Smart driving engineers

SMART cars carrying on-board navigation, communications and teletext could solve traffic problems in the near future, thanks to research by a group in the School of Engineering.

Fawaz Al-Khudairy, Mohamed El-Haddad and Nikolaos Papadoglou, and their supervisor Professor Ed Powner have developed a system which will combine available and new technologies for a complete automobile system. The Global Intelligent Teletext Automobile Navigation (GITAN) system uses global positioning satellites (GPS) to pinpoint accurately the car’s position, combined with on-board vehicle teletext and a wireless communications link.

The GITAN system will provide the motorist of the future with navigational accuracy using GPS correlated with back-up from a ‘dead reckoning’ system which uses a gyrometer, odometer and compass when the satellite information is temporarily blocked, e.g. when driving through tunnels. The global positioning satellite system was developed by the US military, who transmit a separate channel for civilian use, which is deliberately degraded to limit the accuracy. To counter this, GITAN relies on differential GPS which uses a relay station as a reference point; this improves the accuracy to within five metres.

The GITAN system is not limited to providing navigational information, such as road problems and maps. It also comprises mobile communications and a ‘smart wallet’ which allows the motorist to pay for services remotely, e.g. to book a parking space, or pay for road tolls. Other features are borrowed from military aircraft, such as the optional teletext head-up display to enable the motorist to focus on the road, and a black box which details information up to and during accidents.

The GITAN system is intelligent in the sense that all this information can be used in parallel. The motorist can simultaneously drive, book a car parking space, talk on the mobile telephone – with a hands-free set – while the car’s sensors ensure he/she maintains a safe distance from other vehicles. It should be noted that this new technology allows no escape from petty crime; the smart car also checks your speed limit and reminds you if your tax disc expires.

Security officer brought to book

The aptly-named Paul Knibbs (above) has put his pen to use by writing a novel. The University security officer’s work of fiction, entitled Wixley Wood, tells a tale of one girl’s fight against the authorities who plan to build a motorway through her local forest.

Paul describes the plot as “an adult fairytale” and said he was pleased to have his first book published after writing it in-between hours at the security desk.

Wixley Wood is out now in the University bookshop, published by The Book Guild Ltd, at £15.95.

NET COULD CLOSE GAP BETWEEN RICH AND POOR

Developing countries must decide for themselves how the Internet will benefit them. Such crucial choices can’t be left to corporate grandees like Bill Gates or to daydreamers sold on visions of ‘Cybertopia’, no matter how well-meaned. That is the key message of Knowledge Societies, a major new report by the UN Commission on Science and Technology edited by Professor Robin Mansell and Uta Wehn of SPRU.

Knowledge Societies puts developing countries at the heart of debates about the impact of the Global Information Society. It examines the impact of new technologies on market opportunities, employment, lifelong learning, new styles of working and the role of women. It offers new insight into the relationships between infrastructure, skills and experience in enhancing knowledge-based development, and it provides practical guidelines for government and business leaders on the creation of national IT strategies. “Knowledge from new information and communications technologies can be converted into real social and economic benefit,” explains Robin. Yet the report also shows that new products and applications are too often designed in ignorance of developing countries’ realities and don’t respond to the needs of the most disadvantaged people and communities. “If governments and other stakeholders found ways to use these advanced technologies more creatively, the

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In the Bookshop

Recent publications by Sussex authors, all obtainable from Sussex University Bookshop


GENDER AND MANAGEMENT IN EDUCATION. AN INTERNATIONAL PERSPECTIVE edited by Pat Drake and Patricia Owen. Trentham Books Ltd £13.95.


SYSTEM ANALYSIS AND SIGNAL PROCESSING WITH EMPHASIS ON THE USE OF MATLAB by Philip Denbigh. Addison-Wesley £24.95.


PROJECTIVE GEOMETRIES OVER FINITE FIELDS (second edition) by James Hirschfeld OUP £65.00.


COMPETITION AND ECONOMIC INTEGRATION IN EUROPE edited by Saul Estrin and Peter Holmes. Edward Elgar £45.


