The glass ceiling in the Faculty of Engineering has been well and truly broken this year with the appointment of Associate Professor Rosalind Archer as the Head of Engineering Science. She is the first woman to head a department in the faculty.

Rosalind began her undergraduate Engineering degree at Auckland in 1993 where she met Associate Professor Merryn Tawhai, who is also breaking new ground as the first female Deputy Director of the Auckland Bioengineering Institute. “It’s a great thing for young female engineers to see women in these roles,” says Merryn, “and then for them to reach a point where they are taken for granted.”

Merryn and Rosalind are part of a growing number of female staff in the faculty and are two of four women holding significant leadership positions. When Professor Margaret Hyland (Chemical and Materials Engineering) joined the faculty 23 years ago she was one of two females on staff. Now she is Deputy Dean of a faculty that has 650 women studying across the four years, with a quarter of the intake this year female, the highest for any Australasian university.

Associate Professor Bryony James (Chemical and Materials Engineering) did her undergraduate degree at Bath in England, where about 10 percent of the engineering students were women. Today Bryony is a role model as a 2013 winner of a National Tertiary Teaching Excellence Award. She recently participated in the New Zealand Women in Leadership programme and begins a new role in November as the faculty’s Associate Dean Research.

So in Bryony’s words that makes it a “Quadrumvirate” of Engineering women in leadership roles.

The Internet is arguably one of the most transformative forces in society today, and its impact on our lives is still evolving rapidly two decades after its adoption by the wider public.

“The very same public continues to demand faster and more secure service in more places from Internet technologies,” says Dr Ulrich Speidel from the Department of Computer Science, organiser of this year’s Vice-Chancellor’s Lecture Series under the
Inspiring message from Helen Clark

The Rt Hon Helen Clark gave an inspiring and poignant speech at The University of Auckland on her role as administrator of the United Nations Development programme.

A packed audience attended the Maidment Theatre for the 2013 Robert Chapman Lecture, named in honour of Bob Chapman, the founding Professor of Political Studies at the University. It’s the second time Helen Clark has delivered the Robert Chapman Lecture since she gave the inaugural speech as Prime Minister in 2000.

Her speech started out sounding like a return home as the former Political Studies lecturer and tutor acknowledged familiar faces in the audience, and paid homage to both Rob and Noeline Chapman for their influence on her intellectual development as a young student in the late 1960s. But the focus of the speech, titled “Beyond the Millennium Development Goals: What could the next global development agenda look like?” quickly turned to her role as administrator of the United Nations Development Programme, a position she has held since April 2009.

Helen Clark spoke passionately about the achievements the UN has made since the eight original Millennium Development Goals or “MDGs” were created from the UN Millennium Summit in 2000, and, following a report published this year, what further goals can be achieved by 2015.

She emphasised that “increased global attention does work” and highlighted the significant gains made in the fight against HIV/AIDS, the lifting of one billion people out of extreme poverty and the eradication of polio from all but three countries.

“The world is demonstrably healthier, more educated and with more GDP per capita than ever before.”

But she was also realistic about what further gains can be achieved, stating that even if all the MDG targets are met there will still be one billion people living in extreme poverty in 2015.

The MDGs have also had to develop and change with the times since their formation in 2000. Helen Clark outlined the greater emphasis on climate change and how global warming can hinder development goals by destroying crops and pasture intended to help people in need.

“ Even heroic action by advanced countries is not enough to ward off climate change.”

Libraries in the global village

A ceremony to showcase the Shanghai Window Project, originally a print based service but now an e-book service, was held on Monday 19 August at the University’s General Library.

Shanghai Library, the second largest library in China, has been donating books on Chinese culture and language to The University of Auckland Library for over five years. The University of Auckland Library now has access to over 900 e-books in the new service, with many more to come.

