

The University of Sussex BULLETIN

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SAKHAROV AT SUSSEX

Andrei Sakharov, the distinguished Soviet scientist and human rights campaigner, is to visit the University on 19th June to attend a Physics meeting being held in his honour and to receive an honorary degree.

Dr. Sakharov is an eminent nuclear physicist whose work brought him early distinctions and awards from the scientific establishment in the Soviet Union. He worked, from the 1940s onwards, on the USSR's nuclear weapons programme but his support for a ban on nuclear testing in the atmosphere and his activities in support of civil liberties brought him into conflict with the authorities and led to his exile in Gorky for several years.

Dr. Sakharov was awarded the Nobel Peace Prize in 1975, the Einstein Peace Prize in 1988 and, in April 1989, he was elected to the Congress of the People's Deputies by the Academy of Sciences.

At the Physics meeting, papers will be presented in the field of time-reversal violation and its cosmological conse-

quences, areas in which Dr. Sakharov is an acknowledged authority and which are of great interest at Sussex where the Physics Group is currently playing a leading role in the European time-reversal violation experiment at Grenoble and where cosmology has been a major research interest since the establishment of the Astronomy Centre.

A Special Graduation Ceremony will be held at 12.30 pm in the Meeting House when the Vice-Chancellor will confer the degree of Doctor of Science on Dr. Sakharov.

Admission to both the Physics meeting and the Graduation Ceremony will be by ticket only. Any member of the University who wishes to attend the Ceremony, which will last about 15 to 20 minutes, should apply for a ticket to Bob Jamieson, Room 302, Sussex House, tel. 3827; only one ticket per member will be issued. While there will not be a formal faculty procession, any member of faculty who wishes to attend the Ceremony in academic dress may, of course, do so.

PETER LINDON TO ADVISE ON RELATIONS WITH EMPLOYERS

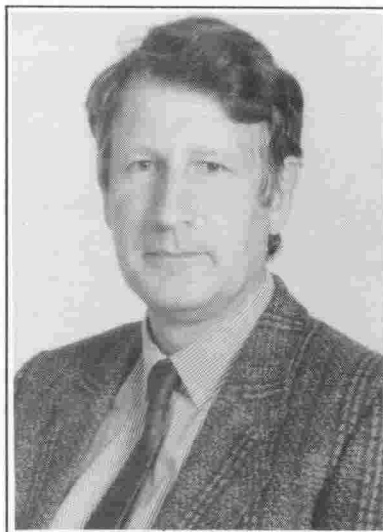
Dr. Peter Lindon (pictured right) has been appointed Special Adviser to the Senior Pro-Vice-Chancellor with responsibility for developing the University's relations with employers.

His responsibilities will include the promotion of research and development contracts, short courses, professional training and links with the undergraduate and postgraduate programmes. Courses bearing COMETT (Strand C) and PICKUP awards will also fall within his remit.

Peter Lindon is a long-standing member of the School of Engineering and Applied Sciences with research interests in power electronics and AC machine drives. Most of this work is undertaken collaboratively with industry.

Apart from his academic career, Dr. Lindon has worked in industry, television and public administration, and is well suited to the task of matching the potential of the University to the needs of industry.

The creation of the post is a timely response by the University to the skills shortfall in industry arising from



demographic factors and the rapidity of technological change.

"There's a pressing need for industry to get at the immense store of knowledge, expertise and intellectual capacity locked up in universities. My role is to make this happen in Sussex by raising awareness on both sides and putting heads together," Dr. Lindon said.

He will devote two-thirds of his time to this new position and will work closely with the Administration, especially the Research and Industry Support Group located in Sussex House. He can be contacted in EAPS.

AUT PAY SETTLEMENT

Members of the Association of University Teachers voted, in the recent ballot, to accept a pay award of six per cent, backdated to 1st April, with a further one per cent to be distributed at the universities' discretion from 1st October.

In addition, all universities will pay a one-off lump sum of at least £150 and individual universities may pay up to £285 if they can afford it. At Sussex, the Vice-Chancellor and Chairman of Council have agreed to pay the full lump sum of £285.

Every effort is now being made to ensure that degree results are ready in accordance with the normal schedule; the Summer Graduation Ceremony will be held on 11th July as previously arranged.

