Engineers Develop Revolutionary Rocket Launching System

A team of Sussex engineers led by Professor Jayawant has just completed the first stage of a NASA-funded project which may revolutionise space travel. The team is conducting research into magnetic levitation, or maglev, as a source of power for rocket launches.

Maglev technology is already being used in transport systems in Japan, Germany and the USA to propel vehicles down specially designed tracks. The transport carriage hovers above the track, held in place by the repelling effect of two magnets of the same pole, ensuring that the friction which would normally slow the transport system down is greatly reduced. According to Dr Denis Edwards, a member of the team, “the magnetic force developed by a maglev engine is like a river - just as if you were a stick on its surface, you can’t help but be dragged along by its force.”

The team is building on the already proven success of these systems, developing the technology to a point where it might enable cheaper and more frequent space travel. The space launch track would be inclined at a 45 degree angle so that when the rocket reached a critical speed of 600 mph it would be launched off the track and into orbit. The Sussex engineers have completed the first phase of a three part plan by building a prototype for the system which propels a 2 ft shuttle down a 12 ft track at 25 mph in the first 4 ft. The prototype will be built on a bigger scale at a site near the Marshall Space Centre in Alabama in December, when a load of 100 pounds will be expected to accelerate to 70 mph in the first 25 ft.

Currently, the most wasteful aspect of a rocket launch is the amount of fuel burnt up in the first few seconds before the rocket’s second stage can be put into orbit. The fuel lost to this process is a third of the total weight of the rocket. NASA is particularly interested in exploring any means of rocket launching which can avoid this waste, and since the maglev track is re-usable, it is both cheaper and more environmentally sound, providing “huge, huge savings,” according to Denis. In fact, in terms of energy cost, the maglev system could launch a rocket for as little as £5.00 worth of electricity from the mains.

In addition to the support of NASA, the engineers at Sussex have also been working with an American amusement company, Arrow, to develop the technology for use in super-accelerating, super-scary rollercoasters.

The contribution of these Sussex engineers to transport technology will ensure that rollercoasters, transport systems - and space travel itself - will be catapulted straight into the 21st century.

BODY SHOP FOUNDER SPEAKS AT SUSSEX

The Sussex Development Lecture Series kicked off to a stimulating start last week with a lecture by Body Shop originator Anita Roddick. After being introduced as the ‘co-founder’ of the international chain, Ms Roddick broke the ice in her haste to point out that “I was the bloody founder!”

Ms Roddick, who was placed on the UN ‘Global 500’ roll of honour in 1989, spoke about the impact of capitalism on the global economy in universally damming tones. Pointing out that “business alienates humanity in every single way,” Ms Roddick concluded that “when human rights and economics are in conflict, commerce will always prevail.”

The Body Shop entrepreneur suggested that ‘free’ trade was in fact ‘licentious’, and pointed out that it really means a ‘race to the bottom’, where multi national companies endeavour to find the lowest wages and the fewest environmental restrictions. Claiming that business could be made better, Ms Roddick put forward the idea that her chain of shops was a model of the potentially caring implementation of global capitalism. She cited the example of a series of around 36 developments in India in which the Body Shop pumps 20% of the revenue generated there back into the local economy, building schools and providing for other community needs.

Anita Roddick’s lecture continues the tradition of having strong-minded, high-profile public speakers in the lecture series, which, according to the programme organiser Ralph Grillo, is “designed to allow speakers to offer a magisterial overview of issues of current importance to students of Development at Sussex.”

The Garders Arts Centre has free tickets for the first five readers who turn up waving a copy of the Bulletin for Rainer Hersch - All classical music explained on 27 October at 7.45 pm and for the Vtol dance company’s And Nothing But The Truth - A Murder Mystery on 29 October at 7.45 pm.
AN AUDIENCE WITH SUE WEBSTER

Sue Webster, the new face of the Gardner Arts Centre, has been managing the complex since July, and her excitement about the job is infectious.

Sue is originally from Edinburgh which, as she points out, is “about as cultural as you can get.” Being steeped in such an artistic environment may have contributed to her long-standing love of the theatre and visual arts - Sue has spent all of her professional life working within the arts and has managed a diverse range of venues and events. “I’ve managed fairly large venues, worked in arts development, run small scale venues and managed museums and art galleries as well - my background is fairly broad” she says. One of her most challenging ventures was to organise the hugely popular Chelmsford Spectacular - she particularly enjoyed observing the enormous mix of people queuing to see the Spice Girls. “The Spectacular covered pop bands, military bands, an American civil war troop, hot air balloons and everything - it really was an amazing experience.”

Her previous job was as Principal Arts and Heritage Officer for Waverney District Council, something which she found challenging and rewarding, but perhaps without the satisfaction of seeing one place grow and prosper under her management. Sue says she is “glad to have everything united under one roof, glad to have the chance to affect things more.”