Attending the ceremony was the Director of the Shanghai Library, Dr Wu Jianzhong and Janet Capsey, University Librarian. Ms Long, the Cultural Affairs attaché at the China Consulate, and Professor Paul Clark (Asian Studies) and Professor David Robb (Professor of Operations and SCM) were also in attendance. Ms Long spoke of her love of libraries and commented that “in the global village we need to understand each other and there is huge potential for cooperation via libraries”.

In a speech to the delegation Dr Wu spoke about the international standing of the Shanghai Library, citing its innovation and its history. He spoke with enthusiasm of the partnership it shares with The University of Auckland Library, one of New Zealand’s largest research libraries. The following day Dr Wu also visited Auckland Council Libraries which is now the largest public library system in the Southern Hemisphere.

The Window on Shanghai service can be accessed from the Library’s Databases link on the left hand side of the Library’s website.

Paul Clark, Janet Capsey and Dr Wu Jianzhong speak with Ms Long.
Celebrating student volunteers

Auckland University Students’ Association (AUSA) celebrated its success with a launch party at the Vice-Chancellor’s Suite in Old Government House on 14 August.

Vice-Chancellor, Professor Stuart McCutcheon, spoke at the launch, expressing his appreciation of the students who “volunteer their time by contributing to activities that benefit the wider student community.

“I personally place great value on the work you are all doing,” he said.

Guest speaker was Kate Sutton, a former AUSA President and now Programme Development Manager at Pacific Cooperation Foundation. Kate currently sits on The University of Auckland Council.

AUSA Delegates is a student-run volunteer network founded earlier this year by Cate Bell and Max Lin, AUSA Vice-Presidents for 2013, with the aim of advancing culture on campus and helping the community.

This year, the programme allows for delegates to apply their expertise over seven different teams: media, welfare, representation, education, events, general and community. Delegates have already raised thousands of dollars for student welfare and charities, including Hairshave – Leukaemia and Blood Cancer New Zealand. They helped paint QueerSpace, launched educational campaigns and analysed the student service levy.

“A student wishing to apply for the Delegates’ Programme is required to go through a formal application process, where their skills and interests are matched with AUSA divisions requiring assistance. The programme helps students to gain valuable experience and develop their personal and inter-personal skills.

“Students can be a powerful agent for good in the community. I’m incredibly proud of what they have already accomplished and look forward to what’s yet to come,” says AUSA President, Daniel Haines.

For more information visit: www.auckland.ac.nz/vcllectures

From the Vice-Chancellor

Food and Health Programme

The recent scare over possible contamination of New Zealand milk products reminds us how dependent we are as a nation on our agricultural exports, and how even problems that affect only a small proportion of our output can have a major impact. It is also worth reminding ourselves that the nature of our exports has changed little over the last 30 years and that we still rely very much on the export of commodities and ingredients from our primary sectors.

To help New Zealand address some of those challenges we have established the Food and Health Programme, an interdisciplinary research and teaching initiative that draws on the expertise of over 150 leading researchers from across the University.

Led by Dean of Science Grant Guilford, the Food and Health Programme has been bolstered by the appointment of several senior staff in the food and health area, including three professorial appointments in Food Process Engineering, Human Nutrition and Public Health. It has also developed a number of new academic programmes to support the food industries. The inclusion of a nutrition pathway in the Bachelor of Science in Food Science has seen student numbers treble. Three new masters programmes - the Master of Professional Studies in Food Safety, Master of Health Sciences in Nutrition and Dietetics, and Master of Engineering in Food Process Engineering have all commenced in the last year, with pleasing early enrolments.

The University and Plant & Food Research have created a Joint Graduate School in Plant and Food Science. Currently there are over 50 postgraduate students working in the area of plant and food science, two thirds of them supervised jointly across the institutions. A second Joint Graduate School, in Dairy Research and Innovation, is being established with the University, Dairy NZ, Livestock Improvement Corporation and AgResearch as partners. This will likewise provide opportunities for postgraduate students to work across multiple institutions, accessing a wider range of expertise and future employment opportunities than would otherwise be possible.