CHAPLAINCY FAREWELLS

Colin Thompson, the University Chaplain, is to leave at the end of this term to take up a Lectureship in Spanish at Oxford, with a Tutorial Fellowship at St. Catherine's College. To mark his departure, you are invited to join the 11.30 am Morning Worship on Sunday, 25th June, to be celebrated by Colin and at which he will preach, and to a lunch, presentation and party afterwards. If you cannot get to the service, you are invited to the lunch and party beginning at 1.15 pm. Please bring a dish of party food and let Barbara Barber, Room 3, The Meeting House, know that you will be there.

Father Bruce Harbert is also leaving this term. He will be taking up an appointment as Assistant Lecturer in Dogmatic Theology at St. Mary's College, Oscott, nr. Birmingham. A Chaplaincy Party to bid farewell to Fr. Bruce and this year's finalists will be held on Tuesday, 27th June at 6 pm. You are warmly invited and, again, are asked to let Barbara Barber know that you will be attending and bring a savoury or sweet dish with you.

EUROPEAN COMMUNITY RESEARCH AND DEVELOPMENT PROGRAMMES

Deadlines for the next calls for proposals

Programme	Deadline
BRITE/EURAM (aeronautics)	09.06.89
Technology Research — coal (ECSC) (DG XVII)	31.08.89
Steel research (ECSC) (DG XII)	31.08.89
Pilot and demonstration projects in the iron and steel industry (ECSC) (DG XII)	01.10.89
Plan to facilitate access to large-scale scientific facilities (see Official Journal C 93 of 14.4.89) (DG XII)	01.10.89
MAST (Marine Science and Technology) (DG XII)	30.06.89
Plan to stimulate the international cooperation and interchange needed by European researchers: SCIENCE (see Official Journal C 335 of 30.12.88) (DG XII)	no deadline
STD (Science & Technology for Development) (DG XII)	30.06.89
DOSES (Call for expressions of interest; see Official Journal C 99 of 20.04.89) (DG Statistical Office)	30.06.89

Forthcoming calls

FLAIR	May/June 1989
DRIVE — Information technology and telecommunications applied to road transport	June 1989
STEP/EPOCH — R & D programmes in the field of environmental protection	June 1989
Decommissioning of Nuclear Plants	June/July 1989
BRIDGE — Biotechnology Research for Innovation	September 1989
ESPRIT II — Research in information technology	November 1989
IMPACT — Information Industries	November 1989
FAR — Fisheries & Aquaculture Research	2nd half of 1989

FAMILY CREDIT: CLAIM IT!

If you've watched television lately you could hardly have failed to miss the new series of advertisements for Family Credit. This benefit has had a very low take-up since its beginnings last year, when it replaced Family Income Supplement. It's primarily intended for working parents on relatively low take-home pay and, if you qualify, can act as a passport to free NHS dental treatment, free prescriptions and some assistance with the cost of glasses.

FC can be claimed by workers who are employed 24 hours a week or more and have children. Single parents or families with only one income are the most likely to qualify. The benefit is tax-free and you can arrange to have it paid to you at a Post Office, like Child Benefit, or direct into an account at a bank or building society. Lots of people who could be getting it simply aren't claiming. You could be one of those people.

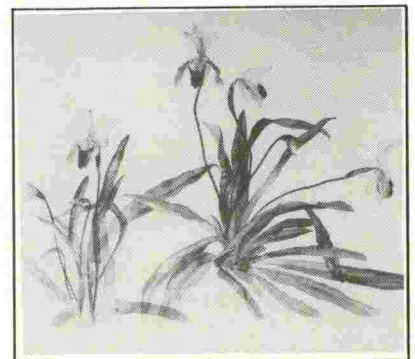
Let's look at a few examples. If you have a child under 11 and you take home less than £112 per week, you should make a claim. The same applies if you have two children, one under 11 and the other between 11 and 15, and your take home pay is less than £130 per week. There are lots of other combinations. If you'd like further information and a rough calculation of your eligibility, pick up your latest pay-slip and call me on internal 3598. To get a claim form, call the FC Freephone 0800-500-2222. I will also have a limited supply soon, so check with me first.

