A record number of women students are enrolled in first-year courses at the University’s Faculty of Engineering this year.

A quarter of the 2013 first-year intake is women, and those 178 enrolments are the highest number for any university in Australasia. The Faculty of Engineering has a proactive recruitment initiative and a pastoral care programme for women students.

The Faculty’s Women in Engineering Equity Adviser, Robyn MacLeod says that other universities don’t have a full-time position dedicated to recruiting women into engineering courses.

“I do up to 40 presentations to schools each year, talking to young women in physics and calculus classes or during their free periods,” says Robyn. “This gets our engineering programmes known as a career option among women and out in the community.”

In Auckland at Epsom Girls Grammar for example, there were eight physics classes of Year 12 students last year and seven physics classes for Year 13 students. From these, 52 women students applied for engineering this year, although not all of those were successful.

“Many parents and students don’t realise that engineers are creative problem solvers that are always working on new challenges to make a difference to people’s lives,” she says.

The recruitment initiative is successful, and attitudes are changing, “but not fast enough or we would have 50 per cent of girls enrolling in engineering”.

Women students come from around New Zealand and from all decile schools, not just the top deciles, she says. This year 121 women student enrolments came from the Auckland/Northland region with 37 from the lower North Island (Waikato south), four from the South Island and 17 from overseas.

This year there are nearly 650 women undergraduate students in the Faculty of Engineering, across four year levels, doing Part 1 to Part 4.

The Women in Engineering Network (WEN) is a pastoral care support group that has operated in the faculty for 20 years. One of the two women who initiated the group is Associate Professor Rosalind Archer, who as the first female head of department in the Faculty of Engineering, leads the Department of Engineering Science.

Now run by Robyn and a committee of 16 student co-leaders, WEN creates a strong social support group for women engineers in the faculty. They run social events such as the Orientation Afternoon Tea, a dinner and a cocktail party. They also have career development day and evening events for women student engineers, and a tutor group especially for women.

Cut line: New female Engineering students at the 2013 Orientation Afternoon Tea

“Be creative

“Music, art and stimulating conversation will help to keep you young.” That was the message from Centre for Brain Research Director Professor Richard Faull when he spoke at Brain Day 2013 on Saturday 16 March.

“Every amazing work of art, literature or music in the history of civilisation has been generated by the human brain. We know from our studies that the more we keep active and expose ourselves to new experiences, the more new brain cells are generated. So it’s important to indulge in being creative.”

The neuroscience of art, music and dreaming were all showcased as part of this year’s Brain Day, under the theme of “your creative brain”. The free annual expo organised by the Centre for Brain Research (CBR), with support from the Neurological Foundation of New Zealand, was part of international Brain Awareness Week. Over 2,000 members of the public attended the event, which featured science laboratory experiments, musical performances, and kids’ hands-on activities.

A packed out lecture programme ran throughout the day, with over 900 people...
University alumna Professor Diane Brand has been appointed to succeed Professor Jenny Dixon as Dean of the National Institute of Creative Arts and Industries (NICAI).

Diane holds a Bachelor of Architecture and a PhD from Auckland and a Master of Architecture in Urban Design from Harvard. She was a practising architect in the private sector for several years and then held academic appointments at the University of Adelaide and University of Auckland. In 2008 she moved to Victoria University of Wellington where she became Head of the School of Architecture and then Dean of the Faculty of Architecture and Design.

Diane’s research interests are mainly in the areas of urban design and urban history, particularly in cities of the New World. Part of what has attracted her to the Deanship at Auckland is the opportunity to extend those interests, as she has done at Victoria, by building connections to other creative and professional disciplines both nationally and internationally.

Diane will take up the Deanship of NICAI on 15 July. Associate Professor Nuala Gregory will be Acting Dean until that date.

The University’s new Chemistry labs are open for business in the Science building.

Weeks into the new term and Jeff Boyle (Advanced Teaching Lab Manager) and Katrina Graaf (Stage One Lab Manager) are excited.