Overall, this represents a very wide range of University and partner expertise being brought to bear on some of the challenges and opportunities facing our food industries - a fine example of the contributions multi-disciplinary universities such as ours can make to issues of national importance.
**Gift of music**

Mi Yeon I, an alumna of the University who lives part of the year in Europe, is now on a visit to her family in New Zealand and will give the second annual “Gift of Music” charity concert, supported by the School of Music.

An acclaimed virtuoso pianist and a winner of international prizes, Mi Yeon I is the founder of the Gift of Music concert, which aims to contribute to the community through music.

All profits made by these concerts are donated to various charities in New Zealand. This year’s concert will support continuing research into a very serious and rare lung disease called LAM (Lymphangioleiomyomatosis). Bronwyn Gray, director of the New Zealand LAM Trust, says they are hoping to fund a summer scholarship in the department of Professor Merv Merrilees (Anatomy with Radiology).

The concert, featuring works by Beethoven, Schumann, Liszt and Ginastera, will take place at the Music Theatre, School of Music, 6 Symonds Street, on Friday 20 September at 7.30pm. Ticket are $49, or $20 for students with ID. Book at iTicket.

**New database for earth sciences theses**

Launched at the General Library on 16 August was a new web resource that will be a valuable asset to students and staff, as well as to other universities and to members of the Geoscience Society of New Zealand.

The Bibliography of New Zealand Earth Science Theses (NZEST) is an open access web resource created by subject librarians and the digital services team at The University of Auckland Library.

Janet Copsey, University Librarian, warmly welcomed guests to the lunch held to celebrate the launch. These included members of the Geoscience Society, staff of Geomarine Research and of the University’s School of Environment and Institute of Earth Science and Engineering, as well as current and retired members of the Library’s team.

Janet acknowledged the work done by Elva Leaming, former Geology Librarian, and other editors of the earlier print bibliographies, as well as by more recent key contributors, including Gillian Ralph, Bevan Shortridge, Sarah Miselis, Kim Shepherd and Jared Watts.

Elva Leaming said that after three years of retirement it was “marvellous to see how the data from the original printed bibliography had been transformed into an attractive and easily searchable online database covering the content of theses about New Zealand earth sciences from 1889 to the present”.

The online collection (http://nzest.auckland.ac.nz) offers retrieval of earth science bibliographic information from theses submitted to New Zealand universities, as well as material relevant to the New Zealand earth sciences presented in theses to many overseas universities.

Photo: Left to right are Gillian Ralph, Elva Leaming, Bevan Shortridge and Sarah Miselis.

**Robb Lectures a great success**

This year’s Robb Lectures series on “Identity, honour and politics”, delivered by eminent philosopher Kwame Anthony Appiah, professor of philosophy at Princeton University, drew consistently strong audiences, with attendance figures totalling 1,038 across all three lectures, averaging 350 visitors each night.

The Robb lectures are named in honour of Sir Douglas Robb, surgeon, medical reformer, writer, a member of the Council of this University from 1938 until 1971 and Chancellor from 1962 until 1968. He was largely responsible first for medical postgraduate teaching in Auckland, and then for the establishment of the University’s Medical School. A series of public lectures was seen as a fitting memorial to his work and life.

This year Professor Appiah’s insights were enjoyed by Sir Robb’s daughter Jenny Buxton, and his granddaughter and her husband, Sarah and Graham Coxhead.

Those who missed the lectures can listen online at www.auckland.ac.nz/robb and an interview with Radio NZ’s Kim Hill on morality and honour as featured in his recent title ‘The Honour Code: How Moral Revolutions Happen’ (2010), is featured on http://www.radionz.co.nz/audio/player/2566870

Photo: Sir Douglas Robb.
Unhappy families

In the inaugural annual lecture for the late Marcia Russell, Professor Bridget Griffen-Foley from the Centre for Media History at Macquarie University in Sydney will speak of “(Un)happy families: the Murdoch, Fairfax and Packer media dynasties”.