Seeing the light

The School of Engineering has recently acquired several research grants, totalling over £370,000. Together with Dr Paul Roche in CPES Professor Peter Townsend and Dr Dave Hole have received £146,000 funding from the EPSRC to develop new high sensitivity ion beam luminescence analyses, which should improve analysis of geological and mineralogical samples as well as a new method of surface analysis. An ESPRIT grant of 96,000 ECU will be used by Peter Townsend in collaboration with Dr Gines Lifante at the Universidad Autonoma de Madrid to improve the sensitivity of photomultiplier tubes; these tubes are used to detect low light levels in applications ranging from astronomy to medicine. Encouraging results from their research in progress suggest that the researchers may have solved a fifty-year old problem involving the manufacturing of the tubes. A Brite Euram grant of 169,000 ECU will be used by Peter Townsend and Dave Hole to improve non-linear optical responses and make smaller, high-efficiency capacitors, as part of a European partnership with other organisations who are sharing a 1,398,000 ECU grant.

Risk of eye damage from some laser pens/pointers

The National Radiological Protection Board have recently advised Trading Standards Authorities to use their existing powers to remove from the general market all laser pointers of a class higher than Class 2 (as defined by the British Standard).

Laser pens/pointers, key rings, etc. greater than Class 2 present an unacceptable risk because they may cause eye injury.

Members of the University are advised to follow this advice and dispose of all samples of this type of laser which cannot be shown to fall into British Standard Class 1 or Class 2. Exceptions to this advice are those lasers used for University research and teaching activities under the control of suitably trained personnel.

Most pointers examined by NRPB fell into Classes 1, 2 and 3B. Purchasers of lasers with a USA Class IIIA classification should be aware that these are equivalent to a British Standard Class 3B device! Class 3B lasers may cause eye damage. This damage is irreversible.

Dr Peter Balance, University Safety and Radiation Protection Adviser

Internal telephone directory

The University’s alphabetical telephone directory is being updated. Anyone requiring changes to their specific information, i.e. room numbers etc., should contact Communications Manager, Bob Stephenson, by memo in the Estates Building as soon as possible.

Green News

THE plastic recycling collection bin at York House has been withdrawn while Brighton and Hove Council reviews sustainable alternatives.

Plastic collections across Brighton are being examined as the present method of transporting plastics from recycling points to sorting centres is very costly – between three and four times as much as the cost of collecting everyday refuse.

The council welcomes any suggestions from local businesses who need certain types of plastic, and those who regularly return leftover plastics for reprocessing. Sue Strong, Waste Reduction and Recycling Officer, would welcome ideas from members of the public who might be able to co-ordinate local collection schemes.

For further information, contact Penelope Chapple, Environmental Adviser on ext 8904, or e-mail: P.J.Chapple@sussex.ac.uk

New General Manager

Sue Webster, currently Principal Arts and Heritage Officer for Waveney District Council at Lowestoft, has been appointed General Manager of the Gardener Arts Centre. David Bunker, Deputy Chairman of the Centre said of the appointment: “Sue Webster has demonstrated the personal attributes and successful performance in the wide range of experience which the post demands. She combines the wisdom to build on the existing strengths of the Gardener with the artistic vision to lead it through the challenges and opportunities at the turn of the millennium.” Sue is to move from Ipswich to the Brighton area and is due to take up her new post in July.

New research board

An interim Arts and Humanities Research Board is to be established pending a decision by Government on whether to set up an Arts and Humanities Research Council – one of the recommendations put forward by the Dearing Committee. The new Board will build on the work of the British Academy’s Humanities Research Board and will allocate research grants as well as postgraduate awards.

Although the Government has yet to make a decision on setting up a research council, it has asked the Higher Education Funding Council for England (HEFCE) to have particular regard to the needs of the arts and humanities in providing research funding.

HEFCE has agreed to provide £8 million to the new Board for this purpose in 1998-99 and £5.5 million in 1999-2000.
Pelotons of Locusts

Locusts and Tour de France cyclists may have more in common than either had realised, according to Mike Jones of BIOLS writing recently in the Guardian. This connection, says Mike, emerged as a result of discussions during a student practical with Professor Wolfram Kutsch, of the University of Konstanz in Germany, who was teaching neurobiologists as part of the Socrates-Erasmus exchange programme. Professor Kutsch was demonstrating how locusts control their wing movements and how they synchronize their wingbeats when they are flying together. With flying locusts, as with cyclists, air resistance is the main problem and, in both cases, it pays to go with the crowd.

