

# Nouvelles brèves

## Livres reçus

*Quantum Mechanics and the Pomeron*, par J.R. Forshaw et D.A. Ross, Cambridge University Press, ISBN 0 521 568880 3, £19.95 (\$34.95) broché

Dans la série Cambridge, Lecture Notes on Physics.

*Wavelets - Calderón-Zygmund and multilinear operators*, par Yves Meyer et Ronald Coifman, Cambridge University Press, ISBN 0 521 42001 6, £40 (\$59.95) relié.

Dans la série Cambridge, studies in advanced mathematics.

*The Casimir Effect and its Applications*, par V.M. Mostepanenko et N.N. Trunov, Oxford Science Publications, ISBN 0 19 853998 3, £55 relié

L' "effet Casimir " provient des altérations des variations dans le vide des champs quantiques dans des topologies spéciales.

Le prix Nobel de physique 1992, Georges Charpak (à droite) lors de l'ouverture de la récente exposition "la France au CERN" en compagnie de Bernard Bigot, Directeur général pour la recherche et la technologie auprès du Ministère de l'éducation et de la recherche.

## Personnalités

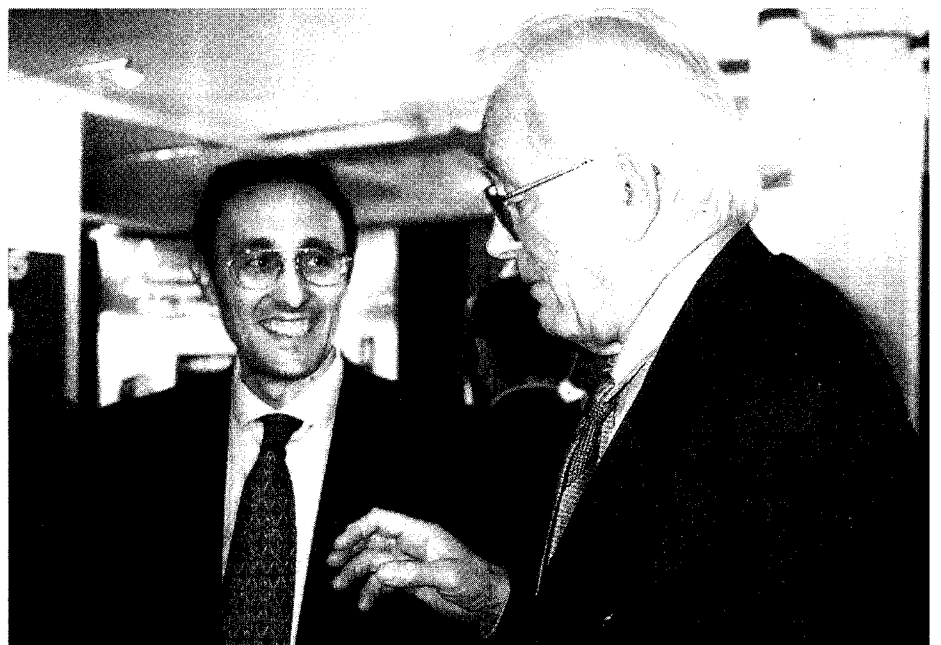
Richard Garwin a reçu le prestigieux prix Enrico Fermi des États-Unis couronnant l'ensemble de sa carrière. Ses expériences menées avec Léon Lederman et M. Weinrich lui ont permis de confirmer, en 1957, la non-conservation de la parité au cours de la désintégration nucléaire bêta et son point de vue averti a été maintes fois sollicité par les plus hautes instances du gouvernement et de l'industrie, en raison de ses compétences dans des domaines scientifiques très variés.

Le prix Max Born de la Société allemande de physique a été décerné à Robin Marshall, de Manchester, pour "sa contribution exceptionnelle à la physique des particules, et notamment pour ses travaux sur l'interaction électrofaible". Les années impaires, la Société de physique allemande attribue ce prix à un physicien britannique, et les années paires, l'Institut britannique de physique récompense en retour un physicien allemand.

Oscar Barbalat - transférer la technologie de la physique des particules.



Trente-six ans après ses débuts au CERN, Oscar Barbalat vient de partir à la retraite. Bien connu pour ses vigoureux efforts visant à promouvoir le transfert et la valorisation des précieuses technologies de la physique des particules, (de l'avis de certain commentateur, ce transfert est devenu si efficace que l'offre de technologie risquerait de devenir insuffisante!), Oscar Barbalat a contribué à faire connaître le CERN et ses travaux à un plus large public, et la



Une conférence internationale s'est tenue à Turin en juin pour célébrer le 65<sup>ème</sup> anniversaire de l'éminent physicien, mathématicien et astrophysicien Tullio Regge. Les thèmes de la rencontre, organisée par la fondation ISI (Institut d'Échanges Scientifiques), ont reflété la diversité des sujets intéressant Tullio Regge en dehors de ceux pour lesquels il est particulièrement connu. Tullio Regge est ici accompagné de Gabriele Veneziano du CERN (à gauche) et de Schu Martin.