As the “old” media struggles to adapt to the new, with declining audiences, converging technologies and changing business models, the traditional spectre of the family media dynasty is also under threat. In Australia over the last 25 years, the Fairfax empire has been lost to the family and the Packer family has transformed its media interests into a gambling and entertainment business. The Murdoch family business, which became global in the 1960s, is struggling to deal with scandals and succession. This illustrated address will consider the past, present and future of the Australian media industry’s “first families”. Professor Griffen-Foley will present a series of vignettes in order to reflect on what we have lost and where we may be heading.

The lecture will take place at 6.30pm on Thursday 19 September at Old Government House Lecture Theatre.

is its place in our society? How do we make sense of, and move beyond, it operating as a closet for misogyny and racism? How is it linked to wider representations of women, men and sex?

“Art and other forms of creative work can play a vital role in opening up room for exploring these kinds of questions. Art can spark reactions and ways of seeing that can move us and shift us - sometimes in unpredictable directions. In bringing together artists with diverse perspectives and different experiences in relation to pornography, gender and sexuality … we have aimed to create a space that is inclusive and challenging at the same time.”

Said invited speaker, Australian curator Julie Ewington: “I like the astute language of the title very much. The artists ‘address’ pornography. They don’t ‘respond’ to it or critique it or even celebrate it. They have been selected and invited to ‘address’ pornography…it’s an invitation to be active – to accept responsibility. And the artists have responded magnificently, fearlessly…”

A different view will continue until 12 October. The project website is www.sexualpoliticsonow.org.nz, @SexualPoliticNZ on twitter – #adifferentview for the exhibition.

David Thomas, Kiss, kiss, kiss (.xxx) - variant blue I (detail), 2013

The Gus Fisher Gallery was packed to capacity for the 23 August opening of the exhibition “A different view: Artists address pornography”.

Bringing together work by 20 artists that illuminate the visual conventions of pornography, this is part of a broader Marsden-funded project now being conducted by Associate Professors Nicola Gavey and Virginia Braun from the School of Psychology, and Linda Tyler from the Centre for Art Studies, on the place of pornography in contemporary New Zealand society. Linda, with Ginny and Nicola, curated the show.

“This exhibition sits within the wider research project that seeks to put pornography on the table for public discussion,” said Nicola, in introducing the work. “What is pornography about now? What

Research Funding News

Genasis Oncology Trust Fellowships and Scholarships.

Murray Jackson Clinical Fellowship (Medical) - awarded to a medical graduate committed to a clinical career with a major involvement in cancer medicine.

Clinical Fellowship for Cancer Nurses - awarded to a nurse who is committed to a clinical career with a major involvement in cancer treatment or care of those affected by cancer.

John Gavin Postdoctoral Fellowship - for the support of outstanding graduates who have recently completed a degree at doctoral level and who propose to conduct research in scientific fields of relevance to cancer control. Personal support for two years of research, usually to widen a recipient’s experience in a different institution.

Postgraduate Scholarships - personal support for graduate students whose proposed programme of advanced study or research for a higher degree (e.g. PhD or MD) is in a field related to cancer. Information and application forms can be found at www.genesisoncology.org.nz. Applications are to be submitted in the University’s Research Funding Module by the deadline of Friday 27 September. Contact Julia Zhu julia.zhu@auckland.ac.nz, ext. 83986

Leukaemia and Blood Cancer New Zealand Travel Grants.

Funding for health professionals, including scientists, clinicians, doctors, nurses, laboratory staff, support workers and counsellors, to attend local and international meetings and keep up to date with the latest advancements in the field of haematology. Applications are to be submitted in the University’s Research Funding Module by deadline Thursday 24 October. Contact Julia Zhu julia.zhu@auckland.ac.nz, ext. 83986

Oakley Mental Health Research Foundation Project Grants (Round 2).

