# 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.*

## Europe

*European Union grant for on-line language learning*

A consortium led by **Stephen Hagen,** dean of the school of languages and European studies at the University of Wolverhampton, has won a £360,000 contract from the European Union to develop an electronic 'intelligent' tutor to manage on-line language learning and cross-cultural communication training in French, English as a Foreign Language and Portuguese. It is aimed at international managers. The SELECT Project (Strategies for European Language/Engineering Enhanced Communication Training). Consortia include major European companies and universities: Thomson (France), Klett (Germany), the University of Poitiers (France), Giunti (Italy) and the Open University of Portugal.

## United Kingdom

*University/industry development project in vehicle telematics initiated*

Coventry University is the contractor of an £800,000 development project aimed to accelerate the introduction of electronic guidance and navigation systems for cars and trucks. Funded by the

Engineering and Physical Sciences Research Council, Coventry's work will address user requirements and manufacturing costs of incorporating telematic technologies in vehicles. The project also involves Warwick University, Bolton Institute and Loughborough University. Industrial partners include Rover, IBM and GEC-Marconi. The project is situated in the heartland of traditional British car manufacturers, including Jaguar and Rover.

## Germany

*Engineering students lack foreign language proficiency*

A study published by HIS, the University Information System, on behalf of the Ministry of Education reveals that engineering students are ill-prepared for the jobs market when it comes to foreign language proficiency. Over half of all job advertisements for engineers indicate that English is required, as well as the readiness to travel internationally. Language requirements are the most common denominator in all engineering openings. Technical Universities have traditionally neglected making knowledge of languages a degree requirement. English is often only an elective which can be substituted by other non-technical

subjects. Knowledge of a second foreign language, usually, French is rarer still. The study reveals that less than 20 percent of students have read a single journal article in English during the past 12 months. This is compounded by the fact that engineering students generally do not read professional publications, unless they have to, not even in their own language. The outcry by personnel managers to develop language and communications skills is only slowly being taken up by technical education institutions. Traditionally, Engineering schools concentrate only on technical and professional subjects, neglecting all areas not directly connected to engineering. This has far reaching implications. Professional papers published almost exclusively in English, are not being written. (see also editorial)

### Austria

*A plan for spying on professors by the education ministry*
Austria's education minister wants to send spies into universities to root out poor teaching and absentee professors who do not carry out their teaching requirements. The secret observers, posing as students, should make reports to the education ministry and to the universities concerned, the minister **Caspar Einem** said in an interview with the Austrian daily *Der Standard.* Professors would get feedback and advice about how to improve their teaching and universities could take disciplinary action against truant professors. No one would be sacked for a first offence, Mr Einem said, 'But we must at least say: "My friend, either you turn up or we take action'". The spies would also tackle unenthusiastic and uninspired lecturers. 'Professors who wrote a book in the 1980s and since then have done nothing but regurgitate its contents, have to be stopped'.

Mr Einem said the professional observers would help bring problem cases out into the open. He claimed students found it hard to report problem professors, fearing it would affect their chances. He believes the universities are not taking action. At present, the education ministry was often being asked to follow up problem cases, he said. But the education minister's plan outraged university rectors and professors. **Peter Skalicky**, chairman of the Austrian rector's conference, and Rector of Vienna Technical University, called it an 'atrocity'. He admitted there were some shortcomings in Austrian universities. But he added, 'It is not true that the universities are incapable of dealing with them'.

Last year Mr Einem signed a new regulation introducing teaching evaluation. Professor Skalicky said universities were still coming to grips with the new system. 'The rectors' conference believes the minister has the wrong priorities', he said. The biggest problems facing the universities were over-long study periods, the high dropout rate and the need to raise Austria's profile in international research, the organisation says. Professor Skalicky suggested the minister put professional observers into his own ministry since it did not operate all that well in terms of personnel and budget management. 'Perhaps we should disguise ourselves as civil servants and sneak into the Ministry of Education', he added.

### Israel

*Graphic system in 3-D planned for the web*
Virtue Ltd, a company started by computer scientists from the Technion-Israel Institute of Technology, has developed a 3-D graphic system for users on low-level PCs connected to an Internet server. The system can interact with large and complex dynamic 3-D virtual worlds. **Jeff Fayman**, vice president for product development says, 'The 3-D graphic content that has existed on the Web until now has been very simple, uninteresting and toy-like, Virtue has developed software technology that allows more complex, interesting, rich 3-D content to be accessed through the Web'. Virtue provides a quantum leap from what is currently available in 3-D graphics both on and off the Web and provides graphics and Web-based multi-user VRML 2.0 (virtual reality modelling language) which are realistic, and fast. Beta versions of two products will be available for download from *www.virtue.co.il* soon. The Thunder optimiser programme processes VRML files, outputting a stream of VRML optimised for efficient viewing over the Internet. Files will be compressed to a VRML text of half its original size.

### USA

*An exploding jobs market for engineering graduates*
It is common nowadays that college graduates are being pressured to make quick decisions on job acceptance, college officials say. The job market for talented college graduates is a buyers market in certain fields and companies are applying pressure tactics to insure that they will be able to get a graduate at all. Companies are giving potential candidates little time to make a decision. **Elizabeth A. Reed,** director of career services at the Massachusetts Institute of Technology, says that the competition for graduates is greater than it has been for the last 20 years. Companies are calling students late at night and giving them 12 hours to make a decision, and they're adding on sudden bonuses. The trend toward 'exploding offers', as the ones with short-fuse deadlines are known, is the result, at least in part, of what the National Association of Colleges and Employers describes as the best job market for college graduates in at least a decade. In its annual survey of companies last fall, NACE reported that nearly 70 per cent of

employers said they planned to hire more college graduates this year than they did last year. The greatest demand, according to job-placement officials at colleges, is in engineering, computer science, and investment banking. The number of computer-programming and computer-science jobs doubled from 1986 to 1996, to about 1.5 million positions, at the same time the number of computer-science degrees dropped by 25 percent, to 36,000, according to the National Software Alliance, of Arlington VA, who are studying the shortage of workers.