(Photo André Martin)

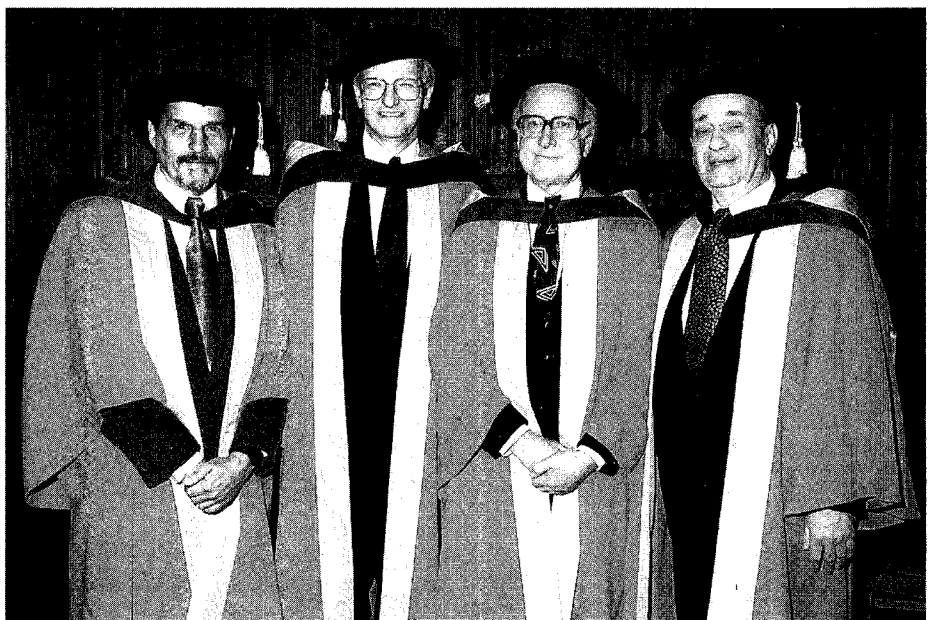
promotion des retombées technologiques a très certainement incité de nouveaux pays à devenir membres de l'Organisation.

### Le Centre de Beyrouth

Conçu sur le modèle de l'Institut de physique théorique de Santa Barbara et de l'Institut universitaire Newton de Cambridge, le Centre d'études mathématiques avancées de Beyrouth aspire à devenir un centre national et régional, à servir de pôle d'attraction pour des visiteurs du monde entier et de lieu de conférence. Ce centre a été créé par Nicola Khuri de Rockefeller, l'un des administrateurs du conseil de l'Université américaine de Beyrouth. Le président du Comité consultatif international du centre n'est autre que l'éminent mathématicien Michael Atiyah.

Le 8 mai, le Directeur général du CERN, Chris Llewellyn Smith, (deuxième à partir de la droite) a reçu le titre de docteur honoris causa de l'Université de Grenade. De gauche à droite: le théoricien espagnol José Bernabeu, le recteur de l'Université de Grenade Lorenzo Morillas, Chris Llewellyn Smith et le théoricien espagnol Francisco del Aguila.

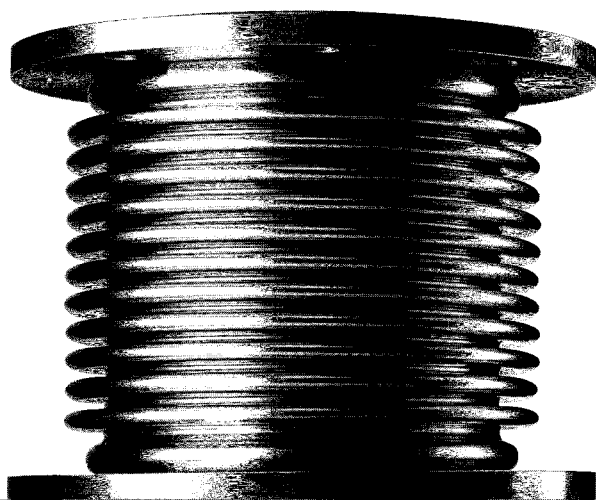
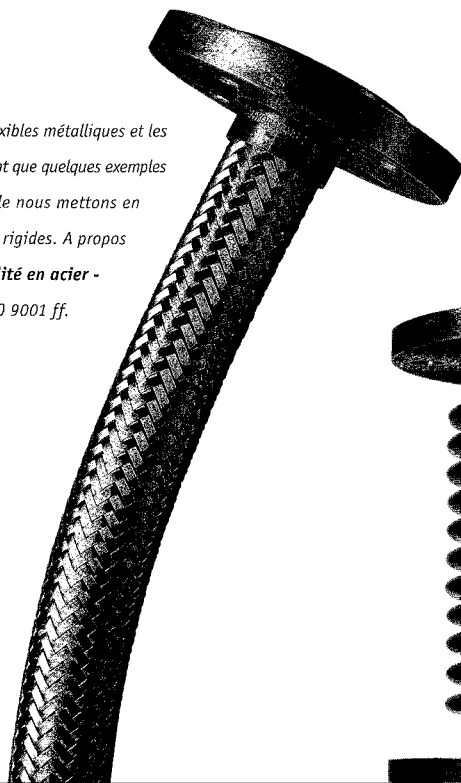
Docteurs honoris causa de Bristol - de gauche à droite: Yakir Aharonov de Tel-Aviv, célèbre pour ses contributions à la mécanique quantique fondamentale (l'effet Bohm-Aharonov); Chris Llewellyn Smith, Directeur général du CERN; Peter Higgs d'Édimbourg, dont le nom est à jamais associé à celui de la "brisure spontanée des symétries"; et Emil Wolf, bien connu pour ses travaux dans le domaine de l'optique.



