

Engineering education world

Contributions are invited for this feature. News items on policies that concern the engineering education world, new courses and curricula either of a unique nature or of international interest, new innovative laboratories and concepts, funding news for engineering research projects involving international participation, special international continuing education courses and news, industry–university interaction, engineering faculty news, and developments in engineering education of international interest. Please send news items and conference information to the Editor-in-Chief. Public relations offices of universities and human resources divisions in industry are requested to contact the Editor with news items concerning engineering education and training.

United Kingdom

Reform in the University and Colleges Admissions Service needed

The university admissions service is coming under pressure because it is not geared to the rapid succession of admissions needed in universities which admit students for semesters with beginnings spread over the whole year. Two universities, de Montfort and the University of Central England, admit engineering students in semesters starting in February. The UCAS has no mechanism of supporting such mid-year admissions. With the introduction of fees, more urgent admissions have also become a real need. The need for engineering students and graduates in engineering is large, and the University of Central England has waived the £1,000 tuition fees required of engineering students for next year.

Education minister predicts decline in the number of engineering students

A decline in the proportion of students studying science and engineering at British universities in the future is inevitable according to **Tessa Blackstone**, minister for higher education. The comment has caused a furore among some scientists. Tessa Blackstone sees lifelong learning as ubiquitous in the next century, and the demise of

socially exclusive higher education. Universities, will be operating for 50 weeks a year, will be driven by distance learning and will cater for more part-time non-traditional students. The nature of universities will change, with significant contributions by part-time teaching from professionals outside the universities. **Andrew Ramsay**, at the Engineering Council, said he was 'disturbed' at her views. 'The true situation is demand for engineering graduates is high and rising.'

Germany

Discussion on the responsibility of engineers and scientists

A recent conference in Dortmund on the subject of responsibility and ethics took up a timely subject. The majority of the panel members represented a critical attitude towards current developments. They included **Hans-Peter Duerr**, formerly of the Max Planck Institute for Astrophysics, recipient of the alternative Nobel Prize, **Wolfgang Neef** of the Technical University of Berlin, **Prof. Hans Primas** of the ETH in Zurich and **Michael Meyer-Abich**, a physicist, and former minister of science and education in Hamburg. Primas presented the thesis that a scientist fascinated by his work could be dangerous, citing that

Robert Oppenheimer said at the time of development of the atomic bomb that 'it was a sweet, lovely and beautiful job'. Wolfgang Neef claimed that it was not the scientist or engineer in person who was dangerous so much as the responsibility for the subject and the commercial interest. There is a 'structural militancy' in engineering which stems from its origins as a military support profession. A more conservative view was represented by **Prof. Hermann Lubbe** from Zurich. He claims that the more sophisticated products become the more is there a demand for reduced risks. The huge advances in medicine and pharmaceutical products have triggered even greater demands on their safe applications. The conference was unanimous in its demand that ethics and responsibility in science and engineering should not be left to specialists, or the engineers and scientists themselves, but are a general concern of all society.

USA

Engineering and science experience for middle school students

Two Midwest schools, Madison middle schools Velma Hamilton and Spring Harbor, are taking part in an EarthKAM mission. EarthKAM stands for Earth Knowledge Acquired by Middle schools. Scientist **Sanjay Limaye** and outreach co-ordinator **Rosalyn Pertzborn** of the University of Wisconsin's Madison Space Science and Engineering Center are shepherding schools from setup through completion of the space shuttle Endeavor EarthKAM flight. For their target observations, students will focus on the impact of human activity on the Amazon Rain Forest. Students will also look at active volcanoes. Providing the technology boost for Madison's participants is TDS Telecom, a national telecommunications company. EarthKAM was started as KidSat by the first US woman astronaut, **Sally Ride**, now a physics professor at the University of California in San Diego. EarthKAM observations are integrated into school curricula in earth sciences with activities in math, science, oral and written communication, research, computer use, and team work activities. EarthKAM is funded by NASA and is a collaboration of the University of California at San Diego (UCSD), Johns Hopkins University's Institute for the Academic Advancement of Youth (IAAY), and the Jet Propulsion Laboratory (JPL).

USA/Canada

Environmental impact on semester beginnings

Freak weather conditions in the USA and Europe have made an impact on regular classes. In the North-eastern USA universities were operating under a Federal and State disaster declaration at the beginning of the Spring Semester. The State system of New York was unable to begin the

semester on time. Hardest hit by an ice storm was the State University College at Potsdam, New York, where temporarily displaced people had to be housed on campus facilities. Another hard hit campus was the State University of Technology at Canton, NY. The campus was officially closed. Emergency power provided by 17 generators provided housing for around 1500 local residents. Mother campuses anticipated up to 4 weeks delays in starting classes for the Spring Semester. Canadian university students were affected by the worst storm on record for 150 years, disrupting university services in Quebec and Eastern Ontario.

