

## Keele ITMB students win BT Tower Trophy

Keele first year students studying on the IT Management for Business course, which is run by the School of Computing and Mathematics, have triumphed in a day-long BT Tower event competing with students from 5 other universities and with representatives from a range of IT employers. Organised by e-skills UK, the day included student 'elevator' presentations, a business game to tender for a pyramid building contract and a keynote talk given by Dr. Andy Stanford-Clark, Master Inventor with IBM.

The University teams were given 10 minutes to impress the CEO of a major IT company with their knowledge of the company and to suggest ways in which the company could expand over a five year period. The Keele team focused on Yahoo!

Keele's entry was presented by Jason Lloyd and Barinder Moore. Other members of the team at the event were Daniel Arnold, David Little, Gemma Liu, Tiwalolu Osibodu, Dawatage Pothupitiya and Mary Walsh. The group was accompanied by Pearl Brereton, School of Computing and Mathematics and Denis Stalker, School of Computing and Mathematics and LogicaCMG.

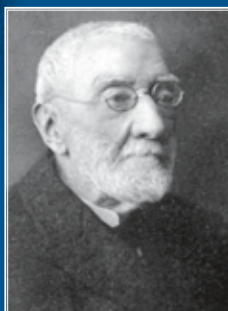
Judged by representatives from a range of employers including Fujitsu, BT, LogicaCMG, Unilever, Deloitte, Royal Bank of Scotland, Ford and IBM, Keele's winning entry was commended for its energy, balance between IT and



business and strong focus on business benefits. The team is now the holder of a substantial glass trophy!

## Forensic Science Laboratories named after forgotten fingerprinting pioneer

### DR HENRY FAULDS



Born in Beith, Ayrshire, on 1<sup>st</sup> June, 1843, Henry Faulds trained as a doctor in Glasgow and then became a medical missionary and writer. From 1874-1885, he worked in Tokyo, Japan, where he founded Tsukiji Hospital in 1875. It was during this time that he made his breakthrough in fingerprinting, being recognised as the first person to publish a detailed report on the conception of fingerprints in criminal investigation in *Nature* in 1880. He died on 24<sup>th</sup> March, 1930 in Wolstanton, Newcastle-under-Lyme, and is buried there in St. Margaret's churchyard. His contribution as a pioneer of fingerprinting is now acknowledged in many countries around the world.

New state-of-the-art forensic science laboratories have been named after Dr Henry Faulds, a pioneer of fingerprinting, who lived and worked in North Staffordshire for almost 40 years. Dr Faulds was born in Scotland in 1843 and worked in Japan as a doctor and evangelist, where he made a breakthrough in fingerprinting. Research would show that the chances of two people have the same prints were 64-million-to-one. Police forces around the world were offered the new fingerprinting system but it was not taken up.

When Scotland Yard opened its first fingerprint bureau in 1901 the recognition went to others, including Sir William Herschel, who was knighted for his efforts. Now the work of Dr Faulds will be recognised as the new Forensic Science Laboratories are named after him. The laboratories are equipped with a wide range of modern instrumentation essential for practical work in forensic and analytical sciences. Dr Faulds' great nephew, Dr Robert Stewart, unveiled a plaque commemorating the naming. Director of Forensic Science at Keele, Dr Vladimir Zholobenko, said: "We have been given permission by the Henry Faulds Foundation to dedicate the laboratories to him and believe we are the first university science faculty to name a facility after Dr Faulds. "He was the first to see the potential of fingerprinting but unfortunately he has not received the recognition he deserves for his pioneering work."



# IMAGINE That!

The Research Institute for the Environment, Physical Sciences and Applied Mathematics (EPSAM) is playing host to cutting-edge research in geophysics which may have ground-breaking innovations and applications for the civil engineering industry.

Dr Nigel Cassidy of the Applied and Environmental Geophysics Research Group has been successful in gaining a new, EPSRC funded, £260,000, research project titled "Inversion, Modelling and Analysis of GPR In Near-surface Environments (IMAGINE)" in collaboration with Dr Lorenzo Crocco at the institute for Electromagnetic Sensing of the Environment of the Italian National Council of Research in Naples (IREA\_CNR) and Dr George Tuckwell of STATS Ltd, St Albans. The project aims to develop new and innovative approaches to Ground-Penetrating Radar (GPR).

The project, which will run over three years, will seek to improve on existing, high-resolution GPR techniques which are currently limited to ground mapping and detection of "near-surface" objects (approximately 2 metres below the surface). GPR has wide applications due to its non-invasive approach. In "difficult" ground conditions, however, analysing GPR data can be extremely problematic, making confident interpretations almost impossible. The IMAGINE project will



resolve that problem by developing advanced inversion/analysis techniques that can 'automatically' determine the true shape, location and material properties of real buried targets from a knowledge of their 'likely' simulated response. Some examples of industrial applications include location of leaking pipes, the location and imaging of buried building structures and features, and land-mine detection.

The project aims will meet the commercial goal of providing real-time automated data assistance in interpreting objects (by providing information on size, shape and material of which they

are composed). It will have applications for civil and 'pavement' engineers and for the fields of archaeology, forensics and potentially for those analysing contaminated land.

The research programme will utilise Keele's new GRID-based CLUSTERVERSION supercomputer and includes a postdoctoral research post and a full time PhD studentship (based within the Applied and Environmental Geophysics Research Group). Interestingly, the recent acquisition of the Supercomputer is underpinned by expertise at Keele and previous success in supercomputing and the research itself grew out of Dr Cassidy's own PhD work undertaken at Keele.

Industrial linkage will be provided through collaboration with STATS Ltd who are supporting the project with over £50,000 of 'in-kind' support in the form of GPR data and commercial expertise. The funding of such an innovative and ambitious project represents a significant advance in GPR-related research internationally and the recognition of Keele's position as one of Europe's leading centres for near-surface geophysics.



## University receives its Bronze SWAN Award!

The Deputy Vice-Chancellor, Professor Maggie Pearson, and the Dean of Natural Sciences, Professor Johanna Laybourn-Parry attended an awards ceremony at the Royal Society in London on Tuesday 13 March to receive a Bronze SWAN award on behalf of the University. The Athena SWAN Charter is a scheme for recognising excellence in science, engineering and technology (SET) employment in higher education. Keele is one of 23 universities who have joined the Charter. In October 2006 Keele was awarded a Bronze SWAN in light of its commitment to assisting the recruitment and retention of women in SET.

As part of this commitment the University has put in place a number of initiatives including the Women in Science lecture series and the AWAKE programme for staff development.

Membership of the Charter, with its bronze, silver and gold SWAN recognition awards, will help universities work towards sustaining equitable working environments and will enable universities to

identify themselves as employers of choice, not only to their staff, but to students, funders, research councils and industry.

The award was presented by Professor Sir David King, the Government's Chief Scientific Advisor.



## Green and Clean!

Professor Mark Ormerod of the School of Physical and Geographical Sciences has been awarded the 2006 Staffordshire Green Award for his work over the last five years in promoting greater awareness of Renewable and Green Energy and sustainable approaches to our future energy needs. Through the award of an EPSRC grant, 'Green and Clean: Promoting Public Awareness of Renewable and Cleaner Approaches to our Future Energy Needs', hands-on experiments and interactive demonstrations on green and renewable energy, including wind power, solar energy, biomass, biofuels and hydrogen fuel cell powered cars and 'green' quizzes have been developed. These have proved extremely successful with schoolchildren, schoolteachers and the general public, involving more than 3,000 school children of all ages from the region, many from educationally disadvantaged areas, and over 200 schoolteachers and trainee teachers. Public talks and lectures on energy use, climate change, renewable energy and adopting greener, more sustainable lifestyles, have been given to over 5,000 people and many local and regional organisations across the region. The activities have clearly demonstrated the huge interest



of schoolchildren and the general public in becoming more aware and better informed about the issues surrounding different green and renewable energies, climate change, recycling and reuse of materials, and adopting greener, more sustainable approaches to energy use.

Dr. Zoe Robinson and Professor Ormerod have recently been successful in obtaining one of only a small number of large grants awarded by DEFRA in their new Climate Challenge Fund, 'Tomorrow's Climate, Today's Challenge' and a second grant from Research Councils UK. The project entitled, 'Being Greener and Cleaner: Promoting Public Awareness of Climate Change and embracing Environmental Citizenship', will build on the work carried out on the highly

successful EPSRC grant, with a particular emphasis on how individual actions can make a genuine difference. The grant has enabled a full-time Project Coordinator, Lucy Gallagher, to be employed, and will further enhance the School's nationally leading reputation for promoting public awareness of science and school outreach activity and will add to the increasingly strong external profile of the interdisciplinary sustainable environment grouping at Keele.

## Forthcoming Events

### Women in Science

Dame Bridget Ogilvie will be coming to lecture at Keele as part of the recently launched 'Women in Science' lecture series. The University has already welcomed the renowned astrophysicist Professor Jocelyn Bell-Burnell and Professor Jane Plant, one of the world's leading geochemists.

Bridget took her first degree in agricultural science (BRurSc) from the University of New England in Australia in 1960. She obtained her doctoral degrees from the University of Cambridge (PhD in 1963, ScD in 1981) for research in parasite immunology.

For 17 years she was a member of the staff of the UK Medical Research Council at the National Institute for Medical Research, Mill Hill, London. In those years, she undertook research on the immune response to parasitic infections. She travelled widely in both the developed world and the tropics in pursuit

of her research interests and as an advisor for key organisations such as the World Health Organisation. From 1985 to 1991, she was a Visiting Professor at the Imperial College of Science, Technology and Medicine in London. She is now a Visiting Professor at University College, London.

As a member of staff of the Wellcome Trust for many years, Bridget took a particular interest in schemes for the career development of scientists and medical graduates. In October 1991 she was appointed Director of the Trust and retired from this position at the end of June 1998.

She has received a number of honorary memberships, fellowships and doctorates from scientific societies and academic institutions in the UK and abroad. Following her retirement from The Wellcome Trust, she has held a number of non executive posts in



science and education.

The lecture will take place on Tuesday 29 May 2007 at 6.30pm in the Charles Strasser Lecture Theatre, Chancellor's Building (please note this is a change of venue from the published leaflet).

## New Faculty Web-Page

The Faculty now has a new web-page showcasing the Faculty's facilities: go to: <http://www.keele.ac.uk/facs/sci/>

## Focusing on... Forensic Science

Forensic Science at Keele is going from strength to strength. The success of the course has been a significant factor in revitalising science and has contributed to increased numbers of students studying Chemistry and Biochemistry.

At Keele the Forensic Science course is distinctive through the strong emphasis on the study and application of the scientific method. There are three scientific threads running through the course: forensic chemistry, forensic biology and criminalistic science. These are developed through a range of forensic applications over the three years of the course. In the final year, students can choose to take forensic specialisms including forensic computing. Students are able to use state of the art equipment in well appointed laboratories which have recently been refurbished to a high standard. Students now have access to the new Dr Henry Faulds laboratory as well as a Scene of Crime room and an analytical laboratory.



At Keele the emphasis is on both the scientific approach to forensic problems as well as the key skills graduates will acquire. This means that forensic science graduates from Keele are particularly well placed to progress not only to a wide range of scientific careers but also to administrative and management roles where communication skills, analytical and problem-solving abilities are greatly valued. Other career paths include the police force or scientific or technical journalism.

For more information on Forensic Science see the new web-pages at: <http://www.keele.ac.uk/depts/forensic/>

## Science Learning Centre Celebrates its 2<sup>nd</sup> Birthday!

To celebrate the 2<sup>nd</sup> birthday of The Science Learning Centre West Midlands, it is hosting the WM SSAT Regional Conference on 8th June 2007 for Science Specialist Schools and Colleges. Colleagues from Specialist Science schools are invited to the conference where seminars and workshops will be held, providing insight into working in partnership with other organisations to meet the requirements of specialist status. Sessions will be presented by a range of successful organisations and practitioners, who will facilitate shared experiences and potential opportunities.

If you would like to book a place, or find out more, please contact the Science Learning Centre, quoting event code WME1444 by phone on 01782 584429, by email: [enquiries@westmidlands.slcs.ac.uk](mailto:enquiries@westmidlands.slcs.ac.uk) or see more online at [www.slcs.ac.uk/wm](http://www.slcs.ac.uk/wm)

## Welcome to New Members of Staff

We would like to welcome the following new members of staff to the Faculty:

### *School of Physical & Geographical Sciences*

Chrystelle Egger

Katie Szkornik

Falk Herwig

Isobel Tomlinson

### *School of Computing & Mathematics*

Shailesh Nair

Theocharis Kyriacou

### *School of Life Sciences*

Hazel Hulme

Glen Hussey

### *Science Learning Centre*

Jo Flynn

## Congratulations!

Congratulations to Nigel Cassidy and Nigel Mounteney who have recently been promoted to Senior Lecturers; and to Pierre Maxted who has been promoted to Reader.

## The BA

The University has signed up to the British Association for the Advancement of Science (BA). This has a number of benefits including preferential rates for advertising in its quarterly magazine 'Science and Public Affairs'. The BA is a charity which exists to advance the public understanding, accessibility and accountability of the sciences and engineering. For more information on the BA go to [www.the-ba.net](http://www.the-ba.net)

## Contact Us

If you have any articles you would like to appear in **news**, please contact the editor: Ximena Canter on [x.k.canter@natsci.keele.ac.uk](mailto:x.k.canter@natsci.keele.ac.uk), or Janet Drewery on [j.drewery@natsci.keele.ac.uk](mailto:j.drewery@natsci.keele.ac.uk)