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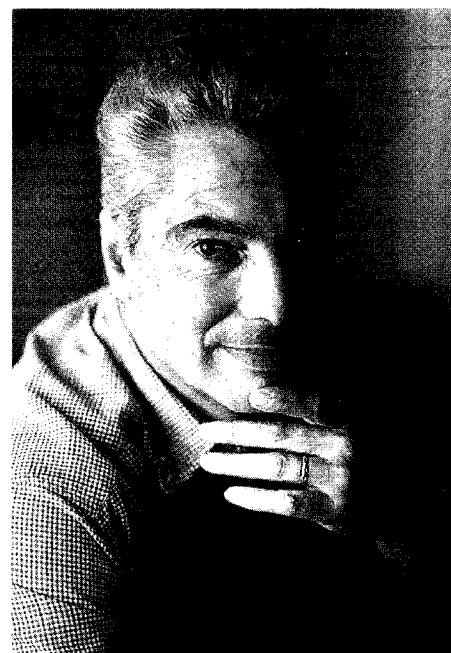
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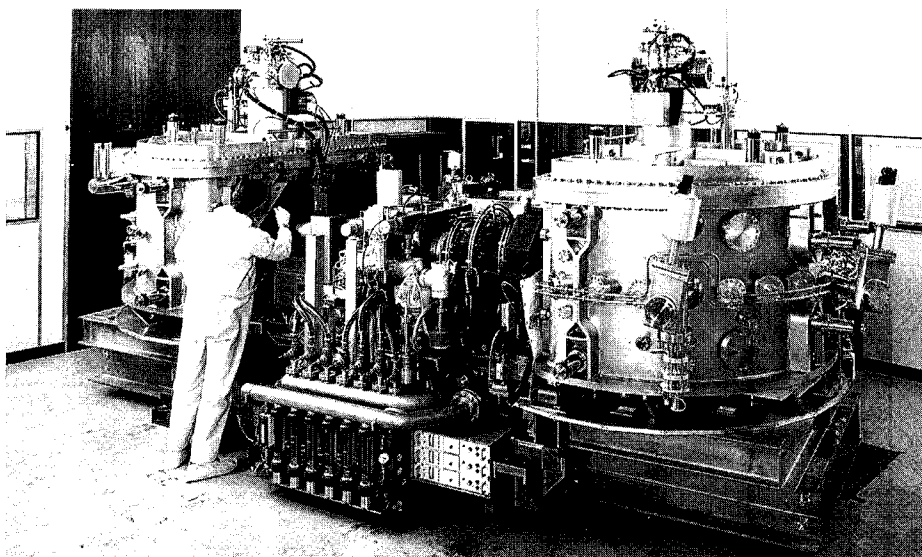
*Alvaro de Rújula (à gauche) succède à Gabriele Veneziano à la tête de la Division Études Théoriques du CERN.*



*Alberto Scaramelli devient le chef de la Division Support technique du CERN (ST), succédant ainsi à Fritz Ferger.*



*Le suédois Bjorn Brandt (à droite), Président du Comité des finances entre 1992 et 1994 et le norvégien Arnfinn Graue, Président du Comité des finances entre 1989 et 1991 et aussi membre d'un Comité spécial sur les conditions d'emploi (à gauche) ont quitté cette année leurs fonctions dans leurs délégations nationales au CERN. Maurice Jacob (au centre), responsable des relations entre le CERN et les États membres, leur offre ses vœux pour la suite de leur carrière.*