Says Katrina: “The experience students are going to have in these facilities will be amazing.” Jeff explains that coming up with the “spec sheet” over an 18 month timeframe was a collaborative process between the team at architectural firm Architectus and the chemistry lab staff who each have different areas of responsibility. “Everyone was included in the design process and there was a lot of input.”

Jeff and Katrina are especially proud of the lab being designed to include people with disabilities, with wheelchair accessible fume cupboards and benches that can be lowered if need be.

Health and safety has driven the new lab design. Along with standardising the lab so students know that whichever area they are in the safety showers will be in the same place, there is a “gown up” area so students do not need to bring in their personal effects. The new “traffic light” system means if the light is orange enter with caution, if it’s red – get out. Each lab has AV screens to enable lecturers to give instructions such as safety messages to students.

The one thing the new lab doesn’t have is a big storage area, but Katrina sees this as a bonus because “we had to get smarter and get rid of a lot of old stuff”.

The labs are smarter still, with columns that re-circulate water — saving on water consumption — and mobile trolleys that can be swapped over instead of having to take instruments apart, ensuring flexibility when running different experiments at different places in the lab. Brand new, efficient dishwashers mean the students don’t go through as much glassware as they used to. Separate write up rooms offer a comfortable and quiet space to study away from the lab.

Jeff says people are impressed with the specs of the new labs and he believes “it should be top class for a number of years to come”.

What’s more when Jeff and Katrina look out the window across to Albert Park they can see sky. A new thing.

**Finding the right balances**

Professor Dame Carol Robinson, the first female professor of Chemistry at Oxford University, gives a talk on mass spectrometry charting its development from the earliest spectrometers designed in Cambridge to measure rare gases through to their modern day counterparts used in our labs to study membrane embedded motors.

Carol is renowned for pioneering the use of mass spectrometry as an analytical tool and for her ground-breaking research into the 3D structure of proteins. She will also talk about her personal journey from lab technician to professor. 6pm, Friday 12 April, Lecture Theatre OGG83, Owen G Glenn Building. See www.science.auckland.ac.nz

**New Chemistry labs**

From left: Jeff Boyle, Glenn Boyes, Sandra Otty and Katrina Graaf

**Picture This!**

Emeritus Professor Geoff Wyvill (Otago University), co-founder of Animation Research Limited which developed the famed America’s Cup graphics package, and Dr John Lewis (Victoria University of Wellington), a Research Lead at Weta Digital, are amongst the speakers at this year’s Gibbons Lectures. The free public lecture series, from 2 to 23 May, will discuss computer graphics in New Zealand. Joining the guest lecturers are Professor Gordon Mallinson (Mechanical Engineering) and Dr Burkhard Wünsche (Computer Science) from The University of Auckland, speaking on engineering computer graphics and computer games, respectively. For more information: www.cs.auckland.ac.nz/our_department/Gibbons_Lectures.

**Professional Staff Development Awards**

Applications and nominations for the bi-annual Professional Staff Development Awards open on Tuesday 2 April and close on Tuesday 30 April at 5pm. These awards provide an avenue for professional staff (either individuals or teams) to make an identifiable contribution to the University by furthering their professional development.

An information session to help staff prepare their application will be held on Tuesday 9 April, 10-11am in Room 102, Level 1, Alfred Nathan House, 24 Princes St. Please register via PeopleSoft HR (course number HRPSDA). See: www.staff.auckland.ac.nz/una/home/staff/intranet/human-resources/career-development and click on the ‘Awards and Fellowships’ link.
University waka blessed

A small group of staff and students gathered at Okahu Bay last week to bless and christen two new waka purchased by Sport and Recreation.

The waka were bought on the strength of last year’s inaugural Waka Ama race, between Okahu Bay and Cheltenham Beach, and the resultant student interest in forming a waka ama club at the University.

“We are always keen to support an active lifestyle among our students, in whatever capacity we are able to,” says Louis Rattray, Director for Sport and Recreation. “After seeing the demand for a waka ama club, we realised it would be difficult to establish a club without the necessary equipment to make it meaningful to join.”

