On call with the scientists guarding against the world’s most alarming disease
A NEW CAMPUS LANDMARK: The state-of-the-art Melbourne School of Design opened last year.

PICTURE: JOHN GOLLINGS

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The quest to resolve one of the great questions of the universe heads in an unlikely direction — underground.

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ON THE COVER: Senior scientist Dr Julian Druce at work in the Victorian Infectious Diseases Reference Laboratory.

PICTURE: CRAIG SILLITOE

LEFT: An Ebola virus virion
A world-first high-tech classroom launched at the University will help researchers to better understand how learning takes place in the brain and to improve teaching.

Structured like a conventional school classroom, the revolutionary facility allows researchers to observe the class through one-way observation mirror and record and analyse student and teacher actions and interactions without disruption.

“The conventional classroom is enormously complex and our understanding of learning as a social activity is fairly limited,” says Professor David Clarke (BSc(Hons) 1973, GDipEd 1974, MSc 1979) from the Melbourne Graduate School of Education, a chief investigator on the project.

“The visible presence of tripods in the classroom and the number of necessary personnel can be distracting.

“Lessons given in our state-of-the-art classroom can be recorded through up to 16 high-definition video cameras and up to 32 fixed and portable microphones, which can be controlled by a technical team to capture everything the researchers need.”

The experimental facility will provide an essential research link for education, neuroscience and psychology experts to unpack the new area of research and how it might inform classroom learning.

“We can try innovative new teaching and learning approaches and technologies and study every aspect of the students’ responses,” explains Professor Clarke (pictured above).

“We can also live-stream this to anywhere in the world. We will build a rich database of classroom interactions that will be an enduring research resource and evidence base.”

The classroom will endow the Science of Learning Research Centre, which comprises 25 chief investigators from nine research institutions across Australia and is supported by $16 million of Commonwealth funding from the Australian Research Council and additional support from a range of organisations.

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Heart of darkness

A gold mine in western Victoria has become the unlikely setting for a mission to resolve one of science’s great mysteries: what holds the universe together?

BY TIM THWAITES (BSc(Hons) 1974, TRINITY COLLEGE, JANET CLARKE HALL)

Dr Matteo Volpi is on his way to work, heading deep into the earth down a steep, curving tunnel known as ‘The Decline’. He’s aboard a four-wheel drive on the main access road to the Stawell Gold Mine, in western Victoria, winding initially through ochre-coloured alluvial rock and then the harder, blue-grey volcanic variety. Every so often his vehicle has to duck into a holding bay to let a truck carrying up to 60 tonnes of rock crawl by.

Volpi, a post-doctoral fellow in the University’s School of Physics, is travelling to a workshop 729 metres underground. Here he is taking initial measurements for a study that could determine what holds the universe together. It may seem bizarre, but to find out why the stars are in their places in the sky, we need to go almost as far from them as we can easily reach on Earth.

A kilometre underground in the mine’s dank, dark environment, in a cavity surrounded by basalt, physicists from the University of Melbourne and several other Australian universities, collaborating with Princeton University in the US, the Australian Nuclear Science and Technology Organisation (ANSTO) and the Italian Institute for Nuclear Physics, plan to construct a $3.5 million laboratory to try to detect the elusive cosmic glue known as dark matter (see page 9).

Understanding the nature of dark matter is regarded as one of the most important questions of modern particle physics.

“If we nail it, it’s a Nobel Prize-winning experiment,” says the leader of the effort, University of Melbourne Professor of Physics Elisabetta Barberio, a chief investigator of the Australian Research Council (ARC) Centre of Excellence for Particle Physics at the Terascale (CoEPP).

But it could mean a whole lot more for the people of the Stawell region, most of whom are being confronted by the concept of dark matter for the first time. They are hoping that the lab can provide employment and investment, technology transfer and a stimulus to local industry; a source of education, possibly even a tourist attraction, and most certainly endless fascination.

CONTINUED PAGE 8
This is a pretty big punt for us, but it’s a good one,” says Murray Emerson, mayor of Northern Grampians Shire, which has applied for regional development funding to develop the lab. “In the long term, it can really be beneficial for our community. We’re right at the start of something pretty exciting.”