*Le fabricant spécialisé Oxford Instruments a vendu un deuxième synchrotron supraconducteur compact - Hélios 2 - à l'Université de Singapour. Il sera utilisé dans une nouvelle installation de rayonnement synchrotron. La lithographie par rayons X devrait être son domaine d'application principal, comme dans le cas d'Hélios 1, vendu par Oxford Instruments au laboratoire d'IBM à East Fishkill, État de New York.*

Dan Kaplan, membre de l'Institut de technologie de l'Illinois et co-découvreur de l'upsilon, remet à Makoto Kobayashi un vase artisanal commémoratif en verre soufflé en forme d'upsilon pour rendre honneur à ses travaux menés avec Toshihide Maskawa qui mirent en évidence la nécessité d'un cinquième quark. ▷

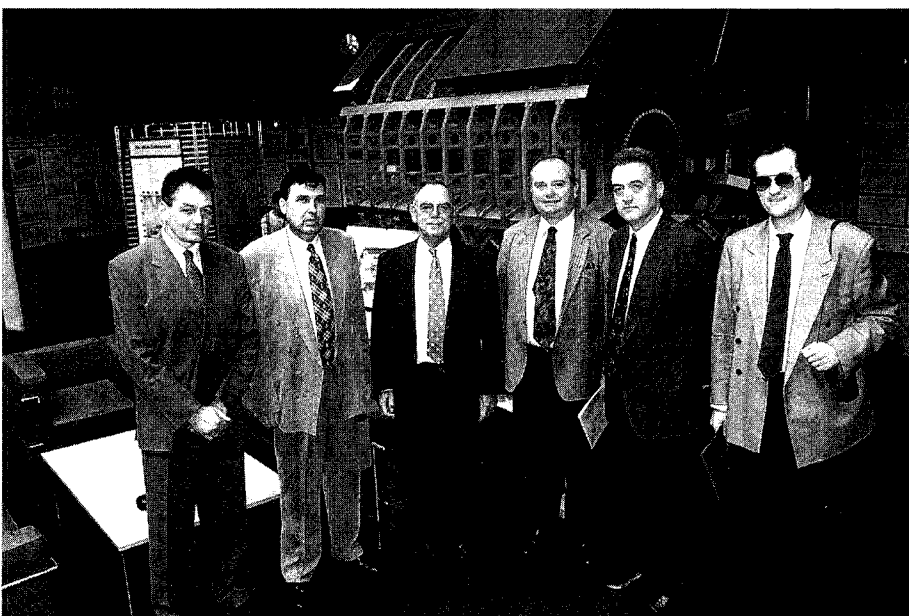
Leon Lederman offre une tranche de b du gâteau d'anniversaire à l'Institut de technologie de l'Illinois pour célébrer les 20 ans de la découverte de la particule upsilon - un état lié d'un quark b et de son antiquark - au laboratoire Fermi en 1977. ▽



À droite : L'éminent théoricien Sergio Fubini (au centre) reçoit des mains d'Ernesto Olivero, membre de l'organisation caritative turinoise SER.MI.G, la médaille "d'artisan de la paix", en remerciement de ses efforts pour rapprocher les physiciens du Moyen-Orient (janvier 1996, page 21). À sa droite, Mme Mercedes Bresso, présidente de la province de Turin. La cérémonie s'est déroulée dans l'Abbaye de Novalese, au pied du Mont Cenis. Cette abbaye qui abrita jadis l'une des plus grandes bibliothèques de la chrétienté et inspira à Umberto Eco l'intrigue de son roman, "Le nom de la rose", a été restaurée par le gouvernement local. Elle représente pour beaucoup un site idéal pour la tenue de conférences internationales pour la paix.



Personnalités serbes en visite au CERN - de gauche à droite: Miroslav Kopećni, Directeur général de l'Institut des sciences nucléaires VINCA à Belgrade; Dragan Popovic, Directeur général de l'Institut de physique Zemun à Belgrade; Jim Allaby, responsable des relations entre le CERN et les États non membres; Vladimir Davidovic, Ministre adjoint des sciences et de la technologie en Serbie; Nebojsa Neskovic, Directeur du centre scientifique TESLA; Peter Adzic, chef du programme de physique des particules à l'Institut VINCA.





Universität Heidelberg

The Institute for High Energy Physics (IHEP) at Heidelberg University has immediate openings for

### Two Postdoctoral Positions in Experimental Particle Physics

The first position (Ref. ATLAS-PD) is in the ATLAS group at the IHEP. The successful applicant will be working on the Level-1 calorimeter trigger of the ATLAS experiment at the LHC and in particular on the realization of a full size prototype for the trigger pre-processor system. The system employs modern electronics components like custom made ASIC's, Multi-Chip Modules and FPGA's. The position is located in the ASIC laboratory at Heidelberg University.

Experience in digital hardware, computer aided electronic design tools and data acquisition is required. A vital interest in LHC physics and the particular challenges of the first level trigger system is expected.