The ceremony was organised by Michael Steedman, Kairarahi at the Faculty of Science, with help from Geremy Hema, Tuakana Equity Adviser, and members of Ngati Whatua o Orakei, the local iwi; Temaiti Arama Tamaariki who endorsed the names of the waka and Taiaha Hawke who conducted the karakia, to bless the watercraft and its use on the Wai'temata.

The two outrigger canoes, each weighing 110kg, were designed and built on request by Northland-based canoe builders Moana Nui, located on the Tutukaka Coast. Both waka were christened with names that hold a special significance to the University.

One is aptly called Waipapa, a homage to our Waipapa Marae, which takes its name from the landing place of canoes on what is now Beach Road. The other is named Tangi’ia, a name which is more universal across the Pacific. It is the name of an ancestor who connects the major islands of the Pacific with New Zealand. This ancestor also sits within our Waipapa Marae.

Each will be branded with University colours and will be temporarily stored at Tāmaki Innovation Campus until a home closer to the sea can be found.
This is reflected in a recent US survey ranking the University as second only to the Colorado School of Mines for the percentage of its research which is sourced commercially. The survey by the North American Association of University of Technology Managers measured how much commercial work was being carried out at universities. In North America the average is 7 percent; at The University of Auckland it is 42 percent.

Since 2005 UniServices has started 15 new companies and issued more than ten times that many licenses to existing companies. In 2011 Peter’s team negotiated the most significant technology transfer deal ever achieved by a New Zealand university when Qualcomm, a world-leading provider of wireless technology and services, bought the University’s IPT technology for the wireless charging of electric vehicles.

Peter, who was appointed New Zealand’s Chief Defence Technologist last year, will continue to have a part time role at the University teaching commercialisation and entrepreneurship courses at the Business and Engineering schools and consulting more widely across the University when needed.

Dr Andy Shenk, who is an American-born New Zealand citizen, holds a BSc in Biology from Rhodes College and a PhD in Biological Sciences from the University of Delaware. His most recent position was as Chief Scientist for Fonterra. He was a director and chairman of Lactopharma, a joint venture company owned by Fonterra and Auckland UniServices, and has been Fonterra’s Board representative on a number of new spinout companies.

### Decolonising our stories

The bombing of Guatemala City that opens Arturo Arias’s novel *After the Bombs* (1979), is a personal memory that marked a life trajectory of creative writing as peaceful revenge, reconciliation and preservation of collective memory. Today, young Maya ask Arturo to tell them about their own history, because a generation of Maya and other Guatemalans disappeared during the 1980s civil wars. These stories of violent conflict elicit painful memories for many Latin Americans and indigenous peoples, a process necessary for healing now taking place in Abya Yala, the Americas, Aotearoa, New Zealand and the world.

On a recent visit to The University of Auckland, Arturo, in an exchange of storytelling with Professor Charles Royal of Ngā Pae o te Maramatanga, posed this question: which stories are appropriate for this generation? Also he shared his experiences as a writer, critical theorist and academic in a series of events sponsored by the Hood Foundation, the New Zealand Centre for Latin American Studies, and Ngā Pae o te Maramatanga, to strengthen research collaborations and further indigenous self-determination.

The workshop on Decolonisation, Research and Indigenous Peoples was led by Arturo and Linda Tuhai Smith, Pro-Vice Chancellor Māori at the University of Waikato. The slow and risky process of decolonisation requires a long and strategic understanding of what will be gained when a community gives up ways of thinking and knowing to adopt others. Building strong relationships and focusing on specific goals requires leadership and foresight communicated through good stories and the simple act of enjoying the company of those you work with in institutions that can stifle creativity and innovation.

Arturo’s Public Lecture focused on the long history of Maya knowledge, empirically verified in the longest extant calendar on earth, whose authors celebrated the beginning of a new cycle, the Thirteenth Baktun (Oxlajuj B’aqun) last December. Contrary to the anxious story about the end of the world created by the Western media, Maya are enjoying a renaissance in which communities across Guatemala and Mexico are revitalising languages and traditions in order to teach others about peaceful solutions to current crises.