Richard Price
Staff Welfare Officer

News from the Gardner Centre

IN TUNE FOR JUNE

With the Brighton Festival over, the Gardner Centre is both exhausted and exhilarated; exhausted by the level of activity within the Centre during the Festival and exhilarated by its quality and popularity. Recipient of a special Zap Award for its contribution to the Visual Arts in the Festival, the Gardner Centre Gallery continues where it has led in presenting two beautiful, summery exhibitions featuring watercolour paintings. Both run from 7th June to 1st July and are complemented by two Saturday one-day masterclasses in watercolour techniques on 10th and 17th June, from 10.30 am to 4 pm, at a cost of £15 per day. (Contact Sue Rigby on 685447 for further details.)



Elizabeth Blackadder —
Paphiopedilum '88

The main Gallery will feature the work of Elizabeth Blackadder. Always experimental and expressionist in her painting, Blackadder's latest cats and flowers are drawn and painted with delicate virtuosity. Fans, toys and puzzles are also familiar elements in the work of this major artist. The exhibition includes not only the watercolours for which she is best known, but also oil paintings, drawings and prints.

In the foyer, the work of Eastbourne artist James Armstrong will be shown, whose still lives and seascapes are painted in a very personal style.

Turning to the theatre, Regency Opera will be performing Puccini's *Tosca* with full orchestra and chorus from 7th to 10th June.

Finally, before the vacation there are three University productions: a celebration of the French Revolution by the French Society; a tragicomedy by the Alternative Drama Group, written by Craig Vaughan, a research fellow in Thermo-Fluid Mechanics; and Purcell's *Dido and Aeneas* by the Music Federation.

PAT ALLEN

We regret to report the death, on 1st June, of Mrs. Pat Allen. Pat, who had worked at the University since 1981 as a secretary in the Registrar & Secretary's office, had been ill for some months; she will be sadly missed and we extend our deep sympathy to her family.

WORLD FIRST FOR SUSSEX PHYSICISTS

A major advance in laser technology has recently been developed Dr. Peter Townsend and his group in the School of Mathematical and Physical Sciences. They have made a crystal waveguide laser using the method of ion implantation — a world first which will result in considerable energy savings, since the lasers produced by this method require far less power than conventional lasers.

Another significant advantage of this new method is its applicability to a wide range of materials which have the potential to act as lasers. The work is part of a £250,000 collaborative programme with Professor Tony McCaffery of the School of Chemistry and Molecular Sciences and the Physics Department at Southampton University, funded by the Science and Engineering Research Council.

To make a crystal waveguide laser using ion implantation, a beam of ions, with energies up to 3 million electron volts, is fired into a crystal. The rapid energy transfer to the crystal produces structural changes which alter the refractive indices. As optical waveguide confines light by differences in index between the guide and the surroundings, the changes produced by the ion beam can be used to write optical waveguides. The present interest in making the waveguides in laser materials then follows as an obvious consequence.

Since all the energy is confined within a path of very small cross section, the energy density is much higher than in a standard block of laser crystal. In principle, this means the light intensity may be increased by up to one million times, or in practical terms, a waveguide laser should operate with a greatly reduced drive power.

As a test system, the Sussex group — Dr. Townsend, Dr. Peter Chandler and Lin Zhang — have used a familiar laser

host material, neodymium doped YAG (yttrium aluminium garnet) which lases in the near infra-red region of the spectrum. Whilst this laser material is well-known, there is real excitement because the method is so simple that it can be applied to a whole range of potential laser materials.

The objective of members of the collaborative programme is to form highly efficient waveguide lasers in materials which are currently only useable in the form of bulk crystals. The ion implantation approach to define optical waveguides in crystals was first proposed by Peter Townsend and demonstrated by him in LiNbO_3 . It has been highly successful, not only in the quality of the guides, but also because it seems to be widely applicable.

The small Sussex group have already made guides in some 20 materials including many potential laser hosts, or crystals which efficiently double laser frequencies (e.g. convert infra-red lasers into visible green lasers). The ion implantation route offers reproducibility and detailed control of the refractive index profiles.

For comparison, conventional waveguide development in just one key material, e.g. LiNbO_3 , has received some 15,000 man years research. However, the conventional techniques are not transferable to apparently similar compounds such as KNbO_3 . The good news for Sussex is that the ion beam implantation method is the only available approach for many of the materials of interest in optoelectronics.