Certainly, she is hugely enthusiastic about the Gardner Arts Centre, enthralled by the space itself and excited by the team-work which buoys it. Her aims for the job are ambitious - she wants to make it “the place to be seen”. Pointing out that the Centre is “one of the most accessible parts of campus - as well as the prettiest!”, Sue hopes that more people will come for general socialising, adding that this might be a good tip for those who wish to mingle with theatre types and artists. Hoping to make the Centre “more integral,” she also intends to “bring in as many people as possible, as broad a range of people as I can, as well as to maintain the quality of the events that go on and bring in more of that quality.” Although she accepts that her brief is a challenge, she feels she is building on solid ground - “The Gardner Arts Centre has a stunning reputation.”

Unfortunately, Sue isn’t in a position to enjoy the fruits of her labour. For someone who would be “hopeless on Desert Island Discs” because she would never be able to get down to just one favourite play or exhibition, she is frequently frustrated in her intention to watch everything at the Centre. “I try to see what I can, but it’s very rare to be able to watch a whole show,” she sighs, “It’s an occupational hazard, but I still love the job.”

- Sue is not the only new face around the Gardner Arts Centre. Two University of Sussex graduates have taken up positions there too. Paul Jukes, who has just finished a D Phil in Chemical Physics, becomes the new Sound Engineer/technician and Siobhan McGovern, an English graduate, takes up the position of Box Office Cashier.

AWARDS FOR GRADUATE STUDENTS

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Awards for Graduate Students

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Research Funding Opportunities

This is a selection of Research Opportunities. More details of these and other opportunities are available from the Research Grants and Contracts Office, ext. 3812. For an extensive listing of funding opportunities see REFINDD on the Research web site: http://www.sussex.ac.uk/Units/research orUSIS Home Page under Research.

The Leverhulme Trust Individual Awards are taking applications for research grants and fellowships for 1999 from all subject areas. Deadline 12 Nov 1998.


Information and Communication Technologies Research Initiative from the NHS has grants for research proposals ranging from promotional work to improving healthcare delivery. Deadline 4 Dec 1998.

Academic and industry collaboration proposals in engineering are being funded by the Engineering and Physical Sciences Research Council. No deadline.

NASA Lunar Data Analysis Programme is funding investigations into data from Mars Surveyor missions to the moon over the next decade. No deadline.

Engineering and Physical Sciences Research Council is encouraging application of leading edge physics to technological challenges presented by healthcare. No deadline.

Fight for Sight invites proposals by 3 Nov 1998 for eye care project grants, a research fellowship and PhD students.

International Society of Arboriculture Research Trust has funds for research into tree ecology rooted in broad environmental, social and economic context. Deadline 1 Nov 1998.

Thomas Jefferson University's 1998 Lennox K Black International Prize for Medicine ($50k) has a 1 Nov 1998 deadline. Internationally recognised medical scholars will be considered.

European Science Foundation is awarding places on exploratory workshops into clinical and biomedical research. Deadline 10 Nov 1998.


BBSRC invites fellowship applications from candidates with at least five years postdoctoral experience. Senior full time positions are available. Deadline 30 Nov 1998.
Creative Cacophony in School Recording Studio

‘Utopia’ may be launched into the music world thanks to the Creative Science Centre in CPES. The band have been able to lay down tracks in the recording studio at their own Sussex school as part of a project initiated by Dr Jonathan Hare. The recording studio project has encouraged pupils at Angmering School to become actively engaged with electronic design, as sixth formers made the whole studio from scratch. With help from Jonathan and their teacher Jan Meering, who worked together on the design, students have built the microphones, mixing desks and amplifiers needed for a fully operational recording unit. Pupils are “very enthusiastic” about the project, says Jonathan - “they are improving all the time and learning all the lessons for themselves.”

The collaborative enterprise has been underway for just under a year, funded by a grant from the Royal Society-Esso Science Education Partnership. The first recording was made in July, and the studio will now be used for poetry readings and drama classes as well as for the school band.

For Jonathan, designing and building a school recording studio has been a “mini dream”, but it is just one aspect of a highly successful ongoing partnership between the Creative Science Centre and Angmering School. Forging links between schools and universities, particularly in the creative application of science, is the primary aim of the centre. The recording successes of Utopia show that this aim has dramatically come to fruition.

See the CPES homepage for more information on the Centre.

Law Students Compete in International Contest

Two law students, James Beverley and Raphael Jouenne, were runners-up in the International Negotiating Skills Competition this year - and they have been asked back as judges for the 1999 event. The competition involves teams being given a legal problem or situation and negotiating a solution or deal. James and Raphael, who have now graduated from CLS, travelled to Malibu for the final, where they competed with teams from Australia, Canada and the USA. According to James, “We had a fantastic and enlightening experience which wouldn’t have been possible without the University’s support.”