The second position (Ref. H1-PD) is in the H1 group at the IHEP. The successful applicant will be working on the operation of the H1 detector at the electron-proton storage ring HERA at DESY and in particular on the analysis of its data. The position is located at the Institute in Heidelberg but requires frequent travel to and occasional longer stays at DESY.

Experience in data analysis of high-energy-physics experiments and in particular the handling of large data volumes is required.

Both positions require a Ph.D. in physics and include teaching obligations. Appointments will initially be limited to 2 years with a possible extension to a maximum of 5 years. Provided superior performance, both positions offer the possibility to confer qualification as a university lecturer (*Habilitation*). Disabled applicants with equal qualifications will be preferred.

The Heidelberg University encourages especially women to apply.

Interested applicants are invited to send their application to:

Ruprecht-Karls-Universität Heidelberg  
Institute for High Energy Physics  
Ref.: ATLAS-PD or Ref.: H1-PD  
Schröderstrasse 90  
D-69120 Heidelberg, Germany

For additional information, please contact Prof. Karlheinz Meier,  
e-mail: meierk@ihep.uni-heidelberg.de, phone: + 62 21 / 54 - 43 35.



DESY announces a

## Post-Doc Position

The candidate is expected to play a key role in the design and commissioning of the rf control system for the 64 superconducting cavities of the TESLA Test Facility. The basic concept is based on a state of the art fast digital IQ controller which controls the vector-sum of 32 cavity voltages in presence of severe Lorentz force detuning, microphonics, and bunch charge fluctuations. The applicant will develop and implement control algorithms based on modern control theory, procedures for the calibration of phase and amplitude of the vector-sum, and cavity frequency control. Actual performance with beam will be measured until end of 97 resulting in suggestions for hardware and software improvements if necessary.

The candidate should have a Ph.D. in physics or equivalent science. He should have good working knowledge in at least one of the following areas: accelerator physics, control theory, digital signal processors, radio frequency systems for accelerators, programming languages and operating systems (such as UNIX, C, C++). Experience with particle accelerators, superconducting cavities or simulation programs such as MATLAB and SIMULINK are desirable.

Interested persons, who have recently completed their Ph.D. and who should be younger than 32 years are invited to send their application including a résumé and the usual documents (curriculum vitae, list of publications, copies of university degrees) until 30 of September 1997 to

### DEUTSCHES ELEKTRONEN-SYNCHROTRON DESY

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Notkestraße 85, 22607 Hamburg, Germany

They should also arrange for three letters of reference to be sent until the same date to the address given above. Code-number: 49/97

Handicapped applicants with equal qualifications will be preferred. Desy encourages especially women to apply.

## SYSTEMS ANALYST/ ADMINISTRATOR

### Physics Department

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Please send cover letter and resume to Virginia Gregory,  
Boston University, Office of Personnel, 25 Buick Street,  
Boston, MA 02215. <http://www.bu.edu/PERSONNEL>

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## EXPERIMENTAL GRAVITATIONAL PHYSICS

The Department of Physics at MIT is seeking candidates for a faculty position in experimental gravitational physics. MIT and Caltech are constructing the Laser Interferometer Gravitational Wave Observatory (LIGO), a national facility for the detection of gravitational waves from astrophysical sources. This NSF funded project will provide unique research opportunities in physics and astrophysics. The person fulfilling this position is expected to engage in undergraduate and graduate education, and may lead an independent research program or play a leadership role in the development of LIGO. Our hope is to fill a tenure track junior faculty position, but we encourage more senior, well established physicists to apply for a possible tenured appointment, in exceptional cases. In any case, we seek candidates who are accomplished in experimental physics and well versed in data analysis. Given the developing nature of this field, candidates with various experimental backgrounds (e.g., astrophysics, high-energy physics, nuclear physics, atomic physics, precision metrology, etc.) will be considered.

Applications are requested before October 1, 1997. Applicants should send a curriculum vitae, a brief description of their current research, and three letters of recommendation to: Professor Richard K. Yamamoto, Chairman, Search Committee, Department of Physics, RM 24-043C, Massachusetts Institute of Technology, 77 Massachusetts Ave, Cambridge, MA 02139-4307. MIT is an Affirmative Action/Equal Opportunity Employer and solicits applications especially from qualified women and minorities.



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### CHAIR IN APPLIED NUCLEAR PHYSICS

Applications are invited to a full professorship in experimental Applied Nuclear Physics. Ref. no. 3299/97. The professorship is intended to promote present developments and to create new fields in applied nuclear physics. The successful candidate who should demonstrate scientific excellence and pedagogical proficiency, is expected to pursue an active research program, supervise graduate students and engage in teaching. The candidate is also expected to chair the activities at the Department of Neutron Research.