Canada

One tenth of university staff eliminated

Quebec universities have lost 10 per cent of their professors, according to a recent survey by a provincial teachers association. According to the Federation Quebecoise des Professeurs et Professeurs d'Universités, 1,000 full-time professors have been lost to Quebec in the past three years. The second-largest Canadian province now employs 8,000 faculty staff, down from about 9,000 in 1994. The rest of the country has lost about 3,000 full-time academics since 1992. There are now about 34,000 in total. In the past three years, Quebec's education ministry has cut operating grants to universities by more than 18 per cent. The study included 239 departments and found that class sizes had increased concurrently with a reduction in teaching assistants, resources and courses. Montreal province has also been hard hit. The Université de Montreal lost more than a quarter of its 1,200 teachers in three years. McGill University has been considering the option of becoming a compact private university to end funding problems. Concordia University, also badly hit, recently scrapped more than one third of its 250 programs.

Japan

Internship system to be adopted

Student internships, already prevalent for students in Europe, are now to be adopted in Japan. In Europe, internships are particularly popular with engineering students, as work experience provides an insight into the future working conditions, as well as being an opportunity for employers and prospective employees to establish test contacts. Whereas the European students have guidelines for internships set up by their home institutions, the Japanese ministry of education has appointed a commission to advise on general guidelines for students, universities and companies participating in internship schemes. The most common problems are student insurance, and low pay, exactly the same problems

encountered in Europe. Internationally placed students usually face dissimilar conditions regarding attitudes towards internship students in different countries. Some companies have organised college relations and will only take selected students with sufficient remuneration; others seem to think that internship students can work on company assignments of lower priority with low pay, which would not be undertaken by regular staff.

China

Macao students drift to Chinese mainland universities

China, which will take over Macao in December 1999, is already attracting many students to its universities among Macao's young people, who see the takeover as offering more exciting and broader career opportunities. Mainland universities and colleges have enrolled a record 1,014 Macao students this year. A total of 1,942 Macao middle-school leavers applied this year – two-thirds of all leavers and almost 600 more than last year. The Macao Chinese Education Association said the students will be attending 33 universities and colleges this September, including Beijing and Qinghua universities. China's mainland universities began recruiting Macao students in the mid-1980s. The most popular subjects for Macao students are clinical medicine, international trade, education, biochemistry, mechanics and electronics, construction engineering, transportation, administration, computing, law and languages.

Australia

Cuts hurting Australian universities

Australian universities may lose 10 per cent staff which means 8,000 jobs may become redundant. This is a consequence of government budget cuts and substantial salary raises for university staff. A typical reorganisation of operations due to the cuts is contemplated by the Royal Melbourne Institute of Technology. **David Beanland**, the vice Chancellor says that that staff cuts will plateau by 1999, as long as there are will be no further reductions in Commonwealth funding. His remarks were made on the signing an agreement between the RMIT and unions under which staff will receive an 11.5 per cent salary increase in the next two years. Professor Beanland estimated the cost at Aus\$22 million a year and the university would offer its employees voluntary redundancy packages. At least 140 were expected to leave in 1998. He said most universities would be forced to shed 10 per cent of staff as a result of the budget cuts and salary increases. By the end of 1997 academic year in Australia 34 public universities agreed on pay rises. But the cost to both university budgets and jobs has been high. It is unavoidable that the cuts

will mean larger classes, longer hours and fewer resources.

In many universities entire departments have been closed as faculty deans struggle with the budget reductions. Monash, Australia's largest university, will have an 8 per cent budget cut. This will mean at least 50 redundancies, on top of the 50 job losses that had already occurred in 1997.

Uganda

Fee paying students for Makerere University

Makerere University is celebrating its 75th anniversary and 36 years of independence with a new policy: greater enrolment of fee-paying students, which will reach a total of 7,000. Government support will still be granted to Freshmen. Enrolment used to be limited to about 2,000 entry-level students a year, sponsored by the Ugandan government, now many of those attending are mature students, employed and studying in the evenings for degrees such as business administration, commerce and journalism. Tuition-paying students are increasingly taking studies that they believe will lead to successful careers. The move is starting to pay off. Funds from self-financing students are beginning to meet the budgetary shortfalls that have long plagued Makerere. In the medical and veterinary science faculties, student fees have helped rebuild laboratories, and the commerce faculty has become so popular it is gaining a \$1 million building. Paid tuition is making it possible to raise salaries. While the Ugandan government pays professors about \$460 a month, the university is trying to raise the rate to a minimum of \$1,000. The university has come a long way since 1922, when, a year after the foundation of the school as a base for technical training, it broadened its curriculum to include engineering, agriculture, education and medicine. It quickly became affiliated to Cambridge Overseas School, and the University of London. But it was not until 1963 – by then renamed as part of the University of East Africa – that it began awarding its own degrees. Even though Makerere still has some budgetary constraints, **Professor John Pancras Ssebuwufu**, the vice-chancellor envisages a university with full library facilities and modern technology. The school plans to open branch institutions throughout the nation, and foresees more external programmes available through televised classes.