In the long term, the ion implanted waveguides should provide very compact, high power tunable lasers. Overall efficiencies, of optical power from electrical power, could be 10 or 20 per cent. This contrasts with the 0.01 per cent for many gas lasers. The Sussex group are therefore looking forward to many more world firsts.

FIELDWORK IN POLAND

A week-long visit to Poland was made in April by Dr. Tony Binns and 14 other British geographers as part of a continuing exchange of views between the two countries on the teaching of geography. This third British-Polish seminar concentrated in particular on text books and fieldwork, visiting Warsaw, Torun and Gdansk.

The visit was organised by the Geographical Association, of which Dr. Binns is Joint Honorary Secretary, with financial support from the British Council. The group's first meeting was at the Institute for School Curricula in Warsaw, which is responsible for the development and implementation of a national curriculum, a new geography curriculum having been developed in 1983-84.

The British geographers then travelled to Torun, an ancient settlement on the north bank of the Vistula, some 200 km northwest of the capital, where they were the guests of the Institute of Geography at the Nicolai Copernicus University and took part in a two-day programme of fieldwork with 14 and 15 year old pupils. The group found that the fieldwork had been carefully planned and it proved to be most stimulating, with the party divided into mixed groups of British



Undertaking fieldwork in the Vistula valley near Torun.

and Polish teachers and children, led by academics from the Torun Institute of Geography.

The final stage of the visit took the party to Gdansk on Poland's Baltic coast, a region which has grown rapidly in recent years, particularly with the development of Gdynia as a ship-building centre and port.

It is hoped that a return visit by Polish geographers will be made in 1991

and that it might also be possible to arrange exchange visits on an individual basis. Various publications and articles are planned and a video has been made of the visit. The UK group is to publish a substantive document on the visit which it is hoped will make a valuable contribution to the rather limited and often out of date literature on Poland currently available in this country.

NOTICEBOARD

VACANCIES

The Personnel Office has issued the following summary of posts to be filled. Advertisements for these vacancies have been placed in local, and where appropriate, national papers, as well as being circulated to the relevant Section Heads and Union representatives for circulation to staff and noticeboards. Copies of these advertisements and further particulars are available, as well as application forms, are available from the Personnel Office, Room 227, Sussex House. This list was compiled on 31st May and is subject to revision.

Teaching Faculty

Chair of Molecular Genetics

Temporary Lecturer in Economics, AFRAS

Temporary Lecturer in French, EURO
Temporary Lecturers (2 posts) in Experimental Psychology

Tutorial Fellows in French and German
Temporary Lecturers in History in ENGAM and SOCS

Research and Analogous Faculty

Research Fellows (2), COGS

Other Faculty

Organising Tutor/Lecturer in Education
Purchasing Officer

Secretarial, Clerical and Related

W/P Support Secretary, full-time, grade 4

Secretary, Personnel Office, f/t, grade 3

Secretary, Academic Relations with Industry, f/t, grade 3

Secretary/Receptionist, Residential Services, f/t, grade 3

Secretary, SOCS, f/t, grade 3

Secretaries to Research Teams, SPRU, f/t, grade 3

Secretarial Assistant, SPRU, f/t, grade 3

Secretary, MAPS, f/t, grade 3

Secretary, EDB, part-time, part-year, grade 2

Clerk, Financial Accounts, f/t, grade 2

Accounts Clerk, Estates, f/t, grade 2

Clerical Assistant/Typist, SPRU, f/t or p/t, grade 2

Technical

Audio Visual Technician (trainee), f/t

General

Ground staff, Estates, f/t

Groundsperson, Sport Service, f/t

Porter, Sportcentre/Playing Fields Pavilion, p/t

University Library: cleaner, p/t. Further details: Librarian's Secretary, tel. 8158.

ISLE OF THORNS SWIMMING POOL

This will be open during July and August, Saturdays and Sundays only, between 11.00 am and 6.00 p.m.

PUBLIC LECTURE

Judaism and Ecology

Rabbi Pesach Efuno

All welcome. Meeting House Quiet Room, 5 pm, tomorrow, 7th June.