Basic and applied research in nuclear physics at Uppsala University is conducted at the Department of Radiation Science and at the Department of Neutron Research. Major national facilities used are the The Svedberg Laboratory, a national facility for accelerator based research in nuclear and particle physics, the Tandem Laboratory and the Neutron Research Laboratory connected to the Studsvik research reactors. Examples of current research areas at Uppsala University, which are of interest in the context of applied nuclear physics, include fission energy technology comprising characterization of nuclear fuel by means of nuclear spectroscopy methods and accelerator driven transmutation of nuclear waste, fusion plasma diagnostics, medical therapy, production and use of radio nuclides, materials modification and characterization, and dating techniques.

Prospective candidates must contact the office of the faculty in order to receive the full announcement with instructions on how to apply. Please use fax no +46 (0) 18 471 1999 or e-mail: Christina.Lindberg@uadm.uu.se

Applications must be received on **October 31, 1997**, at the latest.

For additional information about the position, consult the dean of physics, prof. Bo Höistad, tel. no +46 (0) 18 471 3857, fax +46 (0) 18 471 3833 e-mail: Bo.Hoistad@tsl.uu.se

Uppsala University wishes to establish a more equal proportion amongst female and male professors and applications from women are encouraged.



Universität Zürich

The Faculty of Sciences (Philosophische Fakultät II) of the University of Zürich invites applications for a faculty position in

### Experimental Physics

Condensed Matter

at the Physics Institute. Depending on age and experience, the appointment will be made at the full (Ordinarius) or associate (Extraordinarius) professor level.

Candidates should have demonstrated their ability to carry out independent research in condensed matter physics. There is a preference for candidates in the field of

**Soft Condensed Matter**, especially **Biological Systems**,

but candidates with other areas of specialization will also be considered, in particular if they complement the existing programs in surface physics and superconductivity. The use of the neutron spallation source (SINQ) and the synchrotron radiation source (SLS) at the Paul Scherrer Institute near Zürich as well as that of the existing NMR spectrometers at the Physics Institute is possible.

The successful candidate is expected to participate in the teaching of basic cour for medical and biology students and special courses in condensed matter or biological physics.

Applicants should send their curriculum vitae (publication list, indicating the five most important publications, a short statement of research interests, research plan, and teaching experience) before November 15, 1997 to the

Dekan der Philosophischen Fakultät II der Universität Zürich. Prof. Dr. H. Haefner, Winterthurerstr. 190, CH-8057 Zürich.

For further information please contact Prof. Dr. R. Engfer, phone +41 1 635 5720, fax + 41 1 635 5704. Suggestions for suitable candidates are welcome.

### LABORATORI NAZIONALI DI FRASCATI DELL'INFN

#### EU Postdoctoral Fellowships (TMR Programme)

We invite applications for postdoctoral fellowships (one to two years) in theoretical, experimental physics (high energy physics, astroparticle physics, nuclear physics, synchrotron radiation and gravitational wave detection), and accelerator physics at the Laboratori Nazionali di Frascati of INFN (Istituto Nazionale di Fisica Nucleare).

The Laboratory is situated on a pleasant hill about 20km south of the centre of Rome. Some 150 researchers work here on the different activities. The 1 GeV  $e^+e^-$  machine DAΦNE (Phi factory), to study CP violation and hypernuclear physics, is currently under commissioning. Information on the Laboratory activities can be obtained from:

A. Antonelli, tel. 39-6-94032787, e-mail antonelli@lnf.infn.it and at the URL: <http://www.lnf.infn.it/>.

Applicants must be nationals of an EU member state (excluding Italy), or an associated state, age under 35 and have a PhD degree (or equivalent level of education) or 4 years' full-time research activities at post-graduate level. They should not have carried out research activities in Italy for more than 18 months in the last two years.

Fellows will be employed under the EU's general conditions governing research training fellowships (TMR Programme) and will receive an allowance in ECUs per month to cover subsistence and mobility expenses, tax and social security contributions and cost of attending conferences, travel expenses, etc. Global monthly allowance will be of about 3000 ECUs. More information on the TMR Programme are given at the URL: <http://www.cordis.lu/tmr/home.html>.

Candidates should send a letter of application (where the activity of interest must be specified), a C. V. and two letters of recommendation by 15 October 1997 to:

EU Fellowships Programme, Mrs. M. Cristina D'Amato, LNF-INFN  
Via E. Fermi, 40 - 00044 Frascati (Italy)  
tel.: +39 6 94032373, fax: +39 6 94032475, e-mail: damato@lnf.infn.it

The selected candidates will apply to the next round of EU selection which has the closing date of 15 December 1997.



**DESY**, one of the leading laboratories in particle physics and synchrotron radiation research is offering a position for an

## Accelerator Physicist

in the accelerator physics group MPY. The position is permanent and the salary will be according to the German civil services Ib MTV Angestellte.