The Victorian government thinks so too. In mid-February, Premier Daniel Andrews toured the gold mine and pledged $1.75 million to kick-start construction of the laboratory, a project he says could generate up to 215 local jobs. He called on the federal government to provide matching funding.

The Crocodile Gold Corporation, which operates the mine, sees the project as a way of putting something back into the community and providing continuing employment for its staff and their hard-won expertise, according to general manager Troy Cole. As long as the mine is operating, Crocodile Gold is prepared to provide the lab with in-kind support in the form of access, technical advice and services such as ventilation, water and power.

Dark matter is so-called because it does not interact with light – or any other radiation for that matter. More than dark, it is invisible. And, because of its lack of interaction, it will penetrate almost anything, including Earth itself.

But dark matter is responsible for 85 per cent of the gravity that holds the universe together, so it must have mass. If a particle of dark matter directly bumps into an atomic nucleus “the nucleus gets excited”, says Professor Barberio. “It’s pushed away and the recoil is seen as light.”

And that is exactly how dark matter particles are detected; by setting up a nuclear target – in this case, a very pure crystal of the salt sodium iodide provided by researchers from Princeton – and checking to see what light is emitted. But the sodium iodide can also react in a similar way if hit by other particles or radiation. So the detector needs to be located as far as possible from any sources of these, such as sunlight or cosmic rays or radioactivity.

And that is where the muted environment of the Stawell Gold Mine shines. Not only does it provide suitable sites deep underground surrounded by low-radiation basalt, it has another huge advantage – access. Because it is a modern “decline” mine, the laboratory can easily be serviced by trucks, ventilation, electricity and even the internet.

What’s more, while there are at least 15 such underground laboratories in the northern hemisphere, this would be the first south of the equator. That’s important, because its initial job would be to duplicate a northern hemisphere experiment that has provided some of the only credible direct evidence of dark matter. It was undertaken at the world’s largest underground particle physics laboratory, 1400 metres below Gran Sasso near L’Aquila, about 120 kilometres north-east of Rome.

The Italian physicists reasoned that, as the sun moves around the centre of our galaxy, it passes through a soup of dark matter particles at about 200 kilometres a second. Earth, orbiting the sun, swims with this current of particles for half a year and against it for the other half. So, you would expect that in one half of the year a dark matter detector would encounter more particles than in the other. And, over several annual cycles, that’s exactly what was found at Gran Sasso.

But critics of the study suggest that it might simply be a seasonal thing. Perhaps more particles are detected in winter than in summer, they say, or when the sun is nearer. So the Gran Sasso researchers were keen to help establish an underground laboratory in the southern hemisphere that could run the same experiment simultaneously to eliminate those seasonal possibilities.

Barberio and her colleagues at CoEPP heard their call. She is a highly respected experimental particle physicist who was a key player in the discovery of the Higgs boson, the so-called “God particle”.

“There is a lot of excitement internationally about this particular dark matter experiment because we are in the southern hemisphere,” she says. “The University of Melbourne has the strongest experimental particle physics group in Australia. We can compete at the international level. So the Americans and Italians are willing to work with us while we are learning about new techniques.”

Yet dark matter could be the just tip of the research iceberg for the laboratory, according to Barberio. A lot of useful nuclear physics research is conducted in a low-radiation environment, she says. And then there’s biology. “Already there are researchers from Australian universities at Gran Sasso studying the effect of low radioactivity on cells, particularly cancer cells. Then there are studies on general relativity, on underground micro-organisms and on chemistry and materials science.”

There seems real confidence at the mine and in the local community that the laboratory will go ahead. Things are already gearing up. Matteo Volpi’s initial job is to monitor the environmental background radiation, to check that it conforms to the Gran Sasso protocol. A kilometre down, there are two potential sources of radiation – local radioactivity and the occasional intruding cosmic ray. Both have to be taken into account in the design and shielding of the new laboratory.