### Get commercial

Nominations are now open for the Vice-Chancellor’s Commercialisation Medal. This is awarded annually to a University staff member who has, while in New Zealand, made an outstanding contribution to industry and society in particular for commercialisation or contract research. Up to three medals are awarded each year.

Last year two medals were awarded to Inductive Power Technology (IPT) researchers Professor John Boys and Associate Professor Grant Covic from the Faculty of Engineering.

Nominators may nominate a candidate who holds a salaried academic or research position with The University of Auckland or Auckland UniServices and has been employed for two years. Candidates must have an excellent commercialisation or contract research record with UniServices within the last eight years.

**Date of closure:** 31 March 2013  
**Email:** innovation@auckland.ac.nz
Record number of Marsden proposals
The University submitted 323 preliminary proposals to the Marsden fund in February. This represents a 19% increase in numbers against 2012 and was the first Marsden round to go through the Marsden Portal and the Research Funding Module. Researchers were offered assistance by reviews (mock panels and individual reviews) and editing in addition to compliance checks. Twelve mock panels were held in the first week of February with 82 applicants taking advantage of the panel reviews.

Contract extensions for CoREs
The TEC and the University have signed a variation agreement for the University’s three CoREs (Gravida National Centre for Growth and Development; the Maurice Wilkins Centre; Ngā Pae o te Māramatanga), providing funding for a further 18 months from July 2014 to December 2015. The purpose of the extension is to allow for additional time to run the CoRE Rebid process.

HRC Māori Health Research Development and Knowledge Translation Grants
The Health Research Council has announced two Māori health research opportunities, one to support the planning and scoping of a new research project (funds up to $10,000) and the second for research dissemination activities (up to $5,000). Applications are due with the Research Office on 30 May 2013. For further information consult the HRC website (www.hrc.govt.nz/funding-opportunities/maori-development#m% C4%81ori-health-research-development-grant) and Dr Hilary Lapsley, the HRC Fund Specialist (h.lapsley@auckland.ac.nz).

Mystery shopping survey
The Engineering Faculty’s Student Centre has come out tops in a mystery shopping survey.

Student Information and Marketing Services recently conducted a mystery shopping programme to assess the quality of service provided to both prospective and current students. The survey assessed 126 student interactions of which 54 were visits to student information centres, 51 were email enquiries and 21 were telephone calls.

Bronwyne Hawkins, Manager Student Contact and Support worked with all faculties, the International office and the School of Graduate Studies to develop a set of common student enquiries to test. All staff involved were then advised in advance about the exercise. Each interaction by a mystery shopper with a staff member was assessed on the following criteria:

- Student Centre presentation; greeting and acknowledgement; needs analysis; courtesy skills; and closing the enquiry.
- Overall, the level of service provided to students was found to be very good. The Student Centre found to provide the best service to students during the exercise was Engineering which achieved an overall score across all criteria of 96%.

“Congratulations to Engineering for receiving a near-perfect score,” says Dianne Head, Director of Student, Information and Marketing Services. “I would like to thank Bronwyne, the faculties and service divisions who participated in the mystery shopping programme for their support and enthusiasm, and their ongoing commitment to improve student services.”

Healthbots launched in Gore
The University’s reach extended all the way to Gore earlier this month when three small healthbots and a larger one were launched by Gore Health. It is the first health provider in New Zealand to take on the University-designed healthbots to aid older people in their homes.

“The centre [for Rural Health Development] aims to transform the way healthcare is delivered in rural New Zealand,” says Gore Hospital Chief Executive Karl Metzler. “We want to improve health care and outcomes for the local population by using innovative health technology along with workforce skills development and process improvements.”

The University of Auckland’s Robotics Research Laboratory and South Korea’s Electronics and Telecommunications Research Institute (ETRI) began talking in 2006 about combining Korean expertise in building domestic robots with the University’s expertise in writing software programmes for human robots.

“We decided to focus on robotics to help look after older people as many countries are struggling to maintain quality care as their population ages,” says Dr Bruce MacDonald, Director of the Robotics Laboratory.