Botswana

Row over appointment of a foreign vice-chancellor

The University of Botswana has appointed an American as its new vice-chancellor. She is **Sharon Siverts** who has held the posts of Academic Vice-president at the University of North Dakota and Metropolitan College in Denver. The university,

which is well supported by an economy based on diamonds, tourism and farming, is striving to become a centre of excellence in Southern Africa. The number of students has tripled in the past 8 years and is currently 8200. There is concern about over production of graduates in social sciences and a development plan for business and engineering education has been approved. In 1995 a faculty of Engineering Technology has been established.

Conferences

The International University Local and Global Roles

3–5 April 1998
London, UK
Contact: The American International University,
Richmond TW10 6JP, UK
Tel: +44 181 332 8286; Fax: +44 181 332 1297

CALISCE '98 International Conference on Computer Aided Learning

15–18 June 1998
Chalmers University, Goteborg, Sweden
e-mail: calisce@pedu.chalmers.se
<http://www.pedu.chalmers.se/calosce98.html>

ED-Media & Ed Telecom 98 World Conference on Educational Multimedia and Hypermedia

World conference on Educational Telecommunications
20–25 June 1998
Freiburg, Germany
Contact: ED-Media 98/AACE,
P.O. Box 2966,
Charlottesville VA 22902, USA
Tel: +1 804 973 3987; Fax: +1 804 978 7449
e-mail: AACE@virginia.edu
HYPERLINK mailto: AACE@virginia.edu
<http://www.aace.org>

American Society for Engineering Education Annual Conference

28 June–1 July 1998
Seattle, Washington
Contact: ASEE,
1818 N Street, Washington DC 20036, USA
Tel: +1 202 331 3500; Fax: +1 202 265 8504

Higher Education for Europe H3E

Gent, Belgium
1–5 July 1998
Contact: Semico,
Lange Kruisstraat 12D, B-9000 Gent, Belgium
Tel: +32 92338660; Fax: +32 2338597

<http://www.student.rug.ac.be/vtk/h3e>
HYPERLINK mailto:
<http://www.student.rug.ac.be/vtk/h3e>
e-mail: h3e@vtk.rug.ac.be

IEEE Multimedia Engineering and Education Conference

7–9 July 1998
The City University, Hong Kong
Contact: Robin Bradbeer
Dept. of Electronic Engineering,
The City University of Hong Kong
Tel: +852 27887199; Fax: +852 27887791
e-mail: eertbrad@city.edu.hk
HYPERLINK mailto:eertbrad@city.edu.hk

Tenth Conference on Assessing Quality in Higher Education

Penang, Malaysia
27–29 July 1998
Sponsored by Indiana University/Purdue University Indianapolis
Co-hosted by Institut Teknologi Mara & Universiti Malaya
Contact: H+E Associates, 12a Church St, Stiffkey,
Nr. Wells-next-the Sea, Norfolk NR23 1QJ, England
Tel: +44 1328 830355; Fax: +44 1328 830339
e-mail: 106316.3622@compuserve.com

SEFI Annual Conference European Society for Engineering Education

2–4 September 1998
Helsinki, Finland
Contact: SEFI Conference Secretariat,
Lifelong Learning Institute,
P.O. Box 8000, 0215 Espoo, Finland
Tel: +358 9414009; Fax: +358 9451 40 60

Global Congress on Engineering Education

6–11 September 1998
Cracow, Poland
Contact: Zenon J. Pudlowski,
Monash University, Clayton, Melbourne, Australia
Tel: +61 3 9905 4977; Fax +61 39905 1547
e-mail: zjp@eng.monash.edu.au
HYPERLINK mailto:zjp@eng.monash.edu.au

Engineering Education '98 International Symposium IGIP

14–18 September 1998
Moscow, Russia
Contact: MADI TU,
64 Leningradsky Prospect, 125829 Moscow,
A-319, GSP-47, Russia
Tel: +7 095 15510171; Fax: +7 095 1517911
e-mail: igip@madi.msk.su