Experimental particle physics at DESY concentrates at the HERA storage ring facility. The H1 and ZEUS Experiments make use of colliding electron/positron proton collisions to study the structure of the proton. The HERMES Experiment measures the scattering of longitudinally polarized positrons on a gas target of polarized atoms to study the spin structure of the nucleon. A fourth experiment, HERA-B, currently under construction, will investigate the CP-violation in the B-meson-system. B-mesons are produced on wire targets in the halo of the proton beam of HERA.

One of the near term future tasks of the accelerator division is to upgrade the HERA Facility in order to enlarge its scientific potential. Of special interest is the increase of the luminosity beyond the design values. For this purpose the entire interaction regions for H1 and ZEUS will be rebuilt. We are expecting the successful applicant to participate in this project. In addition the applicant should participate in the scientific shift services for all DESY accelerators.

Applicants should have a Ph.D. in physics, substantial knowledge of accelerator physics and should be experienced in field of large particle accelerators. Interested applicants with these qualifications should send their letter of application and three names of referees before 23.9.97 to:

#### DEUTSCHE ELEKTRONEN-SYNCHROTRON DESY

Notkestraße 85, 22607 Hamburg, Germany Code-number 47/97  
Telefon 49-40/8998-3628, Fax: 49-40/8998-4305

Handicapped applicants will be given preference to other applicants with the same qualification. Women are especially encouraged to apply for this position.

## POSTDOCTORAL POSITIONS AVAILABLE

The Relativistic Heavy Ion Group in the Physics Department at SUNY, Stony Brook, New York has several openings at the post doctoral level. We are collaborators in the PHENIX experiment under construction for the RHIC facility at nearby BNL. As one of the largest university groups in the RHIC program, we are involved in several key aspects of the PHENIX program. We have hardware responsibilities in the assembly of the Ring Imaging Cherenkov focal plane detector; assembly and test of the Drift Chambers; and production and testing of the Drift Chamber Front End Electronics. We are building up an analysis group to work in tracking and reconstruction efforts, with an emphasis on the extraction of early electron physics in search of signals of the Quark Gluon Plasma. Applications are invited from all qualified candidates to work with us on both hardware and software projects. Appointments and salaries will be commensurate with experience. PHENIX is expected to take its first data in 1999; our expectation is that these appointments will carry through the publication of first physics results. Interested applicants should send vitae and three letters of reference to:

**Prof. Barbara Jacak  
SUNY @ Stony Brook**

**Dept. of Physics  
Stony Brook, NY 11794-3800**

Applications from minorities and women are strongly encouraged. Stony Brook is an equal opportunity employer.

## FACULTY POSITIONS IN PHYSICS University of California, Berkeley

The Physics Department of the University of California, Berkeley intends to make one or more faculty appointments effective July 1, 1998. Candidates from all fields of physics are encouraged to apply. Appointments at both tenure-track assistant professor and tenured levels will be considered.

Please send a curriculum vitae, bibliography, statement of research interests, and a list of references to:

**Professor Roger W. Falcone, Chairman  
Department of Physics  
366 LeConte Hall #7300  
University of California  
Berkeley, CA 94720-7300**

by Tuesday, November 25, 1997. E-mail applications will not be accepted. Applications submitted after the deadline will not be considered. The University of California is an Equal Opportunity, Affirmative Action Employer.

## OAK RIDGE NATIONAL LABORATORY

# ACCELERATOR PHYSICIST

The Oak Ridge National Laboratory's Physics Division invites applications for a staff position in accelerator physics with the Holifield Radioactive Ion Beam Facility (HRIBF). This unique, newly commissioned facility uses two accelerators, the k=100 Oak Ridge Isochronous Cyclotron and the 25 MV tandem electrostatic accelerator, to produce accelerated beams of short-lived radioactive species, which are then used for research in nuclear structure physics and nuclear astrophysics. Operation, optimization, and improvement of the existing facility are now the primary missions of the HRIBF staff. ORNL's Physics Division will compete for the next-generation radioactive ion beam facility, proposed for future funding in the 1995 DOE/NSF planning document, Nuclear Science: A Long Range Plan. The Physics Division offers an excellent environment for research and development, including access to state-of-the-art computational facilities and opportunities for collaboration with guest scientists at the Joint Institute for Heavy Ion Research.

The successful candidate must have a PhD or equivalent experience in Physics or Engineering with 5+ years' professional experience in accelerator physics; demonstrated record of accomplishments in accelerator design and development; excellent communication skills; the desire to work in a team environment on technically challenging problems; and a working knowledge in such areas as: magnet technology, beam transport, RF systems, and superconducting cavities. Project leadership and facility management experience desired.