Their tactic was to avoid American-style confrontational negotiation and concentrate on arriving at mutually satisfying solutions, and as a result they were “commended for our politeness and patience by the assessors.” Melanie Roberts, Director of the CPE course, was extremely impressed with their success, saying: “This is a great achievement for the team, and a great achievement for CLS.”

Sussex will also be host in February next year to the regional final of this competition, which is sponsored by Allen and Overy. The British leg of the contest is divided into north and south, and Sussex will act as host for the southern sector.

VACANCY

Cataloguer (Fixed Term)

CENTRE FOR GERMAN-JEWISH STUDIES

A Cataloguer is required to work on the Arnold Daghani Collection of artistic and commemorative works by a Holocaust survivor. Fixed term for six months (full time) or one year (part time), starting in January 1999. Salary in the Research and Analogous Grade 1A scale (£15,735 - £18,275) pro rata, depending on qualifications. Closing date: 31 October 1998.

For further details please contact the Director, Centre for German-Jewish Studies, University of Sussex, Brighton, BN1 9QN. Tel/Fax (01273) 678495 or email: e.timms@sussex.ac.uk

EMERGENCY!

Just a reminder that the campus internal telephone emergency number is 3333 and that number should be used to summon assistance for all serious emergency situations. It is essential that 3333 is dialled whenever an ambulance is needed. The 3333 call should also be used to summon the University Rescue Team if a serious accident occurs where people may need to be evacuated from smoke or may be at risk from released chemicals or biological agents.

Staff Development Opportunities

- Funding may be available from Staff Development for faculty to attend the following events. Please contact the Staff Development Officer, ext 7188, for further details.
- Linking teaching and research - Oxford (Brookes) Centre for Staff Development, UMIST, Manchester, 4 November.
- Improving teaching quality using peer observation - Oxford (Brookes) Centre for Staff Development, University of Reading, 19 November.
- Assessment for larger classes - Oxford (Brookes) Centre for Staff Development, University of Birmingham, 25 November.

BOOKS

Recent and forthcoming publications by Sussex authors, all obtainable from Sussex University Bookshop:

Wall, D. Holmes, P & Grant, L. China’s Market Economy: Implications for the world trade system, RIIA, £12.50.
Lectures, Seminar, Colloquia


2.00 pm International Relations and Politics Research-in-Progress Seminar: Mark Lacy, Writing Kyoto: a critical geopolitics of climate change. D310.

4.00 pm Sociology and Social Psychology Graduate Faculty Seminar: David de Cremer, University of Southampton, social identification effects in social dilemmas: a transformation of motives. D310.

5.00 pm Women's Studies Research-in-Progress Seminar: Barbara Burman, Southampton University, Racing Bodies: Women Racing Drivers; Fashion and Modernity 1900-1939. Arts D610.

Tuesday 27 October 12.30 pm Sussex Life History Research Network: Rob Skinner, Life Stories and University Histories. M2.4.7, The Observation Archive, Sussex University Library.

2.15 pm Sussex European Institute Research in Progress Seminar: Dr Chris Stevens, Re-negotiation of the Lone Convention. Rm A71, SEI.

4.15 pm Biochemistry and Genetics and Development Seminar: Dr Dan Cutler, UCL, Expressing chimeras of horseradish peroxidase and P-selectin to dissect targeting to lysosomes, synaptic vesicles and secretory granules. BLT.


5.00 pm Social Anthropology Graduate/Faculty Seminar: Andrea Connolly, 'In our back yard': reflections on participatory research on an urban housing estate in London. D722.


Thursday 29 October 4.00 pm Geography Research Seminar: Dr John Gerrard, University of Birmingham, Land degradation in the middle mountains of Nepal. D340.

4.00 pm Experimental Psychology Colloquium: Angela Roberts, Cambridge, What behavioural disinhibition doesn't tell us about the prefrontal cortex. Biology Lecture Room (EP 3.9).

4.00 pm CPES School Colloquium: Prof. Brian Gazzard, Chelsea and Westminster Hospitals, AIDS, Have we got it licked? Chichester Lecture Theatre.

5.00 pm History Work-in-Progress Seminar: Giles Tillotson, SOAS, Orientalism and the visual arts. Rm A155.

5.00 pm Sussex Development Lectures: Chris Colclough, States or markets? The economic policy debate revisited. A1.

6.00 pm Centre for Statistics and Stochastic Modelling Seminar: Dick Wiggins, City University, Diverse family living situations and child development: a multi level analysis comparing longitudinal evidence from the USA and Great Britain. Rm PEVIA17.