NEWS FROM THE LIBRARY

- The recently published second edition of *The Oxford English Dictionary* (20 vols) is now available in the Quick Reference section.
- Almost all the Ordnance Survey 1:50000 maps of Great Britain have now been published, a complete set of those available may be consulted in the Library, near the Quick Reference Section (where the *Londranger Gazetteer*, on microfiche, provides an alphabetical index to all names shown in this series of maps).
- The Library will as usual be closed over the last weekend of term, 24th and 25th June.

CAN YOU ADVISE?

Brighton Citizens Advice Bureau is looking for volunteer advisers. No formal qualifications are needed and full training is given. Travel and childminding expenses are paid. A commitment of at least one fixed day a week for more than a year is required, together with a further half day a week for three months initial training. Tel. Brighton 207551 for details of introductory talks on 4th, 5th and 6th July.

Small ads

MATURE PERSON working as secretary on campus with 3 yr old daughter seeks rented accommodation 1/2 bedrm. flat in Brighton, Hove or Lewes area. Please contact Christine, ext. 8006 up to 2 pm, or home 773840.

FLAT WANTED: model tenant (mature postgrad) needs self-contained rented accommodation for one person, Brighton area. Tel. Irene Leake, 25143 (answerphone).

FOR SALE: in Downland village of Kingston, 4 bedrm. s/d house, spectacular views. Lounge, dining rm, kit, walk-in larder, cloaks, bath, sep. toilet, g.c.h., large garden. £175,000. Tel. Lewes 472295, eves. and w/ends.

DOWNLAND SETTING, Saltdean, 4 bedrm. split-level detached house, 3 yrs. old, lounge 24 x 13, Paula Rosa kitchen, bath, sep. shower, utility rm, garage, £128,000. Reduction for early completion. Tel. 306333.

TO LET 1-30 August, 17th c. cottage, central Seaford, quiet location, lovely garden. Non-smokers only. Tel. Seaford 899587 or Jenny Marshman, 3496.

HOLIDAY IN FRANCE: full board accommodation offered by British family living in charming village nr. Narbonne for 1/2 teenagers, 14/16 years (friends or same family). £50 per wk. Tel. Pauline O'Reilly, 8209.

CHARACTER cottage in picturesque N. Devon village available for holiday letting. Sleeps 6. Contact Sheila Brain, 2160.

WANTED: bass player required by Sussex Trugs. Please contact Richard Veasey, tel. 8002.

BLACK KITTEN, 10 wks., lovely temperament. Tel. 8238.

ACCOMMODATION FOR RETURNING INTERNATIONAL STUDENTS

The International Office has reserved a small number of campus rooms (not family flats) for returning undergraduates and postgraduates for the next academic year. Forms can be collected from the Accommodation Office or International Office, and the closing date for receipt of the forms is 5.00 pm on Friday, 9th June.

RECENT BOOKS

Recent publications by Sussex authors include:

Evolutionary Genetics by John Maynard Smith. Oxford U.P. Paper, £16.95.

Pre-Raphaelites Reviewed. Edited by Marcia Pointon. Manchester U.P. Paper, £8.95.

The Batsford Dictionary of Drama by Terry Hodgson. Batsford. Now in paperback, £9.95.

Natural Language Processing in Lisp: an introduction to computational linguistics by Gerald Gazdar and Chris Mellish. Addison-Wesley. £17.95.

Natural Language Processing in Pop-11: an introduction to computational linguistics by Gerald Gazdar and Chris Mellish. Addison-Wesley. £16.95.

Natural Language Processing in Prolog: an introduction to computational linguistics by Gerald Gazdar and Chris Mellish. Addison-Wesley. £16.95.

All available from SUSSEX UNIVERSITY BOOKSHOP

LANGUAGE CENTRE IMMERSION COURSES

The Language Centre is to hold an immersion day this Saturday, 10th June in French, German, Japanese and Spanish. The cost is £25 for the day and the courses will run from 9.30 am to 4.30 pm.

THE BULLETIN

The Bulletin is published every three weeks during term. The next edition, and the last for this term, will appear on Tuesday, 27th June. Copy must be received in the Information Office, Level 2, Sussex House, tel. 8208, by no later than 4 p.m. on Monday, 19th June.

Please remember to let us know about news events — we can only inform you, if you inform us.

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