



*This Department is committed to continuous improvement in Academic Engineering Education, Initial and Continued Professional Development of its Staff, Students and Alumni.*

### HEADLINES

#### Internal Research Grants

Staff can now apply for yearly internal research grants, as the University starts to back research in parallel with teaching.

#### Climate change and energy

Arguably the biggest threat or opportunity, so the Department increases its activity in this area.

#### Reducing the carbon footprint

Traditionally, Aborigines would clear sections of the bush (plant life in Australia) by controlled burning. This was done just after the rains, which would help prevent uncontrolled spreading of the fire, as is now experienced in the hot and dry season in the bush. As a result, there were no uncontrolled fires in the good old days, as the fires could not leap across this previously cleared section.

Today, the bush sees almost yearly uncontrolled fires, and hence releasing carbon dioxide into the atmosphere in massive amounts. The Aborigines are now being employed to use their skills to once again prevent the fires, and hence reduce Australia's release of carbon dioxide by an estimated 50%.

This is a remarkable story of how age-old wisdom can save the planet today.

(Adapted from BBC World)

### Message from the HOD

On a personal note, having come to Asian U six years ago and ran the undergraduate programme and department for just over the last five years, I am leaving in July to take up a post in a Graduate School in Bangkok.

I would like to congratulate our Graduates, who all have a great deal to look forward to. I believe they all have something to offer this fast-changing modern world, either in industry or in further studies. It has been a pleasure to have taught them and see them develop over the years. Our Graduates are of course our most valued "product", and reflect on the quality of the Department.

One of our first Graduates recently contacted me asking for a reference to study a Masters. His engineering work since graduating has shown continued development with ever higher levels of responsibility and performance. It is of course a delight to write a reference for such a student.

The undergraduate programme was originally designed and subsequently updated to promote critical thinking, technical competence and professional engineering skills, as well as to make sure the Graduates all had a passion for lifelong learning.

I wish everyone well, and as an Asian U Alumni (of sorts), I will always be interested to read news of the Universities growth.

*Paul*

### Example student project

#### *Life Cycle Approach in Engineering Education*

Engineering research Methods is the course offered at 2<sup>nd</sup> year level to investigate the technological and other aspects of a real engineering problem or basic research topics.

An example of a student project was to investigate the traditional stoves used for cooking in this region. This project was able to utilise a life cycle approach in engineering education. Students started their investigation by reviewing current research in combustion and gasification and produce a design for a wood gasification stove which runs by a forced circulation of air. This is shown in the figure, "night time cooking".

Further investigation will be done in this project to upgrade into gasification stoves.



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Thank you to all contributors.

Contributions for the next edition are welcome at any time from staff, students or alumni, and should be emailed to [med@asianust.ac.th](mailto:med@asianust.ac.th)

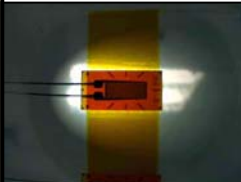


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### Academic and professional engineering outreach

#### Field Trip to Sirinakharin Dam, Kanchanabur

The Department organised a field trip to the Sirinakharin Dam, Kanchanaburi province, to learn about state-of the-art renewable energy power production from hydro resources took place from the 27th to the 28th, February 2007. The trip was arranged as part of course: "Trends and challenges in Engineering", which is taught by Aj.Rajesh Kempegowda as a final year elective for students from the Faculty of Engineering. Aj.Rajesh believes that showing students current practices in engineering technology will give them new insights that will complement their conventional class room teaching.



#### Intellectual Property Rights Seminar

The Department organized and hosted a half day seminar in association with The Society of Professional Engineers of Thailand, The UK Institutions of Mechanical Engineers and of Civil Engineers, the American Society of Mechanical Engineers, the EC-ASEAN IP Rights Programme II and ES Design (Far East) Co.Ltd. The first speaker was Khun Chitr Lilavivat who explained the mechanics of applying for a patent in Thailand. Compared to many other countries, it is relatively simple and cheap. Khun Chitr gave examples of his patents in connection with low cost ferro-cement housing for lepers in Thailand and for people in Cambodia. The second speaker, Mr. Niclas Morey, from the EC working with ASEAN, explained the EU situation regarding patents. In 2006, there were over 200,000 applications for patents and 60,000 were granted. The office in Europe employs nearly 7,000 people of whom nearly 4,000 are engineers with specialist knowledge. The EU is helping ASEAN and its member countries to improve their patent systems. Mr Niclas said that for an effective patent system, countries need to have efficient systems in place with the ability to enforce them. Public education was also necessary. He mentioned that of all available technical information, 80% was only to be found in patent documents.

The final speaker was a well known local inventor, Mr. Stuart Saunders. He has been inventing all his life, but has met with many problems. His inventions range from suspension systems, traction control, stereo hi-fi and the best known here, the credit card dental floss. Stuart has suffered from the patent system, and cited several examples where his ideas have been "stolen" by big companies. Large companies show an interest in ideas, have a look but do not want to pay for anything. Stuart felt that people have unreal expectations of the patent system, and that in most countries, the biggest winners are usually the lawyers.



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### Department publications (June 06 – May 07)

#### National conferences

- Bland, P.W. and Chollacoop, N., "Experimental Observations of Mass and Velocity Parametric Sweeps of Impact Regime Boundaries", 20<sup>th</sup> Conference of Mechanical Engineering Network of Thailand, 18-20<sup>th</sup> October 2006, Nakhon Ratchasima, Thailand, [Paper and presentation]
- Bland, P.W. and Chollacoop, N., "On the Concept and Application of Impact Response Maps", 20<sup>th</sup> Conference of Mechanical Engineering Network of Thailand, 18-20<sup>th</sup> October 2006, Nakhon Ratchasima, Thailand, (full paper in electronic form only, reference AMM047, <http://menett.sut.ac.th/>) [Paper and presentation]

#### Professional institutions

- Bland, P.W., "Developing Local Engineering Human Resources", The Brief, British Chamber of Commerce Thailand, Issue 4, 2006, pp. 40-41. [Article]



### Admissions

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