Tour enthusiasts will be aware of the power of the peloton, the main body of cyclists, which remorselessly overhauls individuals who attempt to break clear. Sustained escape is usually possible only as part of a coordinated team. In the peloton, or in a team working together with regular changes of position, making use of the common slipstream reduces the work that has to be done by individuals. Kutsch and co-workers have shown that when pairs of tethered locusts are flying in a wind tunnel the rear one moves its wings in time with the one in front, but with a phase-lag which depends on the distance between them. This coordination depends on wind-sensitive hairs on the head of the locust which detect disturbances in the air flow. Coupling wing movements to the wake of the ones in front, it can give significant aerodynamic advantage. It remains to be seen whether teams of locusts share the work.

Big Bad Dan Bandana Band

A ONE-OFF country and western evening organised to liven up the social life of experimental psychology faculty in BIOLS led to a live gig at the British Psychological Society conference. Bulletin kids you not, for experimental psychologists Danny Connolly, Alastair Goode, Professor Alan Parkin, Dr Christopher Plack and Linda Sheppard are the infamous Big Bad Dan Bandana Band.

According to Linda, the band was originally just "a bit of a laugh", but the talents of the band are well renowned since their gigs at the Isle of Thorns, and 1997 BIOLS Christmas party. An organiser of the BPS conference was so impressed with the performance at the Christmas party that he invited them to appear at the conference at the Old Ship Hotel in Brighton, along with their dedicated group of postgraduate and post-doctoral line dancers.

At the conference, one convener commented that the band disproved "the long-held belief that you can't get psychologists to do anything in step."

Net could close gap between rich and poor continued from page 1 of current research thinking on relations between development and the Internet, and forms the launch issue of an online version of the development research digest Insights. This is part of the new ID21 Online research reporting service funded by the Department for International Development. In keeping with the UN Commission's advice, ID21 uses the Net to share more 'hot' practical knowledge based in research, more rapidly, with non-academics who are stuck with making critical development decisions daily.

The Insights online launch issue on Net Gains or Net Dreams can be accessed online at www.id21.org.
What’s on...

Lectures, Seminars, Colloquia

Tuesday 5 May
12.30 pm SPRU Environment Programme
Brown Bag Seminar: Ronan Palmer (Environment Agency) The role of economics in the environment. Room Mantell 2A3

12.30 pm Sussex Life History Research Seminar:
Jill Barclay (University of South Australia) will discuss her oral history research project with nurses from the outback. Room D340

4.15 pm Biochemistry and Genetics and Development Seminar: Sue Bailey (BBSRC, Daresbury) DSMO reductase: structure and function of a molybdopenthenium enzyme. Biology Lecture Room (EP 3.9)

4.30 pm Social and Political Thought Seminar: Kevin Love, Strangers and citizens. Room D630

5.00 pm Social Anthropology Seminar: Les Back (Goldsmiths College) Reading the writing on the wall: urban graffiti, racism and territoriality. Room D722

5.15 pm German Research Colloquium: Nick Tucker. Idealism versus evil: a British pacifist’s efforts to rescue a German Jew, 1938-9. Room A155

6.30 pm Issues in Environmental Science Lecture: Goran Jamal (Southern General Hospital, Glasgow) Organophosphate effects on the nervous system: new developments and insights. Chichester Lecture Theatre

Wednesday 6 May
1.00 pm IDS (Poverty Research Programme) Seminar: Stefan Dercon (Oxford University) Changes in poverty in Ethiopia since 1989. Room IDS 221

3.00 pm Sussex Centre for Optical and Atomic Physics Seminar: Richard Keesing (York University) Two photon correlation in single bubble sonoluminescence. Room Pevensey 2A2

5.00 pm History of Art Work in Progress Seminar: Penelope Curtis & Fiona Russell (Henry Moore Institute) Writing a history of sculpture in the early 20th century: feasible? Desirable? Tenable? A5 Lecture Theatre

5.00 pm English Graduate Colloquium: Rowie Wymer (Hull University) The tempest and the origins of Britain. Room D640

5.30 pm Centre for Statistics and Stochastic Modelling Seminar: John Bather, An adaptive Kalman filter. Room Pevensey 2A3

Thursday 7 May

1.00 pm IDS (Participation Group) Seminar: Timothy Pych (University of Calgary) PAR as a way of life. Room IDS 221

4.00 pm Geography Research Seminar: Andrew Church (Birkbeck College) Trans-frontier initiatives across the Channel and the local politics of co-operation and competition in south-east England. Room D610

Monday 4 May – Sunday 10 May

Lectures, Seminars, Colloquia

5.00 pm Centre for Modern French Thought Seminar: Alan Murray (Middlesex University) Le Tiers intrust: Michel Serres on literature, science and philosophy. Room A71

5.00 pm History Work in Progress Seminar: Chris Chapman (Lady Margaret Hall, Oxford) Seventeenth century representations of murder. Room A155

Friday 8 May
2.00 pm SPRU Seminar: Tom Blundell (University of Cambridge) Policy making and the uncertainty of scientific data. Room EDB 121

4.30 pm Philosophy Seminar: Martin Warner (Warwick University) Reasoning in transitions: Charles Taylor and the Good Samaritan. Room A155

Miscellaneous

- Lunchtime recital at the Meeting House - Charles Macdonald (organ) and Peter Abbs (reader) 5 May at 1.20 pm in the chapel
- Living Buddha, The True Story - presented by the Film Making Society and ROKPA on May 7 at 6 pm, room A1. Includes an introductory talk by Buddhist nun, Ani Chudron, £2 (£1.50 FMS) all proceeds to ROKPA
- Golf - ever had a hole-in-one? The UoS Golf Society has just begun its annual campaign; any able golfer is welcome to participate:
  - Tuesday 5 May (v. Pycombe), Thursday 14 May (v. Ham Manor), Wednesday 27 May (v. Dyke), Thursday 28 May (v. Hollingbury) and club championships (36 holes) to be arranged in July. Matches are all in the afternoon. Please contact James Hirschfeld on (67)0800 or e-mail: jwhph@sussex.ac.uk
- Disclaimer - contractors currently working on the A27 are not working for the University, and we were not told about it. We are discussing the matter with them to ensure safe work and minimal disruption. (Estates)

Small Ads

For Sale:
- pool/snooker table 6’ x 3”, £80; mahogany dining table and six chairs, reasonable condition, £250 o.n.o; garden swing frame, £10; trampoline frame, £10, contact 881108

To Let:
- quiet but central two-bedroom flat Lewes cottage with charming garden, available from mid-May, short let. Contact 477314

Research Assistants Wanted:
- two/three f/t in-house research assistants (one an economist) wanted for a year from October or earlier. Candidates should have a masters or first degree in social sciences. Contact Rosalind Woodhouse (IDS) on ext 8266 before 29 May

To Let:
- one room from mid-June, one room from September in North Laines house, five minutes from station. Suit non-smoking female PG/staff/mature student, sharing all facilities with landlady. £50/week incl. Contact Claire on 682929

To Let:
- from end of June, two pleasant attic rooms with cooking facilities in Queen’s Park area. Suit non-smoking female research student requiring peace and quiet to study, £35/week. Contact Pauline on ext 8209 or 607602

For Sale:
- after house move, two very comfortable sofas, one three-seater, one two-seater, £100 each. Contact 857 294 after 6 pm or e-mail: M.T.Reynolds@sussex.ac.uk

Summer Accommodation Exchange:
- PG has three-bed-room flat in central Brighton, seeking similar in Brighton for one-three weeks between 12 July and 8 August. Contact 552929 after 6 pm

To Let:
- one-two adjacent rooms in cosy house in Hanover area, £52/week each incl. except phone, available immediately. Contact 701553

For Sale:
- new ‘Airsprung Backcare’ 4’6” double bed, dismantable, with large storage drawer, purchased new one month ago, must sell, £280 o.n.o. Contact Louise on ext 3129

Bulletin

The Bulletin appears every Friday of term, with copy deadlines the preceding Friday lunchtime. We welcome any suggestions for news, events, letters and small ads. Please contact the Information Office, Sussex House on ext. 8209 or e-mail: Bulletin@sussex.ac.uk

Bulletin on the web: http://www.sussex.ac.uk/information_office/bulletin/