6.00 pm The Meeting House Lecture: Susan Reece, New Age healing and the encounter with the Juda-Christian Tradition. The Meeting House.

Friday 30 October 9.30 am to 6 pm All Day Conference: Social Democracy - Current Ideological Directions. Free entry. Including lectures on Social Democracy and Globalisation, New Labour: History and Comparison, and Comparative Social Democracy. CCS Conference Room, Essex House. Contact Luke Meredith for details, email Lmartell@sussex.ac.uk or phone 678279.

2.00 pm SPRU Seminar: Ruth McNally, Brunel University, The Consequences of Modern Biotechnology and Patenting. EDB Lecture Theatre Rm 121.

4.00 pm Applied Mathematics and Numerical Analysis Seminars: Carlo Berenghi, Newcastle, Vertex knots and vortex tangles. Pevensey I, Rm PEV-2813.

Saturday 31 October All Day Conference Southern Women's History Network: Speakers include Sybil Oldfield, Contact Gerry Holloway, ext 4313, email g.holloway@sussex.ac.uk. Admission free to members, £3 student/unemployed and £6 waged. The Friends' Centre, Ship St, Brighton.

Sportcentre Information
Back Care Course available on Tuesday 17 November 10.00 am - 12.30 pm or 2.00 pm - 4.00 pm, in the Orange Room, Refectory. To provide strategies on preventing and managing back problems, and to enhance and broaden knowledge of back care. Limited no. of places Free course. Bookings must be made by 10 November.

CDU Information
Please sign up beforehand.

Frontier - 27 October, 5.30 pm, CDU, 1st Floor, Falmer House. Voluntary expedition overseas. Requires you to fundraise.

Civil Service Fast Stream - 28 October 5.30 pm, CDU, as above. The routes in the application process and the work.

Government Economic Service - 29 October 5.30 pm CDU, as above. Jobs for those who’ve done at least 25% economics in their degree.

Fidelity Investment Management Ltd - 2 November 6pm, CDU as above. Any discipline, jobs include: IT, account handling, investment admin.

Small Ads
TO LET: Large attic room in quiet house. Queens Park Brighton. Own kitchen, would suit female n/s single female postgrad. £55pw incl. Tel Liz 605042 after 6 pm.

FOR SALE: Citroen 2CV. C reg, red. New brakes, good condition. £800ono. Contact Mr. Martin Hudson on either x8512/3 or 702728 (eves) or email m.l.hudson@sussex.ac.uk.

FOR SALE: PC, 300 MHz AMD K6, 4MB SDRAM, 4MB Stealth II Graphics Card, 17" monitor, 1.8GB Hard Disk, 33.6kbps Modem, Sound Card, CDROM, Floppy Drive, Windows 95. £750ono. Call 565082 or email prance@withdean.u-net.com.

WANTED: Child-friendly student to pick up two delightful (I think!) boys, aged 7 and 5, from school twice a week and look after them until I get home from work at about 6.00 pm. £10.00 per session. Contact Cath on ext 8219 or email haubb@admin.sussex.ac.uk.

FOR SALE: An introduction to programming using Visual Basics 5.0 by David Schneider. Brand new, unused. £170.00. Call Helen Stewart on 2905 or H.J.S.Stewart@sussex.ac.uk.

FOR SALE: Antique Pine farmhouse table (seats 6) plus 5 chairs. Space needed: hence bargain price - £125. Call ext 8022, 272119 or A.Drew@sussex.ac.uk.

WANTED: Babysitter to take care of my 20 month old daughter on campus. Fridays all day, or other days of the week after 5.30 for two hours. French speaking preferred but not compulsory. Good rate offered. Please call 8408 during working hours or 846 575 after hours.

FOR SALE: Olympic 4pc Drum Kit - VGC Vintage kit with many modern extras £350. Apple Macintosh Classic - HP Printer, loads of software £250. Contact Richard on 297908 or email rag@bt.co.uk.

ACCOMMODATION WANTED: for new faculty member, 3/4 bed. Beg. December. Short (7 months) or long term, furnished or unfurnished. Please phone US-1-412 521 1447 or email halperin@vms.cis.pitt.edu.

FOR SALE: Rover 216 'Sprint' F Reg - New MOT, sunroof, radio - good runner - £750 ono. Phone 701762.

HOUSE SHARE: Comfortable, well equipped house in the Hanover area. Nr town centre, easy access to public transport to university. Suitable for postgrads/faculty. £55 a week - bills. Tel: 677401

Bulletin
The Bulletin appears every Friday during term time with copy deadlines the preceding Friday lunchtime.

Please contact the Information Office in Sussex House on Ext. 8209 or Email: Bulletin@sussex.ac.uk.