Funding for research and investigation into social and scientific trends in psychiatry; to study existing and planned mental health delivery programmes; to subsidise publication and dissemination of findings, and to attend professional meetings. Part funding and co-sponsorship of projects with other funding bodies will be viewed favourably. Information and application forms can be found at www.oakleymentalhealth.co.nz. Applications are to be submitted in the University’s Research Funding Module by deadline Thursday 10 October. Contact Julia Zhu julia.zhu@auckland.ac.nz, ext. 83986
From the art collection

Marti Friedlander is one of New Zealand’s most celebrated photographers. She migrated to Auckland from London in 1958, after an extraordinary nine-month honeymoon on a Lambretta scooter with her kiwi husband, Gerrard. In 1964 she became a full-time photographer, documenting New Zealand’s fledgling wine industry for Dick Scott’s Wine Review, no doubt finding a strong connection with the European migrant communities that were so influential in developing these businesses. Travelling the country, she brought an inquisitive eye to capturing the everyday activities of a fast-changing nation, and took a particular interest in meeting Maori, leading to her work with Michael King on his book Moko: the art of Maori tattooing (1972).

Friedlander is probably best-known for her portraits, and as a recent (and young) arrival from bustling London, she was always on the look-out for cultural activity. The result is a roll-call of New Zealand artists and writers, including Rita Angus, Ralph Hotere, Colin McCahon, Charles Brasch, Karl Stead, Louise Henderson and many more, including a significant group commissioned for Jim and Mary Barr’s book Contemporary New Zealand Painters: Volume 1 A-M (1980, there was never a second volume, although Robin White would have been a likely inclusion).

This photograph captures painter White in her studio at Portobello where she lived from 1972 to 1980. In the background of the photograph is another portrait: one of four major paintings White produced of poet Sam Hunt, including one held by The University of Auckland Art Collection. White met Hunt at the University Arts Festival in 1968 while she was finishing teacher training at Epsom, having already completed a diploma at Elam. She found work at Mana College in Porirua and Hunt found her a tiny cottage on Paremata Harbour near his own place. White is in bare feet, Hunt is in gumboots and singlet, there is a Chef Jellymeat can to clean brushes in and the painting’s shadows say mid-morning so the Portobello Pub is presumably not yet open – it is a quintessentially vernacular scene that could have just as easily been described by the poet as by the painter (or the photographer).

In 1999, Friedlander was made a Companion of the New Zealand Order of Merit for Services to Photography, and received an Icon Award from the Arts Foundation in 2011. In 2009 she was the subject of the substantial book Marti Friedlander: Looking Closely, written by Art History Professor, Leonard Bell, and published by Auckland University Press, featuring more than 200 of her photographs and accompanied by an exhibition at the Gus Fisher Gallery. Since 2007 she has sponsored the Arts Foundation’s Photographic Award, and in October this year her autobiography, Self-Portrait, written with oral historian Dr Hugo Manson, will be published by Auckland University Press.

Dame Robin White was made a Distinguished Companion of the New Zealand Order of Merit in 2003, and in 2012 was celebrated by The University of Auckland as a Distinguished Alumna.

Andrew Clifford

Marti Friedlander (b.1928), Robin White, in her studio, before painting. 1977

Vintage silver gelatin print, 233 x 233mm, The University of Auckland Art Collection

Politics and the Media

This book, published by Pearson, combines an in-depth examination of theoretical issues surrounding politics and the media with specific examples drawn from New Zealand experiences.

Key topics covered include the relationship between media, politics and democracy; the relationship between politicians, journalists and spin doctors; an examination of the state role in media and communication, including propaganda; the media in foreign policy and in peace and conflict; the political roles of traditional and new media in New Zealand; and gender, ethnicity and media in New Zealand.

Politics and the Media, one of the Pearson Originals, is edited by Dr Geoff Kemp from the Department of Political Studies at The University of Auckland, with Dr Babak Bahador from the University of Canterbury in New Zealand, Dr Kate McMillan from Victoria University of Wellington and Dr Chris Rudd from the University of Otago.

