department of Physics, City College, CUNY  
New York, NY 10031 USA

Faculty of Mathematics, THE OPEN UNIVERSITY,  
Milton Keynes, UK

DYNAMICAL GROUP  $SO(6)$  AND COEXISTENCE:  
SUPERCONDUCTIVITY AND CHARGE DENSITY WAVES

Tu Gui-zhang

Dipartimento di Fisica, Università degli studi  
di Lecce, Italia  
Istituto Nazionale di Fisica Nucleare,  
Sezione di Bari  
Permanent Address: Computing Center of Chinese  
Academy of Sciences Beijing, China

ON INFINITESIMAL BACKLUND TRANSFORMATIONS AND  
GENERALIZED SYMMETRIES OF THE NONLINEAR  $\sigma$ -MODEL

M.Boiti and  
Tu Gui-zhang\*

Dipartimento di Fisica dell'Università, Lecce,  
Italia Istituto Nazionale di Fisica Nucleare,  
Sezione di Bari, Italia

\*Permanent Address: Computing Center of Chinese  
Academy of Sciences Beijing, China

BACKLUND TRANSFORMATIONS VIA GAUGE TRANSFORMATIONS

H. Neumann  
R. Werner

Fachbereich Physik, Univ. Marburg, D-3550 Marburg  
Fachbereich Physik, Univ. Osnabrück, D-4500 Osnabrück

CAUSALITY BETWEEN PREPARATION AND REGISTRATION  
PROCESSES IN RELATIVISTIC QUANTUM THEORY

Gerhard Schäfer

Fakultät für Physik der Universität Konstanz  
Postfach 5560, D-7750 Konstanz

RADIATION REACTION AND ENERGY LOSS FOR  
GRAVITATIONALLY BOUND SYSTEMS

W.R. Schneider

Brown Boveri Research Center  
CH-5405 Baden, Switzerland

EXISTENCE AND UNIQUENESS FOR RANDOM  
ONE-DIMENSIONAL LATTICE SYSTEMS

K. Veselić

Fachbereich Mathematik, Fernuniversität Hagen,  
Postfach 940, D-5800 Hagen

ON THE NON-RELATIVISTIC LIMIT OF THE BOUND  
STATES OF THE KLEIN-GORDON EQUATION

Zbigniew Oziewicz

Institute of Theoretical Physics  
University of Wrocław  
50-205, Wrocław Cybulskiego 36 Poland

ON SANTILLI'S LIE-ADMISSIBLE TREATMENT OF  
NON-LOCAL AND NON-POTENTIAL INTERACTIONS

D. Mayer  
and  
R. Roepstorff

Institut für Theoretische Physik - Lehrstuhl E  
RWTH Aachen, D-5100 Aachen

STRANGE ATTRACTORS AND ASYMPTOTIC MEASURES OF  
DISCRETE-TIME DISSIPATIVE SYSTEMS

M.Boiti\*  
and  
R.Pempinelli\*  
and

Laboratoire de Physique Mathématique  
Université des Sciences et Techniques du  
Languedoc Montpellier, France 34060

Istituto Nazionale di Fisica Nucleare - Italia

\*Permanent Address: Istituto di Fisica,  
Università di Lecce, 73100 Lecce, Italia

THE SPECTRAL TRANSFORM FOR THE NLS EQUATION  
WITH LEFT-RIGHT ASYMMETRIC BOUNDARY CONDITIONS

Konrad Schmüdgen

Ernst-Moritz-Arndt-Universität, Sektion Mathematik  
DDR-2200 Greifswald, Ludwig-Jahn-Str. 15a, und  
Naturwissenschaftlich-Theoretisches Zentrum der  
Karl-Marx-Universität

OBER DARSTELLUNGEN DER KANONISCHEN VERTAUSCHUNG  
RELATION  $PQ-QP = -iI$

M.A.H. MacCallum

Department of Applied Mathematics Queen Mary  
College London, G.B.

A.Moussiaux, P.Tombal

Département de Physique Facultés Universitaires  
Namur, Belgium

J.Demaret

Institut D'Astrophysique Université de Liège  
Gointe-Ougrée, Belgium

ON THE GENERAL SOLUTION FOR "DIAGONAL" VACUUM  
BIANCHI TYPE III MODEL WITH A COSMOLOGICAL  
CONSTANT

A.Moussiaux  
P.Tombal  
J.Demaret

Département de Physique Facultés Universitaires  
Namur, Belgium

ALGEBRAIC PROGRAMMING OF HAMILTONIAN FORMALISM  
IN GENERAL RELATIVITY: APPLICATION TO  
INHOMOGENEOUS SPACE-TIMES.

INTERNATIONAL ASSOCIATION OF MATHEMATICAL PHYSICS

President: Prof. E. LIEB  
Jadwin Hall - Princeton University  
P.O. Box 708  
Princeton, NJ 08544, USA



Secretary: Prof. L. STREET  
Fakultät für Physik  
Universität Bielefeld  
D-4800 Bielefeld 1, GERMANY BRD

December 1982

IAMP NEWS BULLETIN

Progress Report

(A) At the IAMP Executive Committee meeting on September 24, 1982 the following was decided:

- (1) A 3 year cycle (instead of 2 as heretofore) is adopted for sponsorship by IAMP of future international conferences on mathematical physics. Therefore the target date for the next meeting is the summer 1986. Applications to organize such a conference are hereby solicited.
- (2) IAMP will sponsor the Third International Mathematical Physics Workshop and NUPP Summer School in Adelaide, February 9-19, 1983, and has made a contribution of \$500 for partial support of participation by scientists from S.E. Asia (outside Australia).
- (3) IAMP will contribute \$2000 to the expenses of the 1983 International Conference on Mathematical Physics in Boulder, August 2-10, 1983. (See below for an announcement of this conference by W. Wyss.)
- (4) At the end of 1983, membership will be terminated of members who have failed to pay 1982 dues.
- (5) IAMP is authorized to become an Affiliated Society of the American Institute of Physics. (J.R. Klauder's help in this matter is gratefully acknowledged.)

This affiliation has been accomplished. It is an official recognition that the AIP governing board wishes to encourage and assist, in whatever way possible, the activities of IAMP. AIP facilities are available at cost to IAMP. IAMP has no financial or other responsibility to AIP other than to provide a list of officers, etc. (which is information that is openly published anyway).

One of the main effects of this affiliation for IAMP members is that all AIP publications can be purchased directly by IAMP members at AIP members' rates. For example, Journal of Mathematical Physics 1983 members' rates are \$50 (USA), \$62 (foreign - surface mail), \$71 (Europe - air mail), \$87 (Asia - air mail). These figures compare with non-member rates of \$300, \$312, \$321, \$337. To obtain these subscriptions, IAMP members should write to the AIP Subscription Fulfillment Division, American Institute of Physics, 335 E. 45th Street, New York, NY 10017, USA, identifying themselves as members of IAMP which is an AIP Affiliated Society. AIP trusts, of course, that such subscriptions will not replace an already existing non-member subscription.

- (6) The 1981 Financial Report prepared by K. Osterwalder, Treasurer, was approved and is printed below.
- (B) The World Scientific Publishing Co. Pte. Ltd., has become an Associate Member of IAMP. They offer IAMP members a 25% discount on their books (as announced in the September, 1982 News Bulletin). This discount can be obtained by writing to them c/o Dr. K.K. Phua, Farrer Road, P.O. Box 128, Singapore 9128, Republic of Singapore.

Elliott Lieb

President: Prof. E. LIEB  
Jadwin Hall - Princeton University  
P.O. Box 708  
Princeton, NJ 08544, USA



Secretary: Prof. L. STREET  
Fakultät für Physik  
Universität Bielefeld  
D-4800 Bielefeld 1, GERMANY BRD

Financial Report for 1981  
(Jan. 1, 1981 to Dec. 31, 1981)

1) Central Account in Geneva (SFr.)

|             |                           |          |
|-------------|---------------------------|----------|
| Income      | Carried forward from 1980 |          |
|             | Dues received 1981        | 3,608.43 |
|             | Total                     | 1,884.30 |
| Expenditure | -                         | 5,492.73 |

Balance : SFr. 5,492.73

2) Princeton Account (US \$)

|        |                           |          |
|--------|---------------------------|----------|
| Income | Carried forward from 1980 | 2,623.29 |
|        | Dues received 1981        | 1,160.-- |
|        | Interest                  | 158.84   |
|        | Total                     | 3,942.13 |

|             |                            |        |
|-------------|----------------------------|--------|
| Expenditure | Printing and mailing costs | 478.46 |
|             | Bank charges               | 10.45  |
|             | Total                      | 488.91 |

Balance : \$ 3,453.22

Holdings

|   |             |
|---|-------------|
| Nassau Savings and Loan Association, Account No. 17589                | \$ 453.22   |
| Merril Lynch Pierce Fenner & Smith, Ready Assets Account No. 83404080 | \$ 3,000.00 |
| Total   | \$ 3,453.22 |

President  
 Prof. E. LIEB  
 Leibniz-Halle, Postfach 1070  
 P.O. Box 107  
 Hannover, N.J. 03044, USA

Vize-Präsident  
 Prof. W. HUNZIKER  
 Eidgenössische Physik  
 ETH - Hônggerberg  
 CH-8091 Zurich, SWITZERLAND



Secretary  
 Prof. L. STREIT  
 Fakultät für Physik  
 Universität Bonn  
 D-5300 Bonn 1, GERMANY

Treasurer  
 Prof. A. OSTENWALDER  
 Mathematisches Seminar  
 ETH - Zentrum  
 CH-8092 Zurich, SWITZERLAND

Financial Report for 1981

3). Bielefeld Account (DM)

|                    |                              |                 |
|--------------------|------------------------------|-----------------|
| <u>Income</u>      | Carried forward from 1980    | 5,170.69        |
|                    | Dues received 1981           | 2,028.47        |
|                    | Total                        | <u>7,199.16</u> |
| <u>Expenditure</u> |                              |                 |
|                    | Support of Berlin Conference | 4,000.00        |
| <u>Balance</u>     | : <u>DM 3,199.16</u>         |                 |

4) a) Kyoto Account (¥)

|                    |   |                 |
|--------------------|---|-----------------|
| <u>Income</u>      | Carried forward from 1980                           | 177,773.        |
|                    | Dues received 1981                                  | 57,200.         |
|                    | Interest  | 6,209.          |
|                    | Total   | <u>241,182.</u> |
| <u>Expenditure</u> |   |                 |
|                    | Printing and mailing                                | 44,990.         |
|                    | Bank fee  | 400.            |
|                    | Petty cash  | 4,500.          |
|                    | Total   | <u>49,890.</u>  |
| <u>Balance</u>     | : <u>¥ 191,292.</u> (Transferred to Tokyo Account.) |                 |

b) Tokyo Account (¥)

|                    |                    |        |
|--------------------|--------------------|--------|
| <u>Income</u>      | Dues received 1981 | 4,400. |
| <u>Expenditure</u> | -                  |        |
| <u>Balance</u>     | : <u>¥ 4,400.</u>  |        |

5) Warszawa Account (Zl.)

|                    |                                    |                 |
|--------------------|------------------------------------|-----------------|
| <u>Income</u>      | Carried forward from 1980          | 2,100.00        |
|                    | Dues received until Sept. 29, 1981 | 6,000.00        |
|                    | Total                              | <u>8,100.00</u> |
| <u>Expenditure</u> | -                                  |                 |
| <u>Balance</u>     | : <u>Zl. 8,100.00</u>              |                 |

K. Osterwalder, Treasurer

Conferences:

"TROISIEME RENCONTRE DE PHYSIQUE STATISTIQUE"

D. De Dominicis, PHYSIQUE THEORIQUE, C.E.N. SACLAY; J. Fröhlich, PHYSIQUE THEORIQUE, Zurich; J.P. Hansen, THEORIE DES LIQUIDES, UNIVERSITE DE JUSSIEU; B. Souillard, PHYSIQUE THEORIQUE, ECOLE POLYTECHNIQUE, G. Toulouse, PHYSIQUE DE SOLIDE, ECOLE NORMALE SUPERIEURE are organizing a two-day conference with the above title on Thursday, 27. 1. 1983, and Friday, 28. 1. 1983, at the ECOLE SUPERIEURE DE PHYSIQUE ET CHIMIE DE PARIS, 10 rue Vauquelin, Paris 5ème, bâtiment N, dernier étage.

- Main speakers will include:
- B. HALPERIN (Harvard, ENS, Saclay) : Cristallisation du système bidimensionnel d'électrons.
  - C. ITZYKSON (Saclay) : Mécanique statistique des théories de jauge.
  - P. KASTELEYN (Leiden) : Random walks on lattices with traps.
  - B. WIDOM (Cornell, ESPCI) : Structure and tension of fluid surfaces.

For further information, please contact Mme. Francine Lefèvre, Service de Physique Théorique CEN, Saclay F-91191 GIF-SUR-YVETTE Cedex (France).

3rd International Mathematical Physics Workshop and NUPP Summer School, Adelaide, South Australia, 9 - 19th February, 1983. Further information from C.A. Hurst, Mathematical Physics Department, University of Adelaide, Adelaide, South Australia 5001

SECOND WORKSHOP ON NONLINEAR EVOLUTION EQUATIONS AND DYNAMICAL SYSTEMS (Chania, Crete, August 13 - 28, 1983). It is planned to organize, in the summer 1983, another International Workshop analogous to that held in the summer 1980 and described in Physica 20 (1981) 545-548. In view of the success of that exercise, it is planned to follow essentially the same format, as regards the scientific scope and procedure, the organizational structure and the venue. Thus the Workshop will be held at the Orthodox Academy of Crete near Chania on the island of Crete and an all inclusive flat rate will be charged to all participants from countries with convertible currencies (\$ 600 per participant, \$ 450 per accompanying adult; up to possible adjustments due to inflation). The Workshop is tentatively scheduled for August 13 - 28, 1983. Anybody who thinks of participating is welcome to write either to

F. CaTogero  
 Dipartimento di Fisica  
 Università di Roma I  
 piazzale Aldo Moro 2  
 I-00185 Roma

or to

A. Verganelakis  
 Nuclear Research Center  
 "Demokritos"  
 Aghia Paraskevi, Attikis  
 Athens Greece

(with copy to the other, please). We plan to send around a number of personal invitations and subsequently to issue an open call for applications to fill the remaining vacancies, if any.

A symposium entitled "Chemical Applications of Topology and Graph Theory" will be held at the Georgia Center for Continuing Education on the campus of the University of Georgia, Athens, Georgia U. S. A., during the period April 18-22, 1983. This symposium will focus particularly on the use of topological models for problems in chemical bonding and dynamics. The following persons have accepted invitations to give hour talks at this symposium:

- R. F. W. Bader, McMaster University (Canada)
- B. L. Clarke, University of Alberta (Canada)
- J. Dugundji, University of Southern California
- F. Harray, University of Michigan
- W. C. Herndon, University of Texas at El Paso
- R. B. King, University of Georgia
- D. J. Klein, Texas A & M University at Galveston
- R. E. Merrifield, du Pont
- H. G. Othmer, University of Utah
- M. Randić, Drake University
- D. H. Rouvray, Diebold Europe
- O. E. Rössler, University of Tübingen (West Germany)
- O. Sinanoglu, Yale University
- R. Thomas, Université Libre de Bruxelles (Belgium)
- W. T. Tutte, University of Waterloo (Canada)

Further information and application materials for participation in the above symposium can be obtained from:

Prof. R. B. King  
 Department of Chemistry  
 University of Georgia  
 Athens, Georgia 30602 U.S.A.

The deadline for applications to participate in the symposium is January 17, 1983.

The International School of Mathematical Physics will be held in Erice, Sicily, Italy, July 2-14, 1983 on the subject of Regular and Chaotic Motions in Dynamical Systems, organized by G. Velo and A.S. Wightman. The lecturers will be G. Gallavotti, O. Lanford, P. Collet, J-P. Eckmann, S. Newhouse, R. Helleman, E. Trubowitz, and L. Kadanoff. Subjects will include perturbation theory of Hamiltonian systems, uniform and measure theoretic hyperbolicity, bifurcation theory and universality, generic properties of dynamical systems, integrable dynamical systems, and renormalizing the borderline between order and chaos.

Site: Boulder, Colorado

Topic: Fluids and Plasmas: Geometry and Dynamics

Chairman: Jerrold E. Marsden, Department of Mathematics, University of California Berkeley, CA 94720 (415-642-5229)

This conference will study theoretical and computational aspects of fluid and plasma dynamics. This includes the following three principal aspects:

1. Hamiltonian and Poisson bracket structures and related topics.
2. Dynamical systems methods, especially chaotic dynamics.
3. Nonlinear hyperbolic PDE's, convergence and computation.

Organizing Committee:

Andrew Majda, Mathematics, University of California, Berkeley, CA 94720.  
 Philip Holmes, Theoretical and Applied Mechanics, Cornell University, Ithaca, NY 14853

Advisors:

Alecandre Chorin and Alan Weinstein

Chairman of the AMS Summer Conference Committee:

Ronnie O. Wells, Department of Mathematics, Rice University, Houston TX 77001.

August 2-10, 1983

SEVENTH INTERNATIONAL CONGRESS ON  
 MATHEMATICAL PHYSICS, BOULDER, COLORADO

Sponsors: National Science Foundation, University of Colorado, International Association of Mathematical Physics, University of Denver, IMU, IUPAP.

Conference Committee: H. Araki, W. Brittin, J. Fröhlich, K. Gustafson, J. Lebowitz, E. Lieb, W. Wyss.

Speakers include: T. Balaban, H. J. Borchers, D. Bridges, V. S. Buslaev, J. P. Eckmann, V. Enss, M. Fisher, G. Gallavotti, J. Ginibre, T. Hida, G. Parisi, R. Tenam, E. Trubowitz, S. Varadhan, C. N. Yang.

Session Organizers include: J. Klauder, J. Glimm, E. Zehnder, R. Seiler, D. Szasz, L. Streit, W. Thirring, C. DeWitt.

Program: In addition to invited lectures, there will be special sessions on: mathematical methods, computational methods, classical dynamics, quantum dynamics, equilibrium statistical mechanics and condensed matter, nonequilibrium statistical mechanics and irreversible processes, quantum field theory and particles, classical field theory and relativity, supersymmetry and super gravity. Abstracts of poster presentations consistent with these themes are welcomed and should be sent to the executive secretary.

Round Table Discussion: "The contributions of Mathematical Physics to Science." Participants include E. Lieb, M. Fisher, R. Haag, A. Wightman, C. N. Yang.

Information: Professor Walter Wyss, Executive Secretary, IAMP Congress 83, Department of Physics, Campus Box 390, University of Colorado, Boulder, Colorado, 80309, U.S.A.

PROJECT No.2

Title, Topics:

Under the title "The Problem of Infinitely Many Degrees of Freedom in Mathematics and Physics" the Centre for Interdisciplinary Research (ZiF) of Bielefeld University will host a group of Mathematicians and Physicists in residence to work in problem related fields of Mathematics and Physics such as:

Operator algebra, stochastic equations and fields, functional integrals, pseudodifferential and Fourier integral operators, algebraic geometry, global analysis; statistical mechanics, hydrodynamics, quantum theory, Feynman integrals, elementary particle models, gauge theories, nuclear physics, classical fields, critical phenomena etc.,

Project Period:

SEPT. 1983 - AUG. 1984

Participants:

S.Albeverio (Bochum), H.Araki (Kyoto), E.Balslev (Aarhus), D.Buchholz (Hamburg), J.Challifour (Bloomington), G.Dell'Antonio (Roma), C.DeWitt (Austin), J.P.Dias (Lisboa), M.Donsker (New York), S.Doplicher (Roma), E.Dynkin (Ithaca), J.P.Eckmann (Genf), G.Emch (Rochester), H.Ezawa (Tokyo), J.Froehlich (Karlsruhe), J.Froehlich (Paris,Zuerich), K.Gawedzki (Paris), F.Gesztesy (Graz), F.Guerra (Roma), R.Haag (Hamburg), T.Hida (Nagoya), R.Hoegh-Krohn (Marseille,Oslo), K.R.Ito (London), M.Jimbo (Kyoto), G.Jona-Lasinio (Roma), R.Kadison (Philadelphia), D.Kastler (Marseille), J.R.Klauder (Murray Hill), S.Kusuoka (Tokyo), C.Lang (Graz), M.Mebkhout (Marseille), T.Miwa (Kyoto), Y.M.Park (Seoul), M.Reed (Durham), H.Rost (Heidelberg), G.Rupp (Nijmegen), E.Seiler (Muenchen), R.Seneor (Paris), M.Sirugue-Collin (Marseille), M.Sirugue (Marseille), F.Strocchi (Pisa), J.A.Tjon (Utrecht), I.T.Todorov (Sofia), R.Vilela Mendes (Lisboa), J.Westwater (Seattle).

Initial Symposium:

SEPT.5-10, 1983

To make your work available to this group, please send your recent and upcoming (p)reprints to

Librarian  
ZiF, Bielefeld University  
Wellenberg 1  
D-4800 Bielefeld 1 FRG

Preparatory Committee:

Sergio Albeverio, Bochum  
Philippe Blanchard, Bielefeld  
Gustav Sommer, Bielefeld  
Othmar Steinmann, Bielefeld  
L.Streit, Bielefeld (Chairman)

An International Summer School will be organized in Romania:  
Title: Theoretical aspects of critical phenomena  
period: September 1 - 13, 1983, Romania, Poiana Brasov  
Organizers: Romanian Academy of Sciences, Central Institute of Physics  
Director: Valentin Ceausescu  
Address of Organizing Committee:  
Dr. Valentin Ceausescu  
Central Institute of Physics  
P.O.Box - mg 6  
Bucharest  
Romania

PREPRINTS

- E.Abdalla, Instituto de Fisica, Universidade de São Paulo, BR-05508 São Paulo, S.P., Brazil  
M.Forger, Fak. f. Physik, Univ. Freiburg, D-7800 Freiburg, Fed. Rep. of Germany  
M.Gomes, Inst. de Fis., Univ. de São Paulo, BR-05508 São Paulo, S.P. Brazil  
ON THE ORIGIN OF ANOMALIES IN THE QUANTUM NONLOCAL CHARGE FOR THE GENERALIZED NONLINEAR SIGMA MODELS
- S.Albeverio, Mathematisches Institut Ruhr-Univ. Bochum, D-4630 Bochum, FRG  
Ph. Blanchard, Fak. für Phys., Univ. Bielefeld, D-4800 Bielefeld 1, FRG  
R.Høegh-Krohn, Univ. de Provence Centre de Phys. Théor. CNRS, F-13288 Marseille France  
A STOCHASTIC MODEL FOR THE ORBITS OF PLANETS AND SATELLITES: AN INTERPRETATION OF TITIUS-BODE LAW
- S.Albeverio, Mathematisches Institut, Ruhr-Univ. Bochum, D-4630 Bochum 1, FRG  
D.Bollé, Instituut voor Theor. Fysica, Univ. Leuven, B-3030 Leuven, Belgium  
F.Gesztesy, Institut f. Theor. Physik, Univ. Graz, A-8010 Graz, Austria  
R.Høegh-Krohn, Univ. de Provence et CNRS-Marseille, F-13288 Marseille, France  
L.Streit, Fakultät f. Physik, Univ. Bielefeld, D-4800 Bielefeld 1, FRG  
LOW-ENERGY PARAMETERS IN NONRELATIVISTIC SCATTERING THEORY
- L.Abellanas, Departamento de Métodos Matemáticos de la Física, Univ. Compl. de Madrid  
A.Galindo, Departamento de Física Teórica, Facultad de Ciencias Físicas, Universidad Complutense de Madrid, Madrid-3, Spain  
ON THE STRUCTURE OF EXCEPTIONAL EVOLUTION POLYNOMIALS
- L.Abellanas, A.Galindo (address see above)  
EVOLUTIONS EQUATIONS WITH HIGH ORDER CONSERVATION LAWS
- J.P. Antoine, Institut de Physique Théorique, Université Catholique de Louvain  
B-1348 Louvain-la-Neuve, Belgique  
G.Lassner, Sektion Mathematik, Karl-Marx-Universität, DDR-7010 Leipzig, GDR  
PARTIAL INNER PRODUCT STRUCTURES ON CERTAIN TOPOLOGICAL VECTOR LATTICES
- R.Arshansky, L.P.Horwitz and Y.Lavie  
Department of Physics and Astronomy, Tel Aviv University, Tel Aviv, Israel  
PARTICLES VS. EVENTS: THE CONCATENATED STRUCTURE OF WORLD LINES IN RELATIVISTIC QUANTUM MECHANICS
- Giles Auchmuty, Department of Mathematics, Univ. of Houston, Houston, Tx 7704, USA  
DUALITY FOR NON-CONVEX VARIATIONAL PRINCIPLES (REVISED VERSION)
- J.Audretsch, Claus Lämmerzahl, Fakultät für Physik der Universität Konstanz.  
Postfach 5560, D-7750 Konstanz, FRG  
LOCAL AND NON-LOCAL MEASUREMENTS OF THE RIEMANN TENSOR



F.C. Barreto and M.L. O'Carroll (Depto. de Fisica do ICEX, Univ. Fed. de Minas Gerais, Belo Horizonte, MG, Brasil)  
CORRELATION EQUALITIES AND SOME UPPER BOUNDS FOR THE CRITICAL TEMPERATURE OF ISING SPIN SYSTEMS (to appear in J. Phys. A)

B. Baumgartner, Department of Mathematics, University of Virginia in Charlottesville, Virginia 22903, USA (On leave of absence from the Institut für theoretische Physik der Univ. Wien, Boltzmanngasse 5, A-1090 Wien, Austria)  
ON THE GROUP STRUCTURE, GKS AND FKG INEQUALITIES FOR ISING MODELS

B. Baumgartner, (address see above)  
RANDOM WALK AND DIFFUSION IN A STOCHASTIC LATTICE GAS MODEL

B. Baumgartner, Institut für theoretische Physik der Universität Wien, Boltzmanngasse 5, A-1090 Wien, Austria)  
GRIFFITHS INEQUALITIES FOR NON INTERACTING N-VECTOR

F. Bentosela, D ep. de Phys. de l'Univ. de Luminy Marseille and Centre de Phys. Th eor. CNRS F-13288 Marseille

R. Carmona, Dep. of Mathem., Univ. of California at Irvine, Irvine, CA 92663 U.S.A.

P. Duclos, D ep. de Mathem., Univ. de Toulon et du Var, 83130 La Garde and Centre de Phys. Th eor. CNRS, F-13288 Marseille

B. Simon, Dep. of Mathem. and Phys., California Institute of Technology, Pasadena, CA 91125 U.S.A.

B. Souillard, Centre de Physique Th eor., Ecole Polytechnique, F-91128 Palaiseau France  
R. Weder, IIMAS, Univ. Nacional Aut onoma de Mexico, Apartado postal 20-726 Mexico 20 DF  
SCHROEDINGER OPERATORS WITH ELECTRIC FIELD AND RANDOM OR DETERMINISTIC POTENTIAL

J. Bernasconi and W.R. Schneider, Brown Boveri Research Center, CH-5405 Baden, Switzerland  
DIFFUSION ON A ONE-DIMENSIONAL LATTICE WITH RANDOM ASYMMETRIC TRANSITION RATES

Ch. Borgs, Max-Planck-Institut f ur Physik und Astrophysik Werner-Heisenberg-Institut f ur Physik, F ohringer Ring 6, D-8000 M unchen 40, FRG  
FREIE QUARKS BEI HOHER TEMPERATUR / EIN STR ENGER BEWEIS IM RAHMEN DER GITTERICHTHEORIEN

 . Burd ik, M. Havl icek, Nuclear Centre, Faculty of Math. and Physics, Charles University, V Holešovičkách 2, 180 00 Prague 8, Czechoslovakia and  
Ju.F. Smirnov, V.N. Tolstoy and A.A. Sacharuk, Institute of Nuclear Physics, Moscow State University, SU-117234 Moscow, USSR  
ABOUT ONE CONSTRUCTION OF THE BOSON REPRESENTATION FOR THE SIMPLE LIE ALGEBRAS

J. Bystricky, D.Ph.P.E., CEN-Saclay, F-91191 Gif-sur-Yvette, France  
F. Lehar, D.Ph.P.E., CEN-Saclay, F-91191 Gif-sur-Yvette, France  
P. Winternitz, Centre de recherche de math ematiques appliqu ees, Universit  de Montr al, Montr al, Qu ebec, Canada H3C 3J7  
ON TESTS OF TIME REVERSAL INVARIANCE IN NUCLEON NUCLEON SCATTERING

G. Cassinelli, N. Zanghi, Istituto di Scienze Fisiche dell'Universit , Genova  
Istituto Nazionale di Fisica Nucleare, Sezione di Genova, Viale Benedetto XV, 5 Genova, Italy  
CONDITIONAL PROBABILITIES IN QUANTUM MECHANICS I<sup>o</sup>. CONDITIONING WITH RESPECT TO A SINGLE EVENT

J.S.R. Chisholm, Mathematical Institute, Univ. of Kent, Canterbury, Kent, England and  
R.S. Farwell, Theoretical Physics Dep., Imperial College, London, England,  
SPIN GAUGE THEORY OF THE FIRST GENERATION: I. BASIS THEORY OF ELECTRO-STRONG INTERACTIONS, II. BASIC THEORY OF STRONG, WEAK AND ELECTROMAGNETIC INTERACTIONS.

W. Craig and B. Simon, Department of Mathematics, California Institute of Technology  
Pasadena, California 91125 U.S.A.  
SUBHARMONICITY OF THE LYAPONOV INDEX

M. Demuth, Akademie der Wissenschaften der DDR, Institut f ur Mathematik, Mohrenstr. 39  
DDR-1080 Berlin, GDR  
NECESSARY CONDITIONS FOR THE EXISTENCE OF WAVE OPERATORS  
ON NECESSARY AND SUFFICIENT CONDITIONS FOR THE COOK-CRITERION

F. Delyon, B. Souillard, Centre de Physique Th eorique, ECOLE POLYTECHNIQUE,  
F-91128 Palaiseau Cedex - France  
Equipe de Recherche du C.N.R.S.  
THE ROTATION NUMBER FOR FINITE DIFFERENCE OPERATORS AND ITS PROPERTIES

C. DeWitt-Morette, Department of Astronomy and Center for Relativity, University of Texas, Austin, Texas 78712, USA  
Tian-Rong Zhang, Department of Physics and Center for Relativity, The Univ. of Texas, Austin, Texas 78712, USA  
A FEYNMAN-KAC FORMULA IN PHASE SPACE WITH APPLICATION TO COHERENT STATE TRANSITIONS

C. DeWitt-Morette and Tian-Rong Zhang (address see above)  
PATH INTEGRALS AND CONSERVATION LAWS\*

C. DeWitt-Morette, Dep. of Astronomy and Center for Relativity, The Univ. of Texas, Austin, TX 78712, USA  
Bruce Nelson, Dep. of Physics, The University of Utah, Salt Lake City, UT 84112 USA  
Tian-Rong Zhang, Dep. of Physics and Center f. Relativity, The Univ. of Texas, Austin, TX 78712  
THE CAUSTIC PROBLEM IN QUANTUM MECHANICS WITH APPLICATION TO SCATTERING THEORY

W. Driessler and St. J. Summers, Fachbereich Physik, Universit t Osnabr ck, D-4500 Osnabr ck Fed. Rep. of Germany  
A DENSE SET OF CYCLIC VECTORS FOR QUANTUM FIELD POLYNOMIAL ALGEBRAS

W. Driessler and St. J. Summers (address see above)  
NONEXISTENCE OF QUANTUM FIELDS ASSOCIATED WITH TWO-DIMENSIONAL SPACELIKE MANIFOLDS

V. En  Institut f ur Mathematik Ruhr-Universit t, D-4630 Bochum 1. Fed. Rep. of Germany  
PROPAGATION PROPERTIES OF QUANTUM SCATTERING STATES

D.E. Evans, Mathematics Institute, University of Warwick, Gibbet Hill Road, Coventry CV4 7AL, England  
J.T. Lewis, School of Theoretical Physics, Dublin Institute for Advanced Studies 10 Burlington Road, Dublin 4, Ireland  
THE SPECTRUM OF THE TRANSFER MATRIX IN THE C\*-ALGEBRA OF THE ISING MODEL AT LOW TEMPERATURES

M. Fannes, Bevoegdverklaard Navorsers N.F.W.O., Belgium  
J.V. Pul , On leave of absence from Univ. College, Dublin, Ireland  
A. Verbeure, Instituut voor Theor. Fysica, Univ. Leuven, B-3030 Leuven, Belgium  
GOLDSTONE THEOREM FOR BOSE SYSTEMS

M. Fannes, J.V. Pul , A. Verbeure (address see above)  
ON BOSE CONDENSATION

W.G. Faris (Dept. of Math. Univ. of Arizona, Tucson, Ariz. 85721 USA) and  
G. Jona-Lasinio (Istituto di Fisica, Univ. di Roma, Roma Italia)  
LARGE FLUCTUATIONS FOR A NONLINEAR HEAT EQUATION WITH NOISE

J.-R. Fontaine, Institut de Physique Th eorique, Universit  Catholique de Louvain  
chemin du Cyclotron, 2 1348 Louvain-la-Neuve, Belgium  
NON-PERTURBATIVE METHODS FOR THE STUDY OF MASSLESS MODELS

A. Frigerio and V. Gorini, Istituto di Fisica dell'Universit , Milano, Italy and  
INFN, Istituto di Scienze Fisiche "A. Pontremoli", Sezione di Fisica, via Celoria 16, 20133 Milano, Italy  
DIFFUSION PROCESSES, QUANTUM DYNAMICAL SEMIGROUPS, AND THE CLASSICAL KMS CONDITION

M. Gadella, Facultad de Ciencias, Universidad de Santander, Av. los Castros s/n, Santander, Spain  
A GENERALIZED WEYL CORRESPONDENCE. II: SOME GENERAL RESULTS

M. Gadella (address see above)  
A DESCRIPTION OF VIRTUAL SCATTERING STATES IN THE RIGGED HILBERT SPACE FORMULATION OF QUANTUM MECHANICS

- G.C. Gaunaurd (Naval Surface Weapons Center, White Oak R-43, Silver Spring MD 20910 USA) H. Uberall (Dept. of Physics, Catholic University, Washington DC 20064 USA) A. Nagl (Dept. of Physics, Catholic Univ. Washington DC) COMPLEX-FREQUENCY POLES AND CREEPING-WAVE TRANSIENTS IN ELECTROMAGNETIC-WAVE SCATTERING
- G.C. Gaunaurd with H. Uberall (see addresses above), and J. D. Murphy (3709 Merlin Way, Annandale, VA 22003 USA) ACOUSTIC SURFACE WAVE PULSES AND THE RINGING OF RESONANCES
- G.C. Gaunaurd and H. Uberall (see addresses above) RST ANALYSIS OF MONOSTATIC AND BISTATIC ACOUSTIC ECHOES FROM AN ELASTIC SPHERE
- G.C. Gaunaurd and A. Kalnins (address above) RESONANCES IN THE SONAR CROSS SECTIONS OF COATED SPHERICAL SHELLS
- G.C. Gaunaurd with P.D. Jackins (address above) RADAR RESONANCE REFLECTION FROM SETS OF PLANE DIELECTRIC LAYERS
- F.Gesztesy, Institut für Theoretische Physik, Universität Graz, A-8010 Graz, Austria  
H.Grosse, Institut für Theoretische Physik, Universität Wien, A-1090 Wien, Austria  
FIRST ORDER RELATIVISTIC CORRECTIONS AND SPECTRAL CONCENTRATION
- F.Gesztesy and B.Thaller, Institut für Theor. Physik, Univ. Graz, A-8010 Graz, Austria  
AN EFFICIENT METHOD FOR CALCULATING RELATIVISTIC
- M.Giovannini, Département de Physique Théorique, Université de Genève, 1211 Genève 4, Switzerland  
RELATIVISTIC KINEMATICS AND DYNAMICS: A NEW GROUP THEORETICAL APPROACH
- H.P.W.Gottlieb, School of Science, Griffith University, Nathan, Queensland 4111, Australia  
THE EFFECT OF AN ENCLOSED AIR CAVITY ON A RECTANGULAR DRUM
- F.Hansen, KØBENHAVNS UNIVERSITET MATEMATISK INSTITUT, Universitetsparken 5, DK-2100 Copenhagen Ø Denmark  
MEANS AND CONCAVE PRODUCTS OF POSITIVE SEMI-DEFINITE MATRICES
- E.M.Harrell, Department of Mathematics, Johns Hopkins University Baltimore, Maryland 21218, USA  
N.Corngold and B.Simon, California Institute of Technology, Pasadena, California 91125, USA  
THE MATHEMATICAL THEORY OF RESONANCES WHOSE WIDTHS ARE EXPONENTIALLY SMALL, II
- E.Harrell and B.Simon (address see above) SCHRÖDINGER OPERATOR METHODS IN THE STUDY OF A CERTAIN NONLINEAR P.D.E.
- G.C.Hegerfeldt, Institut für Theoretische Physik, Univ.Göttingen, Bunsenstr.11, 3400 Göttingen, FRG  
R.Reibold, Fachbereich Physik, Universität Essen FRG  
STOCHASTIC ASPECTS IN THE THEORY OF SPECTRAL-LINE BROADENING. I
- J.Hietarinta, Department of Physical Sciences, University of Turku, SF-20500 Turku 50, Finland  
QUANTUM INTEGRABILITY IS NOT A TRIVIAL CONSEQUENCE OF CLASSICAL INTEGRABILITY
- R.Høegh-Krohn, Matematisk Institutt, Univ. i Oslo, Blindern Oslo 3, Norge  
H.Holden, Matem.Inst., Univ. i Oslo, Blindern Oslo 3 and Ruhr-Univ. Bochum FRG  
F.Martinelli, Mathem. Inst. Ruhr-Universität Bochum, D-4630 Bochum FRG and Istituto di Fisica G.N.F.M., Univ. di Roma, Italia (permanent address)  
THE SPECTRUM OF DEFECT PERIODIC POINT INTERACTIONS.

- M.Hoffmann-Ostenhof, Institut für Theoretische Physik, Universität Wien, Boltzmanng.5 1090 Wien, Austria  
T.Hoffmann-Ostenhof, Institut f.Theor.Chemie und Strahlenchemie, Univ.Wien, Währingerstr. 17, 1090 Wien, Austria  
B.Simon, Departments of Mathematics and Physics, California Institute of Technology, Pasadena, Ca. USA  
A MULTIPARTICLE COULOMB SYSTEM WITH BOUND STATE AT THRESHOLD
- L.P.Horwitz and R.Arshansky, Tel-Aviv University, Dept. of Physics & Astronomy, Ramat Aviv, Tel-Aviv 69 978, Israel  
ON RELATIVISTIC QUANTUM THEORY FOR PARTICLES WITH SPIN  $\frac{1}{2}$  \*
- K.R.Ito, Department of Mathematics, Bedford College, University of London, Regents Park, London NW1 4NS, U.K.  
STUDY OF THE KOSTERLITZ-THOULESS TRANSITION BY THE MAYER EXPANSION
- V.F.R.Jones and M.Takesaki, University of California, Department of Mathematics, 405 Hilgart Av., Los Angeles, Ca. 90024, USA  
ACTIONS OF COMPACT ABELIAN GROUPS ON SEMIFINITE INJECTIVE FACTORS\*
- Th.Jonsson, NORDITA, Nordisk Institut for Teoretisk Atomfysik, Blegdamsvej 17, DK-2100 København Ø, Danmark  
HEDGEHOGS IN A THREE-DIMENSIONAL ANISOTROPIC SPIN SYSTEM
- M.W. Kalinowski (Dept. of Phys. University of Toronto, Toronto Ont. Canada M5S 1A7)  
ON THE NONSYMMETRIC JORDAN-THIRTY THEORY  
MATERIAL SOURCES IN THE NONSYMMETRIC KALUZA-KLEIN THEORY  
ON THE OLD-NEW METHOD OF SOLVING NONLINEAR EQUATIONS  
ON EINSTEIN-MOFFAT-CARTAN THEORY  
THE NONSYMMETRIC KALUZA-KLEIN THEORY  
THE NONSYMMETRIC-NONABELIAN KALUZA-KLEIN THEORY  
with M. Sewerynski and L. Szymanowski (Inst. of Nucl Res., Hoza, Warsaw, Poland)  
ON THE F-EQUATION
- T. Kawai (Department of Physics, Osaka City University, Osaka 558, Japan)  
A FIVE DIMENSIONAL UNIFICATION OF THE POINCARÉ GAUGE AND ELECTROMAGNETIC FIELDS
- M.Lunn, Dublin Institute for Advanced Studies, School of Theoretical Physics, 10, Burlington Road, Dublin, 4, Ireland  
INTEGRAL FUNCTIONS OF THE BOSE GAS
- J. Magnen and R. Seneor (CPT, Ecole Polytechnique, Plateau de Palaiseau 91128 Palaiseau, Cedex France)  
A NOTE ON CLUSTER EXPANSIONS  
THE INFRA-RED BEHAVIOUR OF  $(\varphi)_3^*$
- J.D.McCrea, Department of Mathematical Physics, University College, Dublin and School of Theoretical Physics, Dublin Institute for Advanced Studies  
STATIC, VACUUM, CYLINDRICAL AND PLANE SYMMETRIC SOLUTIONS OF THE QUADRATIC POINCARÉ GAUGE FIELD EQUATIONS
- J.Mickelsson, Research Institute for Theoretical Physics, University of Helsinki, Siltavuorenpenger 20 C, SF-00170 Helsinki 17, Finland  
ON A RELATION BETWEEN MASSIVE YANG-MILLS THEORIES AND DUAL STRING MODELS
- A.Ostendorf, Fakultät für Physik, Universität Bielefeld, D-4800 Bielefeld 1, FRG  
FEYNMAN RULES FOR WIGHTMAN FUNCTIONS