Qualified applicants are invited to send a current resume and arrange for 3 letters of evaluation to be sent to: **Dr. James R. Beene, Oak Ridge National Laboratory, PO Box 2008, Oak Ridge, TN 37831-6368** or e-mail a resume to: [jrb@ornl.gov](mailto:jrb@ornl.gov)

For more information about ORNL, the Physics Division, and the HRIBF, please visit our web sites at: <http://www.ornl.gov>, <http://www.phy.ornl.gov>, and <http://www.phy.ornl.gov/hribf/hribf.html>

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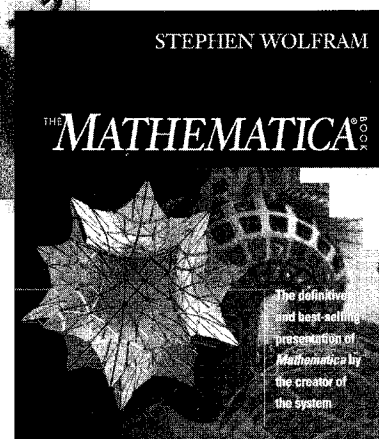
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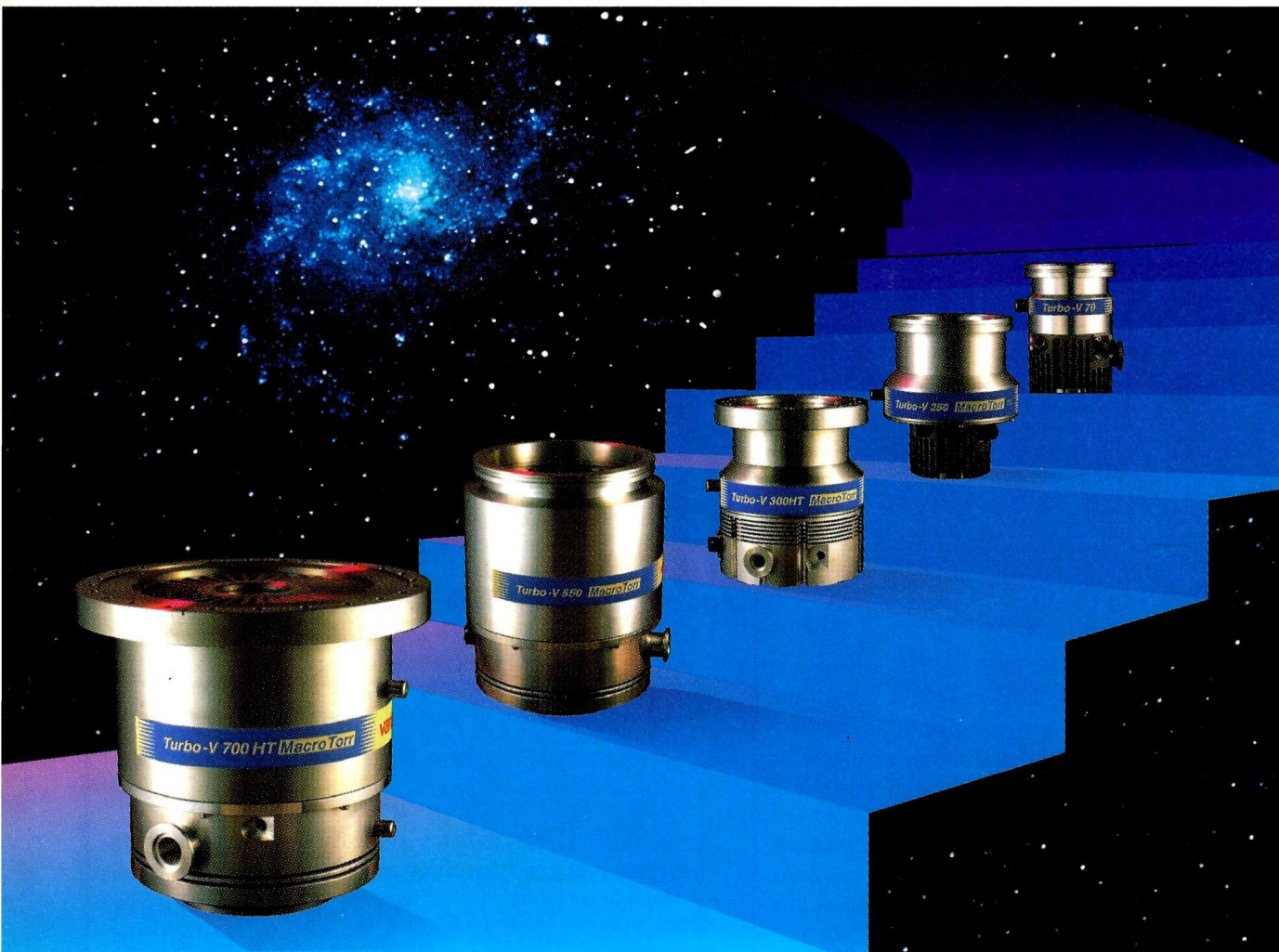
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