Geoff Kemp teaches and researches media politics and the history of political thought, was a daily newspaper journalist in the UK for 20 years, and gained his PhD at the University of Cambridge.
THURSDAY 5 SEPTEMBER
School of Biological Sciences seminar
Dr Barry R Bochner: Phenotype microscopy: An overview of the technology and applications. 1-2pm, BLT 100. Queries to anna.wilson@al.co.nz

Engineer Her Future 2013 6.30-8.30pm, Lecture Theatre 401 J39, Faculty of Engineering, 20 Symonds St. An information evening targeted at Year 12 girls with presentations and networking to help with making decisions and subject choices for Year 13 and the future. RSVP to www.forms.auckland.ac.nz/uoa/home/engineering-forms/engineer-her-future-2013-registration

FRIDAY 6 SEPTEMBER
 Auckland Nutrition Research Network seminar Helen Vidgen, School of Exercise and Nutrition Sciences, Queensland University of Technology, Brisbane: Food literacy and disadvantage. 4.5-6.30pm, Seminar Room 505-603, Bldg 505, 85 Park Rd, Grafton.

SATURDAY 7 SEPTEMBER
Exhibition event Viv Stone, Sandy Callister and Tracey Lee Women in advertising: The representational reach of pornography. 1pm, Gus Fisher Gallery, 74 Shortland St. How might the increasing pervasiveness of pornographic representations of women’s bodies and sexuality be impacting the advertising genre? Today’s panellists have worked extensively in the advertising industry and they reflect on the representation of gender and sexuality and how the visual and representational conventions of pornography might be seeping into advertising. Queries to gusfishergallery@auckland.ac.nz

THURSDAY 12 SEPTEMBER
Centre for Longitudinal Research seminar Prof Peter Davis, UoA: Modelling the early life-course. The Kiwi approach! 12noon-1pm, Function Room 730-220, School of Engineering, 2 Symonds Street. Director’s Maree Crabbie and David Corlett work together on the Australian community education project Reality & Risk: Pornography, young people and sexuality. Their documentary film will have its NZ premier and then both Maree and David will speak and answer questions from the audience after the showing. All welcome. Queries to p.benton-greig@auckland.ac.nz

FRIDAY 13 SEPTEMBER
Royal NZ Navy Band lunchtime concert 1.05pm, Music Theatre, School of Music, 6 Symonds St. There will be music for everyone to enjoy showcasing the best the band has to offer. Featuring guest pianist Stephen de Pledge. Free. Queries to concerts@auckland.ac.nz

SATURDAY 14 SEPTEMBER
Exhibition event 1pm, Gus Fisher Gallery, 74 Shortland St. Maree Crabbie and David Corlett, Educators/Researchers, Reality & Risk: Pornography, young people and sexuality, Victoria, Australia. Reality & Risk is an Australian initiative that responds to the social and personal implications of increasingly pervasive and hard core pornography in the lives of young people. Maree and David will discuss their research project and recently released documentary, Love and Sex in an Age of Pornography which includes interviews with young people and participants in pornography production. See www.sexualpoliticsnow.org.nz for details. Queries to gusfishergallery@auckland.ac.nz

TUESDAY 17 SEPTEMBER
Department of Civil and Environmental Engineering seminar Prof Jason Ingham: Protecting our built heritage from the ravages of earthquakes. 5.30-6pm, Room 403-403, Faculty of Engineering, 20 Symonds St. Queries to n.baatjes@auckland.ac.nz

WEDNESDAY 18 SEPTEMBER
DALS1 seminar Tom Finlayson, UoA: Constraint, evasion and persistence: The news interview as a context. 12noon-1pm, Room 408, Arts 1.

Classifieds

APARTMENTS FOR RENT

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For a full list of The University of Auckland events see www.auckland.ac.nz/events

Please email classified ads to unisrvnewadvertising@auckland.ac.nz nine days before publication. Cost $20 (incl GST).