Selwyn Village Retirement Home in Point Chevalier has been an active testing ground with some 30 healthbots trialled at any one time.

Mystery shopping survey

Back row (left to right) – Jamie Pratherae, Maree Shaw, Joanna Burnett, Karrie Blennerhassett, Liz Chandy
Front row (left to right) – Sushani Jayasinghe, Dorothy Tolentino and Bella He

Apology
In the last issue of the University News’s Maramatanga titled “Predator-Free New Zealand” we published Sir Paul Callaghan’s name as “Peter”. Our sincere apologies for this mistake.
Creating her largest art work to date, a huge 104-part painting to cap off her survey show, a loop around a loop, at Christchurch Art Gallery in 2006, Julia Morison titled the behemoth "Gargantua's petticoat" after the garments mentioned in Francois Rabelais‘ 1534 novel. Rabelais describes how the men and women of the religious order Theleme were appareled: “next to their smock they put on the pretty kirtle or vasquin of pure silk camlet; above that went the taffety or tabby farthingale, of white, red, tawny, grey, or of any other colour.”

RoCoco is one of the ten playful entities that emerge from under the skirt of that gargantuan. Made of ten aluminium laminate quadrangles, it fixes flat to the wall like a segment of an architectural frieze or dado. Cross-shaped, this Euclidean straight-edged geometrical support is dressed first in a coat of Berlei beige then with a spiraling, looping and interlacing configuration of black and white lines. While the lingerie colours and tightly cinched centre of the pattern might conjure associations with corsetry, the interlocking Cs-scrolls conjure the signature motif of French eighteenth-century Rococo décor. The predominantly horizontal black-and-white stripes appear stave-like, ending either in tightly curled spirals or unwinding into treble clef-type curlicues. In the top half of the work, koru-like black bulbs are furled in purposeful formation in contrast to the flaccidly drooping teats on the left. One road leads to Gordon Walters and Op Art, and the other route takes us to the free organicism of the Aesthetic Movement: formalism versus decoration.

As well as invoking the Rococo style, the unusual capitalisation of the title suggests a playful reference to Coco Chanel (1883-1971), the French fashion designer whose casually chic clothes liberated women from the corset. In a range of sporty outfits inspired by nautical pursuits, Chanel teamed horizontally-striped shirts with espadrilles that meant women laced their shoes rather than their undergarments. Just as the decoration of royal residences in the reign of Louis XV saw the rampant release of rippling S curves meeting to form the outline of a bow above mirrors and doorways, so too did Chanel dress up her boxy suits and blouses with pussycat ties and ribbons. Although it was once defined as “excessively or tastelessly florid or ornate”, historians have also noted how Rococo accompanied an age of liberating modernity when lightheartedness replaced the suffocating formality and sobriety of the seventeenth century. Chanel’s fashion is the twentieth century equivalent. For both Coco and Rococo, the concern was not with sculpting mass or the body beneath, but with a delicate play of pattern on surface, and with countering constraints imaginatively.

Linda Tyler

Julia Morison, (born 1952), RoCoco, 2006, 2400 x 2400mm, 10 panels, mixed media on aluminium laminate

From the Cultural Collection

Described by Berlioz as “delicious” the compositions of Maria Malibran are examples of popular solo songs from the early eighteen hundreds. This copy of There is no home like my own by Madame Malibran de Bériot, was published in London around 1840 by D’Almaine and Co and such was its popularity that 16 editions were published.

How this copy came to Auckland is unknown but sometime in the 20th century the song was bound into a collection of 19th century songs. The volume is now held in the Music and Dance Library’s Glass Case collection which consists of about 600 books and scores, either rarer New Zealand material or works published generally before 1860.