Volpi has visited each week or fortnight to take measurements underground. In his orange overalls, goggles and gumboots, he could be taken for any other miner, if it weren’t for the metre-long dreadlocks cascading down his back. He’s clearly made an impression on the mine workers. Recently, courtesy of an equipment malfunction, he had to take a few weeks’ break. When he returned, they greeted him like a colleague back from holiday. They are incessantly interested in what he is doing. What would secure the project is a federal grant to match what the Victorian government has already promised. So Mayor Murray Emerson is off to Canberra to lobby for his case. He has become an enthusiast, to the extent that he has even been talking to Year 7 pupils at the local primary school about the opportunities brought by the project. “We hope one day that some of our local kids will end up as professors,” he says. “At the very least, it may encourage them to stay at school and consider doing science.”

And he’s also impressed by the possibility of the laboratory becoming a tourist drawcard. About 8000 people a year visit Gran Sasso. “It turns over €1.5 million annually in tourism alone,” he says. “People ring up and book three years in advance to go there.”

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FROM PAGE 7

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Taking initial readings in the underground workshop, a precursor to a full-scale experiment (right) part of the tunnel. Pictures: Michael Shead (Gravitex) and Steve Benoit
A

s they sit side by side on a fat, black leather lounge in their Fitzroy home, discussing books and the art and mechanics of writing, you realise what a gift Graeme Simsion and Anne Buist have been to the PR team at Text Publishing. They are the true and perfect fit to the old publishing cliche: “Husband-and-wife literary double act.”

They became literary kittens as the result of a PR stunt in 2006, when they were asked their greatest regret. “Not one at all; it’s very naughty Mills & Boon,” Simsion, now enrolled in a professional writing course, reclaimed the idea, keeping only the main character of Don.

“I always knew the heart of the story was the Don Tillman character,” he says. “Laugh-out-loud comedy comes out of character and very few novelists have been gifted even one such character in a lifetime. You’ve got Bridget Jones, you’ve got Rumpole of the Bailey, and perhaps you’ve got Don Tillman.”

For all that, there was still the tug of writing. “On our first wedding anniversary we said to each other: ‘What do you want to do in the next five years?’” Simsion told his wife. “Just one page … if you only write one page a day, in a year you’ll have a novel.” Of course it wasn’t that easy. Simsion didn’t help but giggle and nod as he makes an admission: “As a child and teenager he was something of a nerd. Oh, yeah, I think so…” he says. “I was good at maths and science, in the radio club, I was a ham radio operator, all that sort of stuff.” In the prototypical nerdish trajectory, the New Zealand-born town planner’s son was at university at only 16. He’s a former IT specialist, she’s an eminent psychiatrist.

Now Graeme Simsion and Anne Buist are a literary couple, parlaying their original careers into second lives as novelists.

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A cultural enlightenment on offer is tremendous, but it doesn't come by ancestors and our own possible futures as well. The personal and past of our species, the movements of populations, the choices made can access huge amounts of knowledge from the genome, some of humanities, which had always been suspicious about attempts to find gene for something – red hair, or personality or intelligence – had been media's tendency to announce that the genome revolution grew out of the Human Genome Project (HGP), a multi-million-dollar endeavour in which hundreds of scientists participated, but ironically the fact that so few people know much about their own genome can at least partly be explained by the project was received. Although the first draft of the human genome, published in 2001, was issued by comparing the DNA of two people, a father, say, and his illegitimate child, but it's a wholly new thing to be able to send off a sample to a DNA to genetic genealogy company and have it matched against the samples sent in by complete strangers. Such discoveries would not be possible without the modern genetic origins of disease. It seems that now is a good time to catch up big projects to collect genomic data so as to illuminate the common genome, it's essential to consider the privacy issues that can arise. These are pioneering days in the business, as well as the science, of the genomes only because companies can benefit from making everyone's data available for matching. There is an inevitable tension here. It is entirely reasonable for businesses to make a profit, and it's also sensible for the scientific community to hope to protect our data if we don't know how the genome gets broken apart and shuffled over generations, how it connects us all in a great big network and what we can learn from those connections. In addition, when it comes to the genome, it's important to know that many of the individual gains come via the collective.

FAMILY

Moore typically finds families by using genetic genealogy databases to identify distant cousins with the segments of DNA that people have in common. Then she tracks back through the family histories of the cousins to find a common ancestor among them. After that she works her way down again from the common ancestor, looking for an individual's parents. "You build the tree up and then you build the tree down," she told me. Sometimes she has found a direct match, where it is quite obvious from the amount of DNA that two people have in common, how many chromosomes that they are siblings or parent and child. Twenty years ago, there was no way to identify many of the people Moore helps. Family relationships could be proved by comparing the DNA of two people, a father, say, and his illegitimate child, but it's a wholly new thing to be able to send off a sample to a DNA to a genetic genealogy company and have it matched for free. With large data come large responsibilities, too. How can we sensibly manage this unprecedented amount of personal data? If we are not going to make the same mistake as the HGMP, we must interact with the public at the beginning of the personal genome revolution and the answer is not yet clear. But even though there is no obvious and comforting path to follow, we'll never find it if we don't learn a few new, but basic, principles about our genomic selves. For example we can't hope to protect our data if we don't know what the genome gets broken apart and shuffled over generations, how it connects us all in a great big network and what we can learn from those connections. In addition, when it comes to the genome, it's important to know that many of the individual gains come via the collective.

newborns, some found in dumpsters. Few years Moore has helped half a dozen individuals who were abandoned as newborns, some found in dumpsters. The fact that any one of us can take the first step in the knowledge of our own past by accessing our own genome can at least partly be explained by way the project was received. Although the first draft of the human genome, published in 2001, was issued by comparing the DNA of two people, a father, say, and his illegitimate child, but it's a wholly new thing to be able to send off a sample to a DNA to a genetic genealogy company and have it matched. Sometimes Moore's clients don't get the ancestral result they expect. They assume they are Irish, but the test says they are Jewish. "This is just my experience," Moore said. "It could be that people are drawn to testing who think they are not who they thought they were genetically."

"We can access huge amounts of knowledge from the genome, some of it previously unimaginable."

"Databases that genetic genealogy companies use to connect their clients with one another have become very valuable."

"It could be that people are drawn to testing who think they are not who they thought they were genetically."
It’s like a fire station, we’ve got to be in constant readiness,” says Catton, the head of the Victorian Infectious Diseases Reference Laboratory (VIDRL), which is based at the Peter Doherty Institute for Infection and Immunity in the heart of Melbourne’s biomedical research community. “The pressure is on us.”

The laboratory must work fast to identify a virus so hospital staff and health authorities can act rapidly to contain it. In this case, dinner must wait as he arranges for a sample to be shipped to Melbourne.

Catton and his team play a key role in protecting Australia and the region against some of the world’s most notorious germs. They monitor and test for a range of infectious diseases, such as HIV, influenza and measles, but as the national reference laboratory for viral haemorrhagic fevers, the laboratory has tested 14 specimens for Ebola, all proving negative.

The laboratory is Australia’s best resource for containing a disease that has killed nearly 10,000 people in the past year, more than any previous Ebola outbreak. Most of the toll is confined to West Africa, but the nature of the epidemic has sparked doubts about the world’s ability to manage dangerous viruses.

“Even though Ebola’s been around since 1976,” Catton observes, “it became real for people in 2014.” In the past year, the laboratory has tested 14 specimens for Ebola, all proving negative.

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The disease is relatively difficult to contract. Unlike influenza or measles, which spread through the air, Ebola is contracted through contact with the bodily fluids of an infected person. And they have to be showing symptoms to be contagious.

Yet the visceral and dramatic nature of Ebola’s advanced symptoms – bleeding from the eyes, bruising, severe weight loss and organ failure – make it particularly unnerving. The virus’s high fatality rate also contributes to its fearsome reputation. The most recent strain kills about half its victims.

Senior scientist Dr Julian Druce says staff at the Doherty never stopped watching out for Ebola and had prepared for any new incarnations of the virus.

“We were always ready for it,” he says. “Ebola is a moving target. There have always been new and emerging strains of Ebola, so you have to keep up.”

Catton believes the disease poses little risk to people in Australia, which has the resources to prevent a serious outbreak, but he would “think twice” about working face-to-face with Ebola victims on the ground in West Africa.

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A laboratory in Parkville is playing a key role in protecting Australia against the world’s deadliest infectious diseases.

BY KATE STANTON

Dr Mike Catton is chopping vegetables for Sunday dinner when the phone rings. A man in another state has a fever; when the phone rings. A man in another state has a fever;

A relative grieves as a Red Cross burial team prepares to remove the body of an Ebola victim in Liberia.

PICTURE DANIEL BEREHULAK/THE NEW YORK TIMES

“The pressure is on us,” says Dr Mike Catton, head of the Victorian Infectious Diseases Reference Laboratory.

“Patients, once they get to vomiting and having diarrhoea – copious amounts of fluid with large amounts of virus – are really dangerous,” he says. “So on the ground, in those countries where those patients are all the time, those healthcare workers are really in the firing line.

“I’ve got the utmost respect for those guys, but I’m a backroom boy.”

He adds: “We’re not about taking risks, we’re not about being cowboys. What we do is actually really safe.”

“It’s very scary when a disease like Ebola gets into a country with a very fragile health care system that can’t effectively block transmission.”

The Institute’s director, Professor Sharon Lewin, believes the Ebola epidemic highlights a disturbing difference between poor countries and rich ones such as Australia, which have the knowledge and infrastructure to withstand Ebola.

“It’s very scary when a disease like Ebola gets into a country with a very fragile health care system that can’t effectively block transmission,” she says. Australians, she observes, are “really lucky” to have the VIDRL and its scientists, who have the highly specialised expertise needed for such a rare virus.

It’s a year since Catton and his team moved to the Doherty, a $210 million facility jointly operated by the University of Melbourne and the Royal Melbourne Hospital. Named after Nobel Prize-winning immunologist Peter Doherty, who works in the building, the Institute brought together hundreds of scientists from different areas – research,
EBOA is a rare but serious disease marked by fever, headache, vomiting and fatigue. It can lead to severe weight loss, bleeding, organ failure and death. The virus first appeared in 1976 in the Democratic Republic of the Congo. Scientists believe it originated from fruit bats.

Ebola has surfaced occasionally since it was discovered, though the most recent outbreak, the 2014 West Africa epidemic, has claimed more lives than all previous outbreaks combined. Nearly 10,000 people have died, mostly in Sierra Leone, Guinea and Liberia, and isolated cases have sprung up in the US, Spain and Britain.

Researcher Dr Wendy Winnall, a vibrant, enthusiastic member of the Doherty's Kent Laboratory. She is on the hunt for a vaccine for HIV and has been working with a Melbourne biotech company to produce antibodies that would help human immune systems combat the virus.

Like HIV, Ebola is a virus that can mutate. Both are made from a simple form of genetic material called RNA. When the recent Ebola outbreak hit, Winnall thought her research could also be used to develop antibodies that fight the disease. "Antibodies are, in my opinion, the next big thing," she says. "But they’re very, very expensive."

Winnall found a new type of antibodies made in bacteria can be produced relatively cheaply, making it plausible to treat large numbers of people when an epidemic hits. Though the protection would last only two or three weeks, this could nonetheless help healthcare workers travelling to Ebola front lines.

As for the collegiate environment at the Doherty, Winnall says proximity to other scientists inspires her. "You can meet people in the left who say: ‘I test for Ebola in a PC4 facility,’ or something like that, and you can come up with these collaborations," she says.

Another lesson underscored by the Ebola experience, according to Professor Levin, is the need for public health infrastructure, such as the Doherty, capable of managing the constant threat of infectious diseases.

"You need strong leadership to make sure that people are on the same page," she says. "And I think everyone struggled with that with Ebola. Not just in Australia but in the US and globally. And probably it gave us a warning sign of how to do it better next time."

Catton also points to the way dealing with the potential for Ebola has left Australia better prepared to deal with other, more likely outbreaks. "All that preparation for Ebola gets you in good stead if you’re later having to deal with the new SARS or flu pandemic," she says.

Outside the laboratory hang framed magazine covers marking the epidemics of years past: SARS, H1N1, Ebola. Whatever comes next, the scientists here are prepared. "I didn’t go into it thinking I’ve got to don my white coat and save the world," Catton says. "But having arrived here, I think it’s something that’s really worth doing."
YVONNE VON HARTEL AM
(BArch(Hons) 1967,
Advanced Management Program 1989)

PRACTICE
peckvonhartel

MAJOR PROJECTS INCLUDE
333 Collins Street, Melbourne: Completed in 1991, the 29-storey tower is clad in ornamented exfoliated granite and topped with a distinctive copper dome.
National Museum of Australia in Canberra (together with Ashton Raggatt McDougall): With exotic, multi-coloured exteriors and a giant sculptural loop at its entrance, the building comprises several spaces jigsawed around a Garden of Australian Dreams.

CAREER AND INFLUENCES
Yvonne von Hartel was 11 when she decided on a career in architecture. Several student jobs turned her off the idea of working with small firms and, on graduation, she applied to the large firm Yuncken Freeman, designers of the Sidney Myer Music Bowl, because it was “the best training ground in Australia”. Working on 140 William Street (the original BHP House), the Austin Hospital and the masterplan for La Trobe University, she acquired a taste for large corporate projects — “the more complicated the better” — that she is still expressing in jobs such as the $3.5 billion Victorian Desalination Plant, which along with ARM Architecture won the Sir Osborn McCutcheon Award for Commercial Architecture in the Australian Institute of Architects’ Victorian Architecture Awards. With her husband and colleague Robert Peck AM (BArch 1968, MBA 1973), they set up their Melbourne practice, then called Robert Peck von Hartel Trethowan. Von Hartel received an Order of Australia in 2007 for her contributions to urban design, architecture and the promotion of women in business.

A UNIVERSITY MEMORY
“Most of all I remember Professor Brian Lewis (DipArch 1928, BArch 1944). He challenged us by providing a cohort of students of varied backgrounds and entry qualifications and urging us to take on more and more, from extra arts subjects and student politics to fundraising for a new school and the Archi Revue.”

PICTURE: MATHEW LYNN
Yvonne von Hartel at the entrance of 333 Collins Street, and (inset) the National Museum of Australia.

PETER MALATT (BArch(Hons) 1989)

PRACTICE
Six Degrees

MAJOR PROJECTS INCLUDE
Meyers Place Bar: Tiny, European-style bar, constructed with reclaimed materials and recognised as the venue that kick-started Melbourne’s laneway culture.
UTAS School of Architecture: A multi-award-winning home for a university school of architecture constructed within a heritage-listed 1950s diesel workshop.

CAREER AND INFLUENCES
As a student and for a year after graduating, Peter Malatt worked for Maggie Edmond (BArch 1969) and Peter Corrigan AM (BArch 1966), whose firm would become famous for controversial and award-winning buildings such as RMIT’s Building 8 extension. But by 1991, he was doing contract work and sharing a cold Richmond studio with five other graduates. They collaborated on architectural competitions and small residential and commercial jobs but had few assets beyond their six architecture degrees. On a winter’s day when the nearby Nylex clock displayed a temperature of six degrees, they had a name for a new practice.
Their “democratic business friendship” became known for its inventive reuse of recycled materials on small jobs, such as the Meyers Place Bar, and is famous for its inventive and sustainable approach to large residential and institutional projects.
Malatt, president of the Victorian chapter of the Australian Institute of Architects, is passionate about architecture’s role in enacting positive social change and outraged by the proliferation of badly designed city apartments — “the slums of the future.” “Melbourne has a lot of ordinary design by non-architects,” he says.

A UNIVERSITY MEMORY
“I remember Peter McIntyre AO (BArch 1950, GDipT&RP 1955, DArch 1993) telling us in our fourth year about studying under Roy Grounds (BArch 1951) and Robin Boyd in the old Nissen huts and the influence they had on him. Peter fought the Buildings Department to allow us 24-hour access to the architecture studio and to reinvoke that 1950s studio culture. We used to drink and smoke and draw all through the night — it was a bonding experience — then go to Cafe Notturno at dawn for coffee.”

PICTURE: MATHEW LYNN
Peter Malatt in the tiny bar in Meyers Place, and (inset) the bar’s facade.
STEFAN MEE
(BPD 1990, 
BArch(Hons) 1993)

PRACTICE
John Wardle Architects

MAJOR PROJECTS INCLUDE
Melbourne School of Design (with Boston’