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Insight: Maramatanga

THOUGHTS ON MATHS

Australian-born Terence Tao is Professor of Mathematics at the University of California, Los Angeles, and the holder of a Fields Medal, the mathematical equivalent of a Nobel Prize. A child prodigy who could do arithmetic at two, Terence graduated with honours at 16, and was appointed professor at UCLA at the age of 24.

During a recent visit to The University of Auckland, where he delivered a public lecture on “The cosmic distance ladder”, Terence took time out to answer some questions for Uninews (abbreviated below) about mathematical outreach and education.

You have expressed a view that many of the general public – including young people of high school age - have misconceptions about mathematics. What are some of things you would like people to know about mathematics and its place in the world?

It’s true that not many people understand exactly what we do because a lot of mathematics is behind the scenes. An engineer building a bridge uses maths as a base to design what he’s building. You use a cellphone, there are many people on the network and yet the lines never cross, because of an algorithm that you are not aware of. All of our lives, whether we know it or not, rest on a base of mathematics. It is one of the things that allows us to do what we do every day.

And whatever the science you use to understand life, there is always mathematics involved.

In economics you do a bachelor’s degree and you use mathematics to understand imports and exports, for instance. But when it comes to doing something more advanced like a PhD on banking systems, then a lot of students have difficulty because they hadn’t realised how much maths would be involved. And actually mathematics majors have an advantage in economics and that is also true of sciences such as biology or chemistry.

What are the misconceptions high school students have about learning maths?

When you study maths in high school and even in university you’re presented with textbooks of theory and you learn to solve problems using techniques that have long been proven. So students can get the impression that there’s nothing left to do except apply the recipes that other people have worked out.

But of course maths is a highly creative subject that is always advancing and confronting new challenges. For instance the advances in IT give huge quantities of data to analyse and in many cases we don’t have the mathematics to make sense of the data and to draw out the patterns from them. An example is the drive to discover which genes effect which diseases. There’s a lot of data now but we don’t have the mathematics to solve these problems. So there is a lot of cutting edge work in mathematics that students often don’t hear about until they reach postgraduate level.

How do you think the misconceptions can be reversed?

Part of the problem is that as research mathematicians we focus on writing our papers and teaching to small classes of very talented students. We don’t do as much public outreach as we should - so I have some public lectures as part of what I’m doing here.

At high school it is very important for teachers of mathematics to be well-qualified in the subject. But people trained in mathematics have a lot of opportunities – they can go into finance, into insurance or IT – and, certainly in Australia and the US, teachers are not paid a lot, so young mathematicians are not often attracted to teaching.

I was very lucky in high school. I had a physics teacher who taught me a lot about maths and he made the subject really fun. A good teacher can make maths really come alive.

“What are the personal joys for you in being a mathematician?”

When you solve a research problem you have worked for several months on, it’s a really great feeling. It’s like doing a crossword puzzle when you can’t see the answers and suddenly you get one clue and they all fall into place.

This happens too when you’re teaching a difficult concept. You can see the students struggling to understand why it works. And then they suddenly get it. You can see it in their eyes. And that’s very satisfying. Once they see it, they will never un-see it.

One of the great pleasures of mathematics is in its serendipity. Sometimes you don’t know what questions to ask until you start thinking about a subject. Then the questions naturally appear. It’s an exploration process and finding the goals is a part of the exploration. There are mathematicians who focus on a single problem for many years and some day they make a big breakthrough. I myself am not like that. I keep moving on. I like working on different problems every few years. I’m happiest when I contribute something that other researchers can build on.

In his lecture on 9 August on “The cosmic distance ladder”, Terence discussed some indirect methods of measurement which, combined with basic high-school mathematics, can allow one to get quite convincing and accurate results on the distances from the earth to the sun and moon, from the sun to the other planets, and from the sun to other stars and distant galaxies without the need for advanced technology.