The woman on the cover is Maria Malibran herself, one of the most famous opera singers of the early 19th century. Born in Spain in 1808, she died aged only 28, having already appeared triumphantly on the opera stages of Paris, London, New York, and Milan. She created the title role in Donizetti’s opera Maria Stuarda and her sister, Pauline Viardot, was also a famous singer and composer. “La Malibran” was almost as famous in her lifetime for her shocking lifestyle as her singing. Her first marriage was annulled, she lived openly with her future husband, Charles de Bériot, and she died after a riding accident for which she refused medical care. Less well-known was the fact that she had also composed more than 40 songs, which she was said to scribble out while waiting back-stage. Few of these songs are still in print and this copy not only continues to make her composition available but also provides a contemporary portrait. Her life and talent continue to fascinate and she is the subject of an opera and three films.

Philippa Mckeown-Green, Music and Dance Librarian
**FRIDAY 5 APRIL**

**School of Music lunchtime concert**
Jazz students. 1.05-1.55pm, Music Theatre, School of Music, 6 Symonds Street, Auckland. A series of lunchtime concerts showcasing School of Music students in both individual and ensemble settings. Queries to concerts@auckland.ac.nz

**SATURDAY 6 APRIL**

**The Great Waka Ama Race**

**Exhibition talk**
Ashley Remer: Kiwi chicks: Gathering of childhood in NZ. 1pm, Gus Fisher Gallery, 74 Shortland St. Ashley is the director of the virtual Girl Museum, http://girlmuseum.org. Queries to gusfishergallery@auckland.ac.nz

**MONDAY 8 APRIL**

**Student Jazz Ensemble Concert**
Alsa 9 April. 7pm, Studio One, Kenneth Myers Centre. Free. Jazz Performance students perform a mix of jazz standards, modern pieces and original work.

**TUESDAY 9 APRIL**

**ABI PhD seminar**
Pau Medrano-Gracia, ABI: Shape and function analysis in large cardiac MRI datasets: statistical atrial of the heart. 4.5pm, Ground Floor Seminar Rm G010, Lindauer House, 70 Symonds St. FTVMS/School of Asian Studies seminar

**Jihye Kim and Curt Fu: Sweating beauty**
1.30pm-2pm, Pat Hanan Rm 501, Arts 2. Women in Engineering Network A woman’s path forward. 6:30pm, AECOM House, 8 Mahuhu Crescent, Auckland Central. Showcasing women at various levels of their engineering career; from graduate to associate director. Come enjoy drinks and nibbles with fellow female engineers and get some top tips.

**WEDNESDAY 10 APRIL**

**Ferréta seminar**
Kate Mead: Music on the airwaves. 5.30pm, Music Theatre, School of Music, 6 Symonds St.

**THURSDAY 11 APRIL**

**Film, Television and Media Studies seminar**
Chris Brickell: A travelling gay picture show: Photography, community &

**FRIDAY 12 APRIL**

**School of Music lunchtime concert**
Flute and guitar students. 1.05-1.55pm, Music Theatre, School of Music, 6 Symonds Street, Auckland. A series of lunchtime concerts showcasing School of Music students in both individual and ensemble settings. Queries to concerts@auckland.ac.nz

**SATURDAY 13 APRIL**

**Exhibition talk**
Gilbert van Reenen, award-winning landscape photographer from Wanaka, talks about retracing John Buchanan’s footsteps with a digital camera. 1pm, Gus Fisher Gallery, 74 Shortland St. Queries to gusfishergallery@auckland.ac.nz

**TUESDAY 16 APRIL**

**Asian Studies/NZ Asia Institute seminar**
Dr Yu Kyung Lee, Kookje College, South Korea: The Goth image expressed in Korean wave K-pop fashion. 4.50pm, Pat Hanan Rm 501, Arts 2. Legal Research Foundation /Faculty of Law seminar

**BestScienceEdit**
International science students and researchers - do you need help with your theses and academic documents? We are professionally trained science editing experts with biomedical degrees and decades of editing experience. We specialise in assisting academics who have English as a second language. Email us at bestscienceedit@com or visit www.bestscienceedit.com

**City Legal Services**
Rainey Collins Wright is a small law firm centrally located at L1 Princes Court, 2 Princes Street. We are near the University, with good parking. We can assist with property transactions, trusts, wills, administration of estates, enduring powers of attorney and relationship property matters. Please phone our senior solicitor Nichola Christie on 379 5828 to discuss your needs, or email nchristie@rainey.co.nz