*Company gives $7 million patent gift to*
*Engineering School*

Allied Signal Technology, donated 17 patents worth $7 million dollars to the University of Virginia. The patent form of donating is an innovative fund-raising concept that not only gives the university $7 million in patents but also the potential to generate additional income as well. Allied Signal, based in Morristown NJ, gave the patents to Virginia because of the university's research expertise, and because the company employs 3,600 workers at facilities in seven Virginia communities, it said. For the university, this gift is the first donation of its kind, and it represents a new form of Technology Transfer from industry to university. The patents carry information that protects the process of creating high-performance metal alloys. The value of the information, which predominantly is determined by research costs, has been estimated at $7 million. But the donation could prove to yield much more. Possessing the patents enables the University to license the information to other companies in return for a royalty income. Each time a company licenses the patent, they then pay a fee to the University. 'It's a win-win situation', Engineering School Dean **Richard Miksad** said. 'We have the opportunity to get companies interested in using this technology and get some royalty income. The University now will concentrate on getting companies interested in licensing the patents. Companies concerned with aerospace technology will find the patents especially useful'.

*Engineering professor in conflict on teaching*

An engineering professor on the University of Illinois's Urbana-Champaign campus says he has not been allowed to teach a course in three years. He is suing five administrators whom he blames for his circumstances. **Louis Wozniak** has filed suit in US District Court for the Central District of Illinois, charging that the department chairman, the engineering dean, the provost, the chancellor, and the university's president violated his rights to due process and free speech when they prevented him from teaching and forced him out of the office he had worked in for 30 years. The conflict is on the requirement of the department for professors to submit their grading notes, which Wozniak apparently failed to comply with. He also expressed concerns about the campus-wide Faculty Advisory Committee election. He said he decided to run for the FAC a month before when two vacancies became available. Each candidate had to write a biographical statement for the FAC, a committee that meets to hear faculty grievances. Wozniak submitted a statement which said. 'When FAC found in my favour on two grievances in two years, administration made no concessions'.

Following the statement was a note added to the ballot by the FAC, reading, 'The Faculty Advisory Committee believes it is obligated to disseminate the candidate's statement as presented by the candidate. This candidate's statement contains a reference to the outcome of two grievances. The FAC is constrained by Articles of Procedure to maintain the confidentiality of grievance decisions and dissemination of this statement does not endorse its accuracy'. Wozniak claims that publication of his statement is meant to influence the outcome of the elections. It seems that in conflict with the administration it is difficult for a professor to win.

## USA/South America

*Recruiting drive for engineering students*

A university fair in Lima , Peru, has been aimed at recruiting potential South American graduates for American universities. 27 universities from the United States were represented. Lima was one stop on a three-and-a-half-week tour of nine cities in seven Latin American countries. El Salvador, Panama, Colombia, and Ecuador were behind them; Brazil and Venezuela were still to come. US universities seek to expand their student bodies, and are looking towards Latin American countries which have many affluent students looking for a better education than they can find at home. Typical of the recruiting universities is the University of Dayton. International students now make up about 5 percent of Dayton's student body of about 10,000. Mr. Ise, a program assistant in the university's English Language and Multicultural Institute, noted that Dayton has a long-term goal of doubling its student body. The university is aiming at increasing the enrolment in engineering programs. Of the 450,000 foreign students in the United States, about 47,000 come from Latin America. A decade ago, the figure was about 45,000. It dipped to about 42,000 in the early 1990s before reaching its current level in 1995–96, according to the Institute of International Education.

Poor facilities and low faculty salaries keep the quality of public education in most Latin American countries at an inadequate level. In Peru, most high school graduates need a year of remedial work before they can pass the university admissions examination. University fairs are aimed at students enrolled in private schools, which have rigorous academic standards.

## Malaysia

*Private college degrees under scrutiny*

The Malaysian education ministry is threatening legal action against private colleges which make misleading claims on their foreign degrees. Private colleges have assumed approval by education minister **Datuk Seri Najib Tun Razak** who announced that they could conduct entire foreign degree programmes locally to offset the public cost of financing study abroad. Now college principals claim that private education official **Sri Nusa Ahmad Thaharuddin** said colleges had to apply individually for state approval. A particular concern to the ministry was that some private colleges were enticing students for foundation programmes fully in Malaysia. Colleges could be charged under the Private Higher Educational Institutions Act 1996 for making false, deceptive, offensive and misleading advertisements.

## Conferences

**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
e-mail: h3e@vtk.rug.ac.be
HYPERLINK:
http://www.student.rug.ac.be/vtk/h3e
e-mail: 106316.3622@compuserve.com

**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, 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**
Mutiara Beach Resort Hotel, 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,
PO 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

**EQAS '98**
**Second International Conference on the Quality Assurance**
**Within Engineering Education**
13–16 September 1998
Zakopane, Poland
Contact: EQAS Conference Secretariat,
University of Mining and Metallurgy,
Al. Mickiewicza 30, PL-30-059, Cracow, Poland
Tel: +4812 6173103; Fax: +4812 6173531
e-mail: eqas98@uclagh.edu.pl

**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

**Pedagogics in Design Education**
19–20 November 1998
University of West Bohemia,
Pilsen, Czech Republic
Contact: Prof. Stanislav Hosnedl,
Dept. of Machine Design,
Univerzitni 8, 306 14 Pilsen, Czech Republic
Tel: +420 19276253; Fax: +420 19279990
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