Student makes medical breakthrough

A prize-winning engineering student has made a revolutionary breakthrough that could save the lives of premature babies.

For his third year project Richard Jones investigated the fluid flow dynamics of a respiratory device for babies called the Infant Flow System (IFS). The IFS is a non-invasive system which supports the breathing effort of neonates suffering from respiratory distress. In many cases it eliminates the need for more uncomfortable treatments such as intubation (placing a tube down the patient’s airway). The device is very successful and has been marketed world-wide for a number of years. The manufacturer, Electro Medical Equipment Ltd. (EME), a local company based in Brighton, approached the University to assist in developing a fuller understanding of the fluid flow inside the device.

The Infant Flow System is unique in that it works using fluid interaction rather than the mechanical valves seen in a conventional ventilator. This gives it a fast response time and low work of breathing – a measure of how much effort is required from the patient. The device works on a principle known as the Coanda Effect whereby a jet of air aids inhalation by forcing air into the lungs, flipping round when the lungs are full, it then assists exhalation by drawing air from the lungs. It was this effect and the potential for modifications in its applications that Richard was asked to investigate.

In helping the baby’s lungs to develop, the IFS often reduces the intensive care time required. Weaning time is reduced and makes the unit available for other patients. And now that the geometry of the flow is fully understood, EME can continue to develop a range of new devices utilising the same principle.

Richard’s success won him the IMechE National and Institution awards for the best biomedical engineering project for 1996. “It’s the best project I’ve ever seen,” said Dr. Peter Childs, who supervised the project and co-ordinated the relationship between the University and EME. “It is very rare that somebody comes up with a detailed understanding of flow processes. What Richard has done is exceptional.”
The Sussex Place-Names Net

R
cognising that scholarly activity goes on outside universities, the Linguistics Subject Group has forged links with people engaged in research on Sussex place-names, resulting in the formation of the Sussex Place-Names Net. This consists at present of 12 people: two academics from Sussex, two from other universities, two archivist-historians employed at record offices, and six independent scholars. Their purpose is to collect, share and publish information necessary for the completion of the English Place-Name Survey in Sussex, the first phase of which was published in 1929/30, but which left out very large numbers of minor place-names.

An example of the potential offered by the analysis of missed names is the discovery of several places named by the Old English word 'comp', adapted from the Latin 'campus', which is regarded as a reliable indicator of Roman-period activity and meaning 'land on the edge of a villa estate'. One such was noted in 1983, before the discovery of the adjacent Roman villa at Beddington in 1986, and others await the attention of the resistivity meter and spade. Current investigations by Net members are yielding greater understanding of landholding in the Ashdown Forest, East Grinstead and Selhurst areas of the Weald at the time of Domesday Book; revealing aspects of the origin of Lewes and the urban history of Chichester; uncovering the early topography of Romney Marsh and piecing together the fragmentary history of West Thorney. Ongoing work is also expected to reveal something about the relation of place-naming to Saxon-period land-holding and farming.

The project, coordinated at Sussex by Richard Coates, is centrally about the interpretation of names as linguistic objects, and the study of the ways in which they change; but the Net is interdisciplinary, involving archivists and local historians, palaeographers, archaeologists and geographers, all of whose skills are necessary for a full understanding of the giving of names in an historical and cultural context.

The Net produces a substantial twice-yearly newsletter edited by Richard Coates. Copies of the first issue, which includes notes and short articles, can be obtained from COGS Library (ext. 2405) £1.50.

Ieuan Griffiths – AFRAS Guest of Honour

Ieuan Griffiths who retired from the University last September after 32 years of service was the guest of honour at the AFRAS Christmas lunch in December. A former Dean of the School, with special interests in the economic and political geography of southern Africa, Ieuan served and represented the University in a variety of capacities over many years.

In recognition of his long and loyal contribution to the academic, administrative and social life of the University he was presented with a framed copy of an early 19th century map of the Cape Colony along with some South African wine, a copy of the classic BBC recording of Dylan Thomas's Under Milkwood and a bound copy of signatures and messages from his friends and colleagues throughout the University. Ieuan has not enjoyed the best of health in recent years and he retires with our best wishes for a happy and contented retirement.

Baguette Express
Opening 3 February in the Mall, Refectory opposite the Post Office
Freshly baked, filled baguettes, pizzas, bagels, French savouries, Danish pastries, hot and cold drinks

Money back guarantee!

At the Gardner Sinfonia 21
Tuesday 11 February at 7.45pm
So confident is the Gardner that people will enjoy the music of Sinfonia 21, they are prepared to offer a money back guarantee to any disappointed customers. This is the challenge – give Sinfonia 21 a chance – you have nothing to lose if you don’t like it and an awful lot to gain if you do.

Vega Science Masterclasses
The next set of Masterclasses are to be broadcast early in the morning on BBC2 on Tuesdays 4, 11, 18 and 25 February. They are:
Flight in Birds and Aeroplanes by Professor John Maynard-Smith, (BIOLS) at 4.30 am
Bernal and the Social Function of Science by Professor Chris Freeman, (SPRU) at 5 am.
WAKE UP YOUR SPRING-TERM BLUES

The ‘spring’ term can be the worst time of the year for winter misery. Most of us are affected to some extent but some unfortunate people suffer more than others. The problem probably lies with our biological clocks, says Mike Jones of BIOLS, and so does its solution. The short and often dark days of winter (and the misnamed ‘spring term’) allow us very little contact with outside daylight, which plays a major part in keeping us in time with external conditions. It helps if we work by sunny windows rather than in windowless cells.

One theory about this condition is that it is a type of hibernation in response to the day length or lack of bright light; we eat more and do less. It seems more likely, however, that it may be due to a lack of synchronization. People don’t get strong enough time-signals from the outside world and so their internal ‘clocks’ drift with their own inherent timing. Human ‘clocks’ tend to run slow, with a period slightly longer than 24 hours, and so, without suitable time cues to reset them, they get later and later each day. This situation is familiar to anyone dealing with teenagers at weekends and is also quite well known among students.

Bright light, daylight or the equivalent, is the answer in either case and, if the problem is lack of synchronization, the light is most effective in the first part of the morning. This is because our ‘clocks’ need to be advanced by morning signals. Light is the most important of these signals, but general arousal, exercise, music, interpersonal relations, all can play a part. Humans, like cows, thrive best on a steady time-regime and regular ‘wake-ups’, therefore, are the key to academic and social success.

Rumour has it that the University will soon be introducing morning ‘works parades’, with PT and suitable patriotic or martial music; this will be led by the Vice-Chancellor and Deans.

Roger Tayler
It is with great sadness that we report the death of Roger Tayler in the Royal Marsden Hospital on Thursday 23 January. Roger was appointed Professor of Astronomy in 1967, just after the foundation of the Astronomy Centre, and was an outstanding Director of the Centre for three six-year stints, ending with his retirement in 1995. He was a wise and well-respected Dean of MAPS from 1974-78 and, through his nearly 30 years on Senate, was well-known and universally liked throughout the University. Before coming to Sussex, he held research positions in the UKAEA, where he undertook some of the first important work on the stability of plasmas in fusion reactors, and research and teaching positions at Cambridge, where he collaborated with Fred Hoyle and Stephen Hawking.

Many of his Sussex graduate students now hold academic positions themselves. He was successively Secretary, Treasurer and President of the Royal Astronomical Society, was for 20 years the Managing Editor of its major journal, and served on a host of university, national and international committees. He was awarded the OBE in 1990, and elected FRS in 1995. He was an excellent teacher, who continued to teach after his retirement and it was characteristic of him that he made up all his examination questions during his final spell in hospital. All who knew him will mourn a fine man who contributed an immense amount to the University. His funeral will be in St Anne’s Church, Lewes, at 2pm on Friday 7 February. Family flowers only. Donations to the Royal Marsden Hospital Myeloma Research Fund, c/o Cooper & Son, Funeral Directors, 42 High Street, Lewes, tel: 01273 475557.

In brief

RESEARCH OPPORTUNITIES

This is a selection of Research Opportunities. More details of these and other opportunities are available from Mylene Powell in the Research Office; ext 3812 (mornings only); email: M.Powell@sussex.ac.uk; http://sussex.ac.uk (For staff, Research Funding) or from URL http://www.ncl.ac.uk/~nrsru/refund.

THE EPILEPSY RESEARCH FOUNDATION - HASTINGS FELLOWSHIP: applications invited on research into Sudden Unexplained Death in Epilepsy. Closing date: 14 February.

WELLCOME SCIENCE AND ART PARTNERSHIPS AWARDS: applications invited. To bring the insights of science and art closer together with an idea which will capture the public’s imagination. Closing date: 14 February.

THE ROYAL SOCIETY ESSO ENERGY AWARD 1997: made to an individual or a team, which has made an outstanding contribution(s) to the advancement of science or engineering or technology leading to the more efficient mobilization, use or conservation of energy resources. Closing date: 17 February.

THE ROYAL SOCIETY/NATO POSTDOCTORAL FELLOWSHIP PROGRAMME: applications invited for one year fellowships tenable in a laboratory in the UK from postdoctoral scientists of some of NATO Cooperation Partner countries. Closing dates: annually on 15 April and 15 September.

WELLCOME TRAVELLING RESEARCH FELLOWSHIPS 1996-97: applications invited from scientists who wish to gain further research experience by working in leading laboratories in the UK or the Republic of Ireland. Two types of award will be made: Research Fellowships and Research Training Fellowships. No closing dates.

UK/SWEDEN ACADEMIC COOPERATION PROGRAMME 1997: to encourage the development of links between Sweden and the UK. Grants for visits is £2000 to each partner. All subject areas. Closing date: 14 March.

LLOYDS CENTENARY FOUNDATION POST-DOCTORAL FELLOWSHIPS: to fund research in the fields of medicine, science, engineering and business studies. Closing date: 4 April.

MRC BIOINFORMATICS: priority areas: improved co-ordination, integration and interoperability of existing databases; development of databases describing biological function; novel applications, development and evaluation of software; co-ordination of epidemiological data on risk and genetic disease and evaluating demographic effects. Open competition, no closing date given.
Monday 3 February - Sunday 9 February

Lectures, Seminars, Colloquia

Monday 3 February


1pm Laboratory of Experimental Psychology: The effects of smoking on negative priming and interference. Paul Rodway, Biology Lecture Room.

2pm Particle Physics Seminar: Cryogenic detectors and a search for dark matter. S. Cooper (Oxford), room PB2A1.

2pm CulCom - Telling Stories: The role of autobiography and personal narrative in women's history. Sheila Rowbotham (Manchester), Gardner Centre Theatre.

4.30pm Neuroscience Seminar: Robot models of sensory-motor control. Barbara Webb (Nottingham), Biology Lecture Room.

5pm Women's Studies Seminar: Social movements and their relationship to Feminism. Sheila Rowbotham, room D730.

Tuesday 4 February

9.30am Telling Stories Follow-up Seminar: The role of autobiography and personal narrative in women's history. Sheila Rowbotham, Essex House Conference Room.


12.30pm Sussex Life History Research Seminars: Pen portraits and privacy. Christian Tyler (Financial Times), University Library Seminar Room 122.

4pm COGS Seminars: Reading the brain's code. Edmund T. Rolls (Oxford), room PBSC11.

4.15pm Biochemistry and Genetics and Development Seminar: Microal دوريometry of protein-protein, protein-ligand and other interactions. Dr Alan Cooper (Glasgow), Biology Lecture Theatre.

5pm German Research Colloquium: Heidegger, Buber and the psychology of listening. Peter Wilberg (Whitstable) room A155.

5pm American Studies Open Seminar: H.D. Gertrude Stein and Georgia O'Keefe: icon and Index in the Modern. Helen McNell (East Anglia), room D730.

5pm MA Language, Arts and Education Open Seminars: Voices in the dark. Faynia Williams and Richard Crane, EDB room 302.

5pm Social Anthropology Graduate/Faculty Seminar: Participation in Iran. Dr Sue Wright, room A71.

6.15pm Public Lecture: Energy and sustainability - too much, too little or too late? John Cheshire, Professor Fellow in SPRU and Head of the Energy Programme, Molecular Sciences Lecture Theatre.

Wednesday 5 February


1pm IDS and Poverty Research Unit Seminar: Participation, poverty and social exclusion in the north and south. John Gaventa, IDS room 221.

2pm South Asia Workshop: Powerful women, fearful men: reforming women's popular culture in late 19th century Punjab. Anshu Malhotra, room C337.

2pm International Relations and Politics Seminar: Assessing the democratic gap in non-Westphalian politics: citizenship and sovereignty. Dr Antje Wiener, EDB room 125.

What's on...

Wednesday 5 February

3.30pm USE/GRCE Faculty Research Seminar: Evaluating the role and the work of the TTA. Ian Hextall (Roehampton Institute), room B347.


4.30pm History of Art Work-in-Progress Seminar: Towards a political economy of contemporary art in Britain. Dr. Andrew Brighton (Tate Gallery), room A5.

5pm English Graduate Colloquium: Modernism and the tank, 1916-1919. Trudy Tate (Southampton), room D640.

Thursday 6 February


4.15pm The New Metaphysical Art: Inaugural Seminar: Metaphysics, metaphysical art - beyond the establishment. Sebastien Barker, Gardner Arts Centre, Music Room.

5pm History Work-in-Progress Seminar: Engineering joy in work: psychology and rationalisation in France in the 1930s. Jackie Clarke, room A155.

5pm Sussex Development Lectures: Women, literacy and development. Lalage Bown, A1 Lecture Theatre.

5pm Social and Political Thought Seminar: Fundamental equality. John Chavet (LSE, Politics), room D630.

5pm French Research Group Open Seminars: Jean-Luc Nancy on Kant. Jonathan Derbyshire, room A103.

Friday 7 February

2pm SPRU Seminar: Time compression and supply chain management. Professor Denis Towill (University of Wales), EDB room 121.

4pm Astronomy Centre Seminar: Galaxy associations as common features of clusters of galaxies. V. Gurzadyan (Yerevan, Armenia), room PB1A7.


Miscellaneous

Debating Society Meeting
1.30pm Thursday 30 January; This house holds that genetics fully determines the person you are. Room A5

Dermologica
Beautu Salon (situated at Sky Gym - Lewes Road Area) are offering all University members 10% discount on treatments. For further details contact Sandy on 386255.

Boxercise
The ultimate stress buster without the lumps and bumps, 6 week course commencing 5 February. Wednesdays 12-1pm, £12.60 University or £15.60 Public. Limited places available bookings now being taken at the Sportcentre reception. For further details contact Karen on ext. 3947/8228.

Undergraduate History Forum
2pm Wednesday 5 February: Mr Roger Davy of the East Sussex County Record Office will speak and also work through a practical will-writing exercise. Room A 155 all welcome. Convener Judith Kimmins Bourke CCs, EDB room D310.

Stolen Wheelchair
Would anyone with knowledge about the theft of a wheelchair from outside Palmer Bar on Monday 27 January please contact Robert Ulrich on 604888. The owner has no interest in punishment. He is purely concerned with the recovery of his property and his mobility.

The Gardner Arts Centre

Film at the Gardner
Monday 3 February
6.30pm Darling (15)

Tuesday 4 February
7.45pm Breaking the Waves (18)

Wednesday 5 February
7.45pm Jade (15)

11.30pm Breaking the Waves (18)

Saturday 9 February
6pm Courage Under Fire (15)

9pm Boston Kickout (18)

Small Ads

ARE YOU in need of a computer/word processor for writing up your thesis/dissertation, etc? I have the ideal machine for you. It's reliable and cheap, and what's more it can be yours for a paltry £525 ono. Call Toby on ext. 8336.

FOR SALE: Amstrad PPC640 computer. £45 Contact Tony Andrews on ext. 2871.

IBM PS1 computer with Windows 3.1 and Microsoft Works. £150. Contact ext. 8679 (Fridays only) or 01825 841231.

FOR SALE: Fiat Uno 45 Five, blue 3 door, G reg, 64k New clutch, taxed and MOT. Good runner. £945 ono. Tel: 525823.

FOR SALE: Casio Digital Diary SF-4300BX. Features includes: arranging schedules, stores phone numbers, stores memos, calculator, calendar, notebook etc. Boxed, perfect working order, unwanted gift. £48 accept £25 ono. J Money ext.2062 or email J.Money@sussex.ac.uk

AU PAIR: available for baby-sitting in Kemp town/Queen's Park area. Call ext. 8256 or 670436.


COMPUTERS: Second user, professional quality: Compaq Deskpro 386 £249, IBM PS/277 466 £395, PACIT dot-matrix printers £49. All fully guaranteed. Call Gordon, 541761.

TO LET: Two large sunny rooms, close to Seven Dials in Hove. Own shared kitchen, bathroom and WC. Use of balcony. Available from mid-February. A third double room possible till end of July if group. £55 and £50 p/w inclusive except phone. Couple considered. Tel: 773161 or e-mail mmn10.

Bulletin

The Bulletin appears every Friday of term, with copy deadline the preceding Friday lunchtime. We welcome suggestions for news, events, letters and small ads. Please e-mail information office, Sussex on ext. 8209 or email tin@sussex.ac.uk