**MedEntry UMAT Prep:** Government accredited and internationally trusted registered training organisation offers quality focused training for UMAT. Aspiring doctors and dentists, year 13 students and first-year health science students, please visit www.medentry.co.nz

**Plumbing Services**
Source Plumbing Ltd is experienced in all aspects of maintenance, renovations and new work. Certifying plumber that is friendly, neat tidy work, and competitively priced. Phone (022) 198 5301 or email craig@sourceplumbing@hotmail.co.nz

**Travel**
I have 12 years experience in booking all aspects of personal travel for university staff and lecturers. I pride myself in ensuring that your travel plans are sourced at the lowest possible costs and are tailor-made to your requirements. Contact Karen on karen.emberton@mondotrail.co.nz or 940 0064 (wk) or (021) 188 7781.
"You may think that there are other more important differences between you and an ape, such as being able to speak, and make machines, and know right from wrong, and say your prayers, and other little matters of that kind; but that is a child’s fancy, my dear. Nothing is to be depended on but the great hippopotamus test."

—from *The Water Babies*, by Charles Kingsley

In this extract, Kingsley intended the "great hippopotamus test" to be a satirical reference to the view, expressed by the distinguished anatomist Sir Richard Owen, that only humans possess a brain structure called the hippocampus minor. Owen thought that this disproved Darwin’s theory that humans share a common ancestry with apes. Kingsley, a minister of the church as well as a historian and novelist, was a friend and supporter of Darwin, and his scepticism was rewarded when T.H. Huxley showed that great apes also possess a hippocampus minor.

The hippocampus minor is now largely a relic of history, but its larger companion the hippocampus major, now generally referred to simply as the hippocampus, has assumed great importance in modern neuroscience. It is the hub of a large network known as the default-mode network, which is active when people disengage from the present and indulge in mind wandering. Brain imaging shows the brain to be almost as active when people in the scanner are supposed to rest as when they are engaged in a designated task. The activity during the resting state also covers much wider brain areas than when the mind is focused.

The hippocampus coordinates personal orientation in space and time. Brain-imaging shows it to be active when people recall past episodes and imagine future ones. If it is destroyed, the individual is effectively stuck in the present, unable to recall past episodes or imagine future ones. A striking case is the English musician Clive Wearing, an expert in early music who built up a distinguished musical career with the BBC; he was responsible for the musical content on Radio 3 on the day of the royal wedding of Prince Charles to Diana Spencer. In 1985, at the height of his career, he was stricken with a form of Herpes simplex (the cold-sore virus) that attacked his central nervous system, destroying his hippocampus. His plight is captured in the title of the book *Forever Today*, written by his wife Deborah. Although locked in a personal here-and-now, he can still play the piano and conduct a choir.

The hippocampus is also a cognitive map, coding one’s location in space. Spatial mapping is especially critical to London taxi drivers, who must decide the quickest route to a passenger’s destination immediately, without looking at a map, consulting a GPS system, or asking a controller by radio or cellphone. Brain imaging shows their hippocampi to be enlarged relative to those of London bus drivers, who follow fixed routes.

Even rats pass the great hippopotamus test. Recordings from so-called place cells in their hippocampi code where the rat is located in an environment such as a maze. But even when the rat is out of the maze, and either asleep or otherwise motionless, place cells are often active in fast “ripples,” sweeping out trajectories in the maze. These trajectories need not correspond to trajectories the animal actually took while it was in the maze. Sometimes they are the reverse of an actual trajectory, and sometimes they correspond to trajectories the rat never actually took. The rat, it seems, is mind wandering.

Mind wandering in humans, though, no doubt includes elements other than places. We construct episodes that include things, actions, emotions, people—even Jeanie with the light brown hair. We even wander into the minds of others. Mind wandering is the source of stories, imaginary tales of heroism, love, and death. Language itself may have evolved precisely so we could share the wandering of our minds.

This is an extract from the talk on "Mind Wandering" Emeritus Professor of Psychology Michael Corballis gave at Brain Day.