OBITUARY

With great sadness we learnt of Michel Sirugue's death on November 11, 1987, and of Raphael Høegh-Krohn's death on January 24, 1988. Michel Sirugue, born in 1937, has been a staff member of the Centre de Physique Théorique of Marseille-Luminy for many years. Raphael Høegh-Krohn, born in 1938, was Professor of Mathematics at the University of Oslo and a member of the Norwegian Academy of Science.

Among their contributions in many fields of mathematical physics their work on stochastic methods will stand as a great achievement. They were also great teachers and because of their warm personality very dear friends to many of us.

Philippe Blanchard
Progress Report

i. All IAMP members are invited to an IAMP general assembly.
   Date: Thursday, July 21, 1988
   Time: 8.00 p.m.
   Place: IAMP Congress, Swansea (exact hall to be announced at the conference).
   Agenda:
   1. Progress report (President)
   2. Financial report (Treasurer)
   3. Other business

ii. Interested parties who wish to suggest topics to be discussed under "other business" at the general assembly are urged to contact the IAMP secretary, Prof. Ph. Blanchard, at least one month prior to the assembly, i.e., by June 21, 1988.

iii. The subsequent IAMP Conference is planned for 1991, and if possible, the IAMP Executive Committee would like to decide this matter at its meeting during the Swansea Conference. Proposals for this meeting are invited from interested groups. They should include data regarding:
   - place and possible dates for conference
   - facilities available:
     lecture halls
     dining facilities
     accommodation
     transportation
- plans for funding
- the names of at least two members of a proposed local organizing committee.

Recent IAMP Conferences have had circa 400 attendees and budgets of roughly USD$ 75,000.

iv. The undersigned is changing institutions effective August 1988. Preprints sent for inclusion in the IAMP News Bulletin should be sent as usual to AT&T Bell Laboratories throughout July 1988, and beginning August 1988 to

Prof. John R. Klauder
IAMP NEWS BULLETIN
Department of Mathematics
Walker Hall
University of Florida
Gainesville, FL 32611, USA

Preprints must be identified (outside or inside the envelope) for the IAMP News Bulletin to be included.

v. Those wishing to pay IAMP dues in USD$ may follow the instruction in iv. (omitting "IAMP News Bulletin" in the address).

John R. Klauder
Open Position:

Director, School of Mathematics
Georgia Institute of Technology
beginning September, 1988

Address inquiries to:

Chairman, Director Search Committee
School of Mathematics
Georgia Institute of Technology
Atlanta GA 30332-0160
USA
International Association of Mathematical Physics
IXth Congress
Swansea, Wales, U.K., July 17 - 27, 1988


PLENARY SPEAKERS

J Bricmont
J Conlon
B Derrida
R L Dobrushin
S Donaldson
J Eckmann
P Goddard
M Jimbo *
V Jones
R Kotecky
S Kusuoka
I Manin
F Martinelli
Y Meyer
P A Meyer
H Narnhorfer
S Novikov
G Segal
S Shenker *
P Steinhardt *
M Virasoro

SESSIONS AND ORGANISERS

General Relativity: C Isham
Probabilistic Methods: E Carlen
String Theory: G Moore *
Non-Equilibrium Statistical Mechanics: E Presutti
Conformal Field Theories: W Nahm
Classical Mechanics: E Zehnder
Classical Field Theories: R Ward
Equilibrium Statistical Mechanics: C Newman, M Suhov
Analysis on Manifolds: E B Davies
Mathematical Problems in Condensed Matter Physics: J Avron
Operator Algebras: D E Evans
Disordered Systems: J Chayes, L Chayes
Constructive Quantum Field Theory: J Feldman
Non-Relativistic Quantum Mechanics: R Benguria
General Theory of Quantised Fields: D Bucholz
Dynamical Systems and Chaos: J Palis *
New Frontiers: B Simon

* : to be confirmed

SCIENTIFIC ORGANISING COMMITTEE

B Simon (Chairman), J T Lewis (Vice Chairman), M Atiyah, R L Dobrushin, D E Evans, J Frohlich, G Jona-Lasinio, D Olive, D Ruelle, L Streit, A Truman

FOR FURTHER INFORMATION CONTACT

IAMP Secretary, Department of Mathematics and Computer Science, University College of Swansea, Singleton Park, Swansea, SA2 8PP, Wales, U.K., Telephone (44) 0792 205678 x 5457
E-mail maian@uk.ac.swansea.pyramid
X SITGES CONFERENCE

Sitges (Barcelona), Spain
June 06 - 10, 1988

FAR FROM EQUILIBRIUM PHASE TRANSITIONS

The Conference will be held at the Museum "Maricel" at Sitges. Among the lecturers that have accepted to speak, are:

N. Abraham, Braunschweig
"Phase and frequency instabilities and dynamics in single mode lasers"

P. Coullet, Nice
"The role of defects in the transition to space temporal chaos"

M. Cross, Pasadena
"Principles of pattern formation in Physics, Chemistry and Biology"

B. Derrida, Paris
"Dynamical phase transitions in spin models"

E. Guyon, Paris
"Non linear physics of random patterns"

K. Lindenberg, La Jolla
"Localmode transition in non linear systems"

L. Lugliato, Milano
"Spatial and temporal structures in optical systems"

D. Jasnow, Pittsburgh
"Scaling for an interphacial growth in stability"

M. Lücke, Saarbrücken
"Convection in binary mixtures: properties and standing patterns"

P. Mandel, Brussels
"Time-dependent phase transitions"

G. Mazenko, Chicago
"Field theory of growth kinetics"

H. Risken, Ulm
"Quantum treatment of dispersive optical bistability"

M. San Miguel, Mallorca
"Fluctuations in the dynamics of nonlinear optical systems"

D. Sherrington, London
"Dynamic response of quasicrystals and disordered magnets"

H. Thomas, Basel
"Dynamic structures: formation, symmetry, stability"

Additional lecturers are being invited.

Applications should reach Prof. L. Garrido, Departamento de Física Fundamental, Diagona.
647, 08028 Barcelona, Spain, as early as possible. They will be answered as soon as circumstances permit. The Conference is directed to University Professors and Doctors with considerable research experience.

Sitges is a small charming summer resort on the Mediterranean coast 30 km South of Barcelona with numerous sports facilities, such as swimming, sailing, tennis, golf, riding, etc. The average temperature during the month of June is 20°C.

Accommodation A limited number of rooms has been reserved for Conference participants at half the usual prices at Hotel "CALIFOLIS" ****. They are as follows:
Pesetas 2.800 per night for one bed in a double room
Pesetas 4.230 per night for a single room

All rooms have a private bath, terrace and TV by satellite receiving European and American stations. Breakfast is included.

Registration fee for the Conference is Pesetas 20,000. This fee includes a copy of the proceedings. The registration fee should be paid upon arrival at the conference.
X SITGES CONFERENCE

Sitges  (Barcelona), Spain

June 06 - 10, 1988

FAR FROM EQUILIBRIUM PHASE TRANSITIONS

Application Form

The Conference is directed to University Professors and Doctors with considerable research experience

Name: ____________________________________________________________

Present Academic Status: ____________________________________________

Institution: _______________________________________________________

Address: __________________________________________________________

If you desire to speak*, please give the title of your contribution:

50 minutes seminar:

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Please indicate the references of your publications during the last three years: (if space is insufficient, continue on separate page)

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* Only a limited number of contributed papers can be included in the proceedings. They will be selected by a scientific committee after the end of the Conference.

______ (date) ________ (signature)

Please forward to:  Prof. L. Garrido
Departamento de Física Fundamenta
Universidad de Barcelona
Diagonal 647
08028 Barcelona (Spain)
Tel: Barcelona 330.36.16
Title: Constructive Quantum Field Theory II

Date: 1-15 July 1988

Location: Erice (Trapani), Italy


For information contact the organizers: G. Velo, Dipartimento di Fisica, Via Irnerio n° 46, 40126 Bologna (Italy) and A.S. Wightman, Department of Physics, Princeton University, Post Office Box 708, Princeton, NJ 08544 USA.
NORDIC SUMMER SCHOOL
IN
MATHEMATICS
1988

SCHRÖDINGER OPERATORS

at
Aarhus University Conference Center, Sandbjerg Slot, Denmark
August 1-12, 1988

There will be longer series of lectures by:

• R. Carmona¹ (University of California, Irvine; Schrödinger operators
  with random potentials)
• W. Hunziker (ETH, Zürich; geometric methods for Schrödinger operators)
• T. Kato (University of California, Berkeley; the nonlinear Schrödinger equation)
• E. Lieb (Princeton University; Coulomb systems)
• I. Sigal (University of Toronto; geometric methods, N-body operators).

The organizers expect that there will be shorter series of lectures by: S.
Albeverio (Bochum), E. Balslev (Aarhus), F. Gesztesy (Caltech), B. Helffer
(Nantes), R. Høegh-Krohn (Oslo), W. Kirsch (Bochum), A. Melin (Lund), P.
Perry (Lexington), J. Sjöstrand (Orsay). Details will be announced later.

The school will accept students from all countries. However, a preference
will be given to participants from the Nordic countries. The number of particip-
ants is limited. Application forms and detailed information on the prerequi-
sites can be obtained from:

Nordic Summer School in Mathematics, att.: Arne Jensen, Matematisk
Institut, Aarhus Universitet, Ny Munkegade, Bygning 530, DK-8000 AARHUS
C, Denmark.

Application deadline May 1, 1988

The school is organized by R. Høegh-Krohn (Oslo), H. Holden (Trondheim), and
A. Jensen (Aarhus). It is sponsored by Nordiska Forskarkurser.

¹not confirmed
XVIIIème ECOLE D'ETE DE CALCUL DES PROBABILITES

SAINT-FLOUR (Cantal)

21 Août - 7 Septembre 1988

CONFERENCIERS INVITES

- D. GEMAN, Professeur à l'Université du Massachusetts à AMHERST (U.S.A)
  "Stochastic Methods in Image Analysis"

- E.J. HANNAN, Professeur émérite à l'Université Nationale de
  CANBERRA (Australie)
  "Linear Systems and their Statistical Treatment"

- N. IKEDA, Professeur à l'Université d'Osaka (Japon)
  "Probabilistic Methods in the study of asymptotics"

XIXème ECOLE D'ETE DE CALCUL DES PROBABILITES

SAINT-FLOUR (Cantal)

20 Août - 6 Septembre 1989

CONFERENCIERS INVITES (sous réserve de confirmation)

- D.L. BURKHOLDER, Professeur à l'Université d'Illinois à
  URBANA-CHAMPAIGN (U.S.A.)

- A.L. SNITMAN, Chargé de recherche au C.N.R.S., PARIS

- M. ZAKAI, Professeur à l'Institut de Technologie de HAIFA (Israël)

INSCRIPTIONS et RENSEIGNEMENTS COMPLEMENTAIRES

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Tél. 73.26.41.10, poste 34-07
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LOCAL ORGANIZING COMMITTEE
S. Berthier, P. Gadonne, J. Lafait, M.L. Thèye.

IMPORTANT DATES 1988
March 12 Deadline for abstract submission
May 5 Notification of acceptance of
abstracts, 2nd announcement
June 15 Last announcement (final program)
August 29 Submission of full-length
manuscripts Beginning of the conference
September 2 End of the conference

LOCATION OF THE CONFERENCE
Ministèrè de la Recherche et de l'Enseignement
Supérieur on La Montagne Sainte Geneviève in
the center of the Quartier Latin. At walking distance
of Paris 6 and Paris 7 Universities, Ecole Normale,
ESPCI, Collège de France and Panthéon, Notre-
Dame, Sainte Chapelle, Jardins du Luxembourg...

CORRESPONDENCE AND INFORMATION
ETOPIM2 Secretary
Jacques LAFAIT
Laboratoire d'Optique des Solides
Université Pierre et Marie Curie
4, place Jussieu - 75252 Paris Cédex 05 - France.
Tel: (1) 43 36 25 25 4353 or 3981
Telex: UPMCSIX 200145 P
Teletex: 933 - 14633527 = UPMCSIX
Bitnet: (IBM) LAFAIT AT FRCPN11.

Abstract Deadline: MARCH 12
GENERAL OBJECTIVES
This ‘88 conference is intended to be a follow up of the Conference on Electrical Transport and Optical Properties of Inhomogeneous Media (ETOPIM), held in Columbus in September 1977. Although the intervening years have seen conferences with closely related themes, there has been no direct successor to the ‘77 ETOPIM Conference. Moreover, the field of Inhomogeneous Media broadened significantly during these past ten years (electron and photon localization, new approaches of coherence, non linear effects, percolation, optical cross-over, thermal transport, relation to morphology, fractal and multifractal concepts, new materials...).

A principal aim of the conference will be to bring together persons working on different approaches: fundamental (theory and experiment) and applications in order to create a cross-fertilization of ideas. Invited presentations will particularly focus on the new subjects recently developed and review some important broader themes. Contributed papers on these new topics covering original unpublished work are particularly encouraged.

FORMAT
4 ½ days conference with one main topic per day:
- long invited (review) papers.
- a few selected short oral communications.
- a poster session followed by a round table (except on Friday).

There will be no parallel sessions.

English is the working language of the conference for oral and written contributions. No simultaneous translation will be provided.

SCOPE
- Theories of wave-propagation, Non linear waves, Coherence, Localization.
- Weak localization of light, backscattering.
- New approaches of the metal-insulator transition: electrical, optical, computer simulations.
- Non linear percolation.
- New effective medium theories, 3D and 2D.
- Interfacial effects.
- Transport properties of new inhomogeneous materials: superconductors, quasicrystals...
- New morphologies: multifractals, superlattices...
- Applications.

No restriction will be put on material types and morphologies, provided that they are related to transport properties. Preparation techniques and morphological studies must also be presented in that line.

ABSTRACTS
Each author is requested to submit an original and two copies of a ONE PAGE ABSTRACT to be reproduced, if accepted, directly by photo offset and published in the conference Digest. Abstracts should be typed in English on white bond paper, inside a frame 16 x 24 cm, single spaced and should include title (capital letters, underlined), names of authors (capital letters), affiliation and complete return address. Figures, tables and drawings are allowed, but should suffer 0.71 reduction. Only ruled half tone photographs will be reproduced.

DEADLINE
The abstracts should reach the organizing secretary before MArch 12, 1988 and will be reviewed by the International and Program Committee members.

ACCEPTANCE
Authors will be notified of the acceptance of their communications by May 5, 1988 and required to deliver a FULL LENGTH MANUSCRIPT on the first day of the conference for refereeing during the conference.

PROCEEDINGS
Invited, oral and poster contributions will be edited. The proceedings will be mailed to the participants in January 1989.

CONFERENCE FEE
Complete details on the preparation of manuscript and the registration fee will be included in the second announcement (May 5, 1988) and sent to all conference registrants having filled and sent the attached preregistration card.

The amount of the registration fee will be about 1 700 FF (around 300 US $ at present rate) with special rates for students.

PREREGISTRATION FORM
(Please block letters)

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☐ Please send me the 2nd announcement
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  ☐ in a student residence

Please indicate the address of persons who may be interested and may not have received this announcement.

Please return this form as soon as possible and in any case before March 12, 1988 (deadline for abstract submission).
Members might also be interested to learn of our new mathematical journals package. We are offering a significantly reduced combined subscription rate to Journal of Physics A: Mathematical and General, Classical and Quantum Gravity, Inverse Problems and Nonlinearity. It is now possible to subscribe to these four journals for just £84.00 - a saving of £136.00.

I do hope you will be able to mention Nonlinearity and this new journals package in the IAMP News Bulletin and, if you are able to, I would very much like to receive a copy.

Thank you so much for your help.

Yours sincerely,

Geraldine Foulseford (Mrs)
Sales Promotion Manager
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Integrable Systems
D J Strachan (Warwick University) – for the LMS Pure and
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J Tandon (ETH Zurich) Nonlinear fluid mechanics and applications
C Tresser (Paul) Dynamical systems
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G Wilson (Imperial College, London) Integrable systems
I C Zeman (Warwick) Catastrophe theory, singularity

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Quantum Scattering and Spectral Theory

D.B. Pearson
Department of Applied Mathematics
University of Hull, England

Scattering theory is a central area of mathematical physics having links in quantum theory, atomic and molecular theory, statistical physics and classical wave phenomena. The mathematical ideas and methods are applicable in many other fields and the theory is now established as a discipline in its own right - involving techniques such as functional analysis, operator theory, spectral analysis, differential equations and measure theory. In this work, the author presents a coherent and systematic account of the development of the subject, beginning with fundamental principles and proceeding to more advanced applications. No existing book in this field develops the theory in such a mathematically consistent way, whilst remaining accessible to the less mathematically qualified physicist.

This book will be of interest to mathematicians seeking an introduction to this area: physicists, particularly those with a limited mathematical grounding in the subject, and to specialists requiring an up-to-date account of recent developments in the field.

PREPRINTS (RECEIVED IN MURRAY HILL)

B. Scarpellini, Mathematisches Institut, Universität Basel, Ch-4051 Basel, Switzerland and P. -A. Vuillemtot, Mathematics Department, The University of Texas, Arlington, TX 76019
INVARIANT MANIFOLDS FOR SEMILINEAR WAVE EQUATIONS ON R**2; ON THE EXISTENCE OF ALMOST-PERIODIC BREATHERS

VARIETIES STABLES ET INSTABLES POUR CERTAINES EQUATIONS DES ONDES SEMILINEAIRES DANS R**2

R. Weder, Instituto de Investigaciones en Matemáticas Aplicadas y en Sistemas, Universidad Nacional Autonoma de Mexico, Apdo, Postal 20-728, Admon. No. 20 Delegacion de Alvaro Obregon, 01000 Mexico, D. F.
THE LIMITING ABSORPTION PRINCIPLE AT THRESHOLDS ELECTROMAGNETIC CASE

E. P. Osipov, Dept. of Theoretical Physics, Institute of Mathematics, 630090, Novosibirsk, 90, USSR,
EUCLIDEAN MARKOV FIELDS FROM STOCHASTIC PARTIAL DIFFERENTIAL EQUATIONS IN EIGHT-DIMENSIONAL SPACE

M. B. Ruskai, Dept. of Mathematics, University of Lowell, Lowell, MA 08154
ENTROPY OF REDUCED DENSITY MATRICES

EXTREMAL PROPERTIES OF RELATIVE ENTROPY IN QUANTUM STATISTICAL MECHANICS

J. Miekisz, The Center for Transport Theory and Mathematical Physics, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061
LOW TEMPERATURE EQUILIBRIUM STATES OF FERROMAGNETIC LATTICE SYSTEMS

HOW LOW TEMPERATURE CAUSES LONG RANGE ORDER

S. J. Summer, Dept. of Mathematics, University of Rochester, Rochester, NY 14627 and R. Werner, Fachbereich Physik, Universität Osnabrück, D-4500 Osnabrück, BRD
MAXIMAL VIOLATION OF BELL'S INEQUALITIES FOR ALGEBRAS OF OBSERVABLES IN TANGENT SPACETIME REGION

P. Federbush, University of Michigan, Dept. of Mathematics, Ann Arbor, MI, 48109
ON THE QUANTUM YANG-MILLS FIELD THEORY

A PHASE CELL APPROACH TO YANG-MILLS THEORY III. LOCAL STABILITY, MODIFIED RENORMALIZATION GROUP TRANSFORMATION

A PHASE CELL APPROACH TO YANG-MILLS THEORY V. STABILITY

P. Federbush, University of Michigan, Dept. of Mathematics, Ann Arbor, MI, 48109 and C. Williamson, Dept. of Mathematics, University of Missouri, Columbia, MI, 65211
A PHASE CELL APPROACH TO YANG-MILLS THEORY II. ANALYSIS OF A MODE

J. Slawny and P. P. Zweifel, Center for Transport Theory and Mathematical Physics, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061
A NOTE ON THE SINGULAR EIGENFUNCTION METHOD IN TRANSPORT THEORY
S. L. Paveri-Fontana, Dipartimento de Metodi e Modelli Matematici, Universita di Roma "La Sapienza" Via Scarpa 10, 00181 Roma, Italy and P. F. Zweifel, Center for Transport Theory and Mathematical Physics, Virginia Polytechnic Institute and State University, Blacksburgh, VA 25061
APPLICATION OF THE CLOSURE RELATION IN TRANSPORT THEORY

G. A. Hagedorn, Dept. of Mathematics and Center for Transport Theory and Mathematical Physics, Virginia Polytechnic Institute and State University, Blacksburgh, VA 24061
HIGH ORDER CORRECTIONS TO THE TIME-DEPENDENT BORN-OPPENHEIMER APPROXIMATION II: COULOMB SYSTEMS

J. Mickiss and C. Radin, Mathematics Dept., University of Texas, Austin, TX 78712
ARE SOLIDS REALLY CRYSTALLINE


**-42**: P. J. HOUSTON: Geometrical aspects of operator ordering terms in gauge invariant quantum models.


**-44**: W. CEZEA, J. T. LEWIS, & G. A. RAGGIO: The free energy of quantum spin systems and large deviations.

**-45**: T. GARAVAGLIA: A quantum model for DNA.


**-47**: B. P. DOLAN & D. H. TCHRAKIAN: New Lagrangians for Bosonic m-branes with vanishing cosmological constant.

**-48**: A. C. D. van ENTER: One-dimensional spin-glasses. uniqueness and cluster properties.


-59: B. DULAN: A group theoretical approach to black hole radiation.

-60: "M. VANDYCK: On the problem of space-time symmetries in the theory of supergravity. Part II.

DIAS-STEP-87-49: J. L. BIRMAN & A. I. SOLOMON:
Dynamical SU(8) for phase-coexistence: Thermodynamics of the SO(4) x SO(4) submodel.


-55: T. DORLAS: Renormalization of a hierarchical \( \Phi^3 \) model.

C. Albanese and J. Fröhlich, Theoretische Physik, ETH-Hönggerberg, CH-8093 Zürich, Switzerland.
PERIODIC SOLUTIONS OF SOME INFINITE-DIMENSIONAL HAMILTONIAN SYSTEMS ASSOCIATED WITH NON-LINEAR PARTIAL DIFFERENCE EQUATIONS I.

A. Amann, Laboratory of Physical Chemistry, ETH-Zentrum, CH-8092 Zürich, Switzerland.
CHIRALITY AS A CLASSICAL OBSERVABLE IN ALGEBRAIC QUANTUM MECHANICS

J.-P. Antoine and A. Inoue, Institut de Physique Théorique, Université Catholique de Louvain, B-1348 Louvain-la-Neuve, Belgique and Department of Applied Mathematics, Fukuoka University, Fukuoka, Japan.
POSITIVE INVARIANT SESQUILINEAR FORMS ON PARTIAL*-ALGEBRAS

J.-P. Antoine and A. Inoue, address: see above,
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SCATTERING THEORY FOR EUCLIDEAN LATTICE FIELDS

J. Beckers, Physique Théorique et Mathématique, Institut de Physique (B5) Université de Liège, B-4000 Liège 1, Belgique, to be published in the Proceedings of the "WORKSHOP" ON MATHEMATICAL PHYSICS - Bujumbura 1987.
SYMÉTRIES ET SUPERSYMÉTRIES DE L'OSSIDATEUR HARMONIQUE EN MECANIQUE QUANTIQUE

DYNAMICAL AND KINEMATICAL SUPERSYMMETRIES OF THE QUANTUM HARMONIC OSCILLATOR AND THE MOTION IN A CONSTANT MAGNETIC FIELD


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D. Bollé, F. Gesztesy and C. Danneels, Instituut voor Theoretische Fysica, Universiteit Leuven, B-3030 Leuven, Belgium and Mathematics Department Caltech, Pasadena, California 91125, USA.
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E. Brüning, Naturwissenschaftlich-Theoretisches Zentrum der Karl-Marx-Universität, DDR-7010 Leipzig, A NOTE ON SOLUTION OF TWO-DIMENSIONAL SEMILINEAR ELLIPTIC VECTOR-FIELD EQUATIONS WITH STRONG NONLINEARITY

L. Dabrowski and J. Shabani, International School for Advanced Studies, 34100 Trieste, Italy, FINITELY MANY SPHERE INTERACTIONS IN QUANTUM MECHANICS: NON SEPARATED BOUNDARY CONDITIONS

F. Delyon, G. Deutscher, Y.-E. Lévy and B. Souillard, Centre de Physique Théorique, Ecole Polytechnique, F-91128 Palaiseau, France, Department of Physics and Astronomy, Tel Aviv University, Ramat Aviv, Tel Aviv, Israel, RANDOM WALKS, SUPERLOCALIZATION AND HOPPING CONDUCTIVITY IN SOME DISORDERED SYSTEMS

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F. Embacher, Institut für Theoretische Physik, Universität Wien, Boltzmann-gasse 5, A-1090 Wien, FREE BOSONIC STRING FIELD THEORY WITHOUT SUPPLEMENTARY FIELDS

F. Embacher, address: see above, SOLITONS IN SUPERGRAVITY

P. Exner, P. Seba and P. Stovicek, Preprint E2-87-707, Dubna 1987, QUANTUM INTERFERENCE ON GRAPHS CONTROLLED BY AN EXTERNAL ELECTRIC FIELD
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W. Hunziker, Institut für Theoretische Physik, ETH Zürich, NOTES ON ASYMPTOTIC PERTURBATION THEORY FOR SCHRODINGER EIGENVALUE PROBLEMS

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A. Ronveaux and F. Marcellan, Facultés Universitaires Notre-Dame de la Paix, 5000 Namur, Belgique, Departamento de Matematica Aplicada, E.T.S. Ingenieros Industriales, Universidad Politecnica, 28006 Madrid, Espana, DIFFERENTIAL EQUATION FOR CLASSICAL-TYPE ORTHOGONAL POLYNOMIALS

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P. Schwarzer, Hochschule für Verkehrswesen "Friedrich List", Postfach 103, Dresden, DDR - 8072, LYAPUNOV EXPONENTS AND POINT SPECTRUM FOR TWO-DIMENSIONAL CANONICAL DIFFERENTIAL SYSTEMS

J. Shabani, International Centre for Theoretical Physics, Trieste, Italy, QUANTIZED FIELDS AND OPERATORS ON A PARTIAL INNER PRODUCT SPACE

J. Shabani, adress: see above, on leave of absence from the Department of Mathematics, University of Burundi, B.P. 2700, Bujumbura, Burundi, SOME UNBOUNDED COMMUTANT OF A SET OF OPERATORS ON A PARTIAL INNER PRODUCT SPACE
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N. Macris, Ph.A. Martin and J.V. Pulè, Institut de Physique Théorique, Ecole Polytechnique Fédérale de Lausanne, PHB-Eculbens, CH-1015 Lausanne, Switzerland, Department of Mathematical Physics, University College, Belfield, Dublin 4, Ireland

J. Bricmont, A. Kupiainen, Physics Department, Princeton University, P.O.Box 708, Princeton, NJ 08544, USA and Research Institute for Theoretical Physics, Helsinki University, Helsinki 00170 Finnlnd
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By all accounts the forthcoming Swansea Meeting promises to be a most successful event. Your cooperation in payment of past and present IAMP dues will help keep your society on a sound financial basis and in view of the decline in value of the US Dollar in recent years some thought is being given to raising the annual dues. However, if you pay for current dues and prepay for several years in the future at the current rate, then you will be exempt from any increase in dues for the period of your prepayment.

An account in pounds sterling has recently been opened in London for the convenience of those who prefer to pay in that currency. Details on how such payment is to be made appear elsewhere in this news bulletin.

John Klauder, President
Complete name: _________________________________________

Complete address: ________________________________________

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Please return to: Prof. Ph. Blanchard
IAMP-Secretary
Fakultät für Physik
Universität Bielefeld
Postfach 8640
D-4800 Bielefeld 1
Recently bills for membership dues have been mailed to all members. The instructions for payment in US $ have to be changed as follows:

Write a check payable to IAMP and send it to

Prof. John R. Klauder
Dept. of Mathematics
Walker Hall
University of Florida
Gainesville, FL 32611
USA
To the IAMP-Members in Britain

I would like to ask the British IAMP-Members to send their dues of 6 Pounds per year directly to

Prof. C.J. ISHAM
Imperial College of Science and Technology
The Blackett Laboratory
Prince Consort Road
London SW7 2 EZ, Britain.
The closing date for requesting participation is:

Request for participation forms, which may be obtained from the University of Burundi, should be completed in full and forwarded to:

Dr. J. NZOTUNGICINEYA, Secretary
Scientific Committee
Workshop on Mathematical Analysis
University of Burundi
Faculty of Sciences
P.O. Box 4700 Bujumbura
BURUNDI.
Tel 2.14.18 Telex 5181 UNIV BDI.

Place: UNIVERSITY OF BURUNDI
BUJUMBURA, BURUNDI

Date: 24 September - 3 October 1988

Organising committee: J. SHABANI (Chairman), J. NZOTUNGICINEYA (Secretary), J. NAVEZ, J. BROSIUS.

AFRICAN MATHEMATICAL UNION
UNIVERSITY OF BURUNDI

WORKSHOP ON MATHEMATICAL ANALYSIS
AND ITS APPLICATIONS
BUJUMBURA, BURUNDI
24 September - 3 October 1988

The African mathematical Union (AMU), in collaboration with the University of Burundi will organize an International Workshop on Mathematical Analysis and its Applications in Theoretical Physics from 24 September to 3 October 1988. The Workshop is co-sponsored by the International Mathematical Union (IMU), the African Academy of Sciences (AAS) and the Committee on Science and Technology in Developing Countries (COSTED).

The programme will be conducted in French and English. It will include a series of lectures and some advanced seminars in Functional Analysis and Complex Analysis and their Applications in Theoretical Physics.

The preliminary list of main speakers includes: ANTOINE (Louvain la Neuve, Belgium), CALLEBAUT (Antwerp, Belgium), BADJI (N’Djamena, Chad), GAUDE (Paris, France), GROESMANN (Nantes, France), KASABA (Dar es Salaam, Tanzania), KONVEAUX (Namur, Belgium), SHABANI (Bujumbura, Burundi), TRAFANI (Palermo, Italy).

Travel and subsistence expenses of participants should be covered by their home institutions. However, limited funds are available for some participants from developing countries, but preference will be given to those who can obtain all or part of their fare from other sources.

Scientists from East and South Africa may also apply for travel grants to the COSTED by writing directly to Prof. D. ODHINBO, Head of the Regional Office of the COSTED for East Africa and Vice-Chancellor of the Moi University, P.O.Box 630-56, Nairobi, Kenya.
AFRICAN MATHEMATICAL UNION
UNIVERSITY OF BURUNDI

WORKSHOP ON MATHEMATICAL ANALYSIS
BUJUMBURA - BURUNDI
24 SEPTEMBER - 3 OCTOBER 1988

APPLICATION FORM

Instructions
Each question must be answered clearly and completely. Type or print in ink. If more space is required, attach additional pages. This form should be sent to the University of Burundi, Faculty of Sciences, B.P. 2700 Bujumbura, Burundi before 30 July 1988.

PERSONAL DATA

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Indicate your specific field of interest:

APPLICABLE ONLY FOR CANDIDATES FROM DEVELOPING COUNTRIES

Please tick as appropriate:
- I can definitely find complete travel funds from local sources [ ]
- I can definitely find half my travel funds from local sources [ ]

Therefore, I am requesting financial support from the organizers for:
- Half travel [ ]
- Full travel [ ]
- Subsistence [ ]

Signature ......................................

I certify that the statements made by me above are true and complete. If accepted, I undertake to refrain from engaging in any political or other activities which would reflect unfavourably on the international status of the meeting. I understand that any breach of this undertaking may result in the termination of the arrangements relating to my visit to Bujumbura. I understand that the University of Burundi, Faculty of Sciences and the host country shall not be held liable for compensation in the event of my death, injury or illness during my travel to and from Bujumbura or during my stay in Burundi.

Signature of candidate .............................................................

Date
WORKSHOP '88

DYNAMICS AND
STOCHASTIC PROCESSES
(Theory and applications)

LISBOA, PORTUGAL, OCTOBER 24 - 29, 1988

TOPICS INCLUDE: Dynamical problems of fusion plasmas, Chemical instabilities, Relaxation times in systems with many degrees of freedom, Fractional diffusion, Stability problems in astronomy, Learning algorithms, Random graphs in theory of epidemics, Simulated annealing, Stochastic perturbations of Hamiltonian systems, White noise analysis, Industrial applications of non-linear dynamics and the theory of stochastic processes

FORMAT: Two lectures in the morning starting at 10:00, and one lecture and two short seminars in the afternoon. Some of the participants will stay, for collaboration in research projects, in the week following the workshop

CONFIRMED SPEAKERS: S. Albeverio (Bochum), A. Arneodo (Bordeaux), J. Bernasconi, W. Schneider (Brown Boveri, Baden), Ph. Blanchard/G. Bolz (Bielefeld), M. Dubois (CEA, Cadarache), C. R. Hwang (Taipei), K. Karagiannis (München), F. Nave (JET), J. M. Petit (Observ. Nice), M. Pettini (Firenze), L. Streit (Bielefeld)

Participation is free and welcome. For informations or hotel reservations please contact the secretary of the meeting, Mrs. M. Fátima Loureiro

"CENTRO DE FISICA DA MATÉRIA CONDEN SADA"
AV. GAMA PINTO, 2-1699 LISBOA CODEX - PORTUGAL
(PHONE 351 1-773325, 351 1-773338 TELEX 62593-IIFM P)

Organizing committee: R. LIMA, L. STREIT, R. VILELA MENDES
September 1989

4 - 8

Centenary workshop of Heun's Equation - Theory and applications

Tagungsstätte Schloß Ringberg
D-8183 Rottach-Egern am Tegernsee (Bavarian Alps, FRG)

Program

Expository and research papers on all aspects of Heun's equation and confluent forms of Heun's equations. An important part of the workshop will be devoted to collect and review results from mathematics, physics, and engineering in order to propose canonical forms and standard notations for solutions.

Participants

The number of participants will be limited to not more than 60.

Call for papers


Information

A. Seeger, Max-Planck-Institut für Metallforschung, Heisenbergstraße 1, D-7000 Stuttgart 80, Fed. Rep. Germany

A. Ronveaux, Math. Phys., Facultés Universitaires, B-5000 Namur, Belgium

*The HEUN equation is the second order linear differential equation with four regular singular points.
NEEDS '89

5th Workshop on Nonlinear Evolution Equations and Dynamical Systems
Kolympari near Chania, Crete; July 2-16, 1989

The 5th Workshop on Nonlinear Evolution Equations and Dynamical Systems (NEEDS) will take place at the Orthodox Academy in Kolympari near Chania, Crete, Greece, from Sunday July 2nd (arrival day) to Sunday July 16th (departure day), 1989. The first four Workshops of this series have been held in Kolympari in 1980 and 1983, in Baia Verde near Gallipoli (South Italy) in 1985 and in Baruluc-les-Bains near Montpellier (France) in 1987; for reports on them see Physica 2D, 545-548 (1981), 11D, 389-391 (1984), 29D, (1988), and Inverse Problems 2, 775-780 (1987). The 5th Workshop will follow the same pattern, both in terms of scientific content and organizational structure. Hence it will be interdisciplinary in character; the topics covered will include integrable dynamical systems (nonlinear ODEs and PDEs), near integrable and non integrable model equations, applications in classical and quantal physics (elementary particles, solids, statistical mechanics, fluids, plasmas, etc.) and elsewhere (oceanography, biophysics, etc.). The techniques discussed will range from pure mathematics through numerical computations to applicable theory and experiments.

The Orthodox Academy, where the first two workshops of this series have already been held, is a modern building by the sea, within walking distance of the village of Kolympari (23 km south of Chania). Some of the participants will be housed at the Academy itself (in double occupancy rooms with private facilities); others will be housed in hotels in Kolympari. An all-inclusive flat rate covering food and accommodation, excursions and registration, is tentatively set at US$ 500 for participants (of which US$ 100 as registration fee), US$ 350 for accompanying persons. We hope to be able to cover all local expenses for a limited number of invited participants from countries with non convertible currency.

The total number of participants will be limited to 80; acceptances will be on a first-come first-serve basis.

Please address all correspondence to: NEEDS '89, c/o F.Calogero, Dipartimento di Fisica, Università di Roma "La Sapienza", p.Aldo Moro 2, 00185 Roma (Italy), telex 613255 INFNRO, telefax 4957697, with copy to: NEEDS '89, c/o A.Verganelakis, N.R.C. Demokritos, P.O. Box 60228, 15310 Aghia Paraskevi, Attiki (Greece), telex 216199.

(Please circulate to interested persons)
"Good News for Mathematical Physicists"

The "Méthodes nouvelles de la Mécanique Céleste" by Henri Poincaré, which had been reprinted many years ago by Dover and were out of print, have been printed again by Gauthier Villars, in the collection "Bibliothèque Scientifique", Albert Blanchard.
**Inverse Problems in Astronomy**

A guide to inversion strategies for remotely sensed data

J D Craig, University of Waikato, New Zealand and J C Brown, University of Glasgow

Consultant editor Professor A J Macdonald, University of Toronto

The first book to cover all aspects of the topic from formulating the inverse problem through to the practical treatment. As such it will be of interest to geophysicists, geologists, astronomers and applied mathematicians. Other workers in observational studies such as meteorology and oceanography will find the chapters on theory and strategy useful.

**Computational Techniques in Physics**

P K MacKean and M S Newman, University of Hong Kong

Describes some of the computational techniques increasingly used in physics and illustrates how they can be applied to the solution of a wide range of problems. The level of material is appropriate for both undergraduate and graduate students in the physics system and graduate physics students in the advanced stages.

**Discrete Fourier Transforms and Their Applications**

V Citek

Consultant editor Professor R F Streater

A practical handbook on the evaluation and application of one of the most important of numerical techniques for digital signal processing. Knowledge of the discrete Fourier transform and the ability to construct algorithms based on the techniques of fast Fourier analysis are essential principles for electrical, electronic, communications and computer engineers. These methods are also invaluable in other applied science, and in many other fields, as fundamental to the mathematics of science and technology. Aimed specifically at experimentalists and practitioners, and excluding only those mathematical details that are beyond the scope of the applications, the text is designed to give a feel for the significance of the methods, and to promote proficiency in their use.

**Chaotic, Noise and Fractals**

Edited by E R Pike, RSRE, Malvern and L A Lugiato, University of Milan, Italy

Malvern Physics Series Series editor Professor E R Pike, RSRE, Malvern

The first US seminar on Chaos, Noise and Fractals was held in September 1986. The seminar was organized by the US National Science Foundation Office of International Science and Technology for the Commonwealth of Independent States. The proceedings of the seminar were presented at a seminar on Chaos, Noise and Fractals at the University of Milan, Italy. The seminar included papers on the mathematical and physical aspects of the phenomena of quasiperiodic, multifractal and chaos.

**Hamiltonian Dynamical Systems**

A reprint selection

Compiled and Introduced by R S MacKay, University of Warwick and J D Malas, University of Texas, Austin

Preserves a selection of some of the most significant papers in Hamiltonian Dynamical Systems published during the last 60 years. A worthy introduction for anyone with an undergraduate background in physics or mathematics, and an indispensable reference work for researchers and graduate students interested in any aspect of classical dynamical systems.

**Nonlinear Theory of Sound Beams**

Edited by N S Bakhvalov, Ya Z Shemyakin and E A Zabotinov

Translated by Robert T Beyer

Preprint Received in Tokyo (Received in the fall of 1987)

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The Cauchy problem of the Korteweg-de Vries equation with measures as initial data

Path integral approach to relativistic quantum mechanics: two-dimensional Dirac equation

The Zitterbewegung of a Dirac particle in two-dimensional space-time

Y. Shibata, Inst. Math. Univ. of Tsukuba, Ibaraki, 305 Japan, and
H. Soga, Fac. of Educ. Ibaraki Univ., Ibaraki, 310 Japan
Scattering theory for the elastic wave equation

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Scattering theory in the weighted $L^2(\mathbb{R}^n)$ spaces for some Schrödinger equations

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Time decay for some Schrödinger equations

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Asymptotic behavior of scattering amplitudes in semi-classical and low energy limits

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M. Röckner

Dirichlet forms, quantum fields and stochastic quantisation.

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A remark on the formation of crystals at zero temperature.

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Distribution of the area enclosed by a plane random walk.
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While aimed primarily to make access to the bulletin easier for people from some Soviet institutes, this collection point is certainly open to all who find it suitable.
Dear colleague,

The 1988 meeting of R.C.P.264 on interdisciplinary aspects of Inverse Problems will be held in Montpellier from Monday, December 5th to Friday, December 9th.

This well-known Workshop on I.P. has room for 70 participants at most. The usual topics on inverse problems of electromagnetism, quantum mechanics, internal and external geophysics, acoustics, etc... those related with the control of partial differential equations, the inverse method and its applications to nonlinear partial differential equations, solitons and related topics will be represented and any related topic will be welcome, in particular nonlinear excitations and nonlinear signal processing.

We expect in particular the presence of Professors Bertero, Calogero, Chavent, DeFazio, Degasperis, Demol, Fokas, Grünbaum, Pike, Tabbara, Zolesio, Boerner.

We suggest the participants to prepare lectures giving either good reviews (of their own works or others) or new results. For this 1988 meeting, there will not be Proceedings. We ask all participants to bring with them an (extended) abstract of their lecture with a reference list. These documents will be copied and distributed to participants.

Next year (1989) will be particularly important for our University since it is in 1989 that the former Ecole de Médecine officially became the "University of Montpellier". For this opportunity, we are planning to enlarge our annual meeting; we already encourage people willing to prepare review lectures and we shall publish the Proceedings of the 1989 meeting through a great scientific European publisher.

With my best regards,

Professor P.C. SABATIER

P.S. If you plan to come, give as soon as possible to "R.C.P.264, Lab. de Physique Mathématique - 34060 Montpellier Cedex 1, France", the title of your lecture and the time you wish.
r.c.p. 264
rencontre interdisciplinaire
problèmes inverses

MONTPELLIER (France), December 5 - 9, 1988

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Pensez-vous assister à la Rencontre R.C.P.264 du 5 au 9 décembre 1988 à Montpellier ?

OUI

NON

Pouvez-vous présenter
1. un exposé de revue .................................................... temps souhaité
   titre ........................................................................

2. un exposé complet du sujet que vous traitez en ce moment .................................................... temps souhaité
   titre ........................................................................

3. une contribution .................................................... temps souhaité
   titre ........................................................................

4. une "question" pour laquelle la discussion avec les gens de la RCP vous semble utile temps souhaité
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DANS TOUS LES CAS, nous serions heureux que vous teniez compte du caractère "interdisciplinaire" de l’auditoire en faisant une bonne introduction pédagogique au sujet traité.

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(Ref. 1516) in the DEPARTMENT OF PHYSICS AND
MATHEMATICAL PHYSICS. The appointment follows the
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Hurst, F.A.A. and is available from June 1989. The
Department was formed from the Departments of
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Edward P. Osipov, Department of Theoretical Physics, Institute for Mathematics, 630090 Novosibirsk, 90, USSR.
Euclidean Green Functions for Nonlocalizable Fields with Exponential Growth in Momentum Space.

Hideki Kosaki, Department of Mathematics, College of General Education, Kyushu University, Fukuoka, 810, Japan,
Characterization of Crossed Product (Properly Infinite Case)

Hiroshi Takai, Department of Mathematics, Tokyo Metropolitan University, Fukazawa, Setagaya, Tokyo, Japan,
C*-algebras of Anosov foliations II

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S. T. Kuroda, Toshio Suzuki, Department of Mathematics, Gakushuin University, Tokyo, Japan,
Department of Mathematics, Faculty of Liberal Arts and Education, Yamanashi University, Yamanashi, Japan,
A Time-dependent Method for Computing Eigenfunctions and Eigenvalues of Schrödinger Operators

Toshitaro Hamachi, Hideki Kosaki, Department of Mathematics, College of General Education, Kyushu University, Fukuoka, 810, Japan,
Inclusion of Type III Factors Constructed from Ergodic Flows

Shin-ichi Nakamura, Hideo Soga, Department of Mathematics, School of Science and Engineering, Waseda University, Shinjuku-ku, Tokyo 160, JAPAN,
Department of Mathematics, Faculty of Education, Ibaraki University, Mito Ibaraki, 310 JAPAN,

Hideo Soga,
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Mitsuo ABE, Noboru NAKANISHI, Research Institute for Mathematical Sciences, Kyoto University, Kyoto 606, Japan,
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1st Dept. of Math, Nagoya University, Furou-Cha, Chikusa-Ku, Nagoya 460, Japan, 2nd Dept. of Math, Yokohama City Univ, Seto 22-2, Kanazawa-Ku, Yokohama 236, Japan, 3rd Dept. of Math, Sophia Univ, Kioi-Cho 7, Chiyoda-Ku, Tokyo 102, Japan, 4th Dept. of Math, Waseda Univ, Ohkubo 3, Shinjuku-Ku, Tokyo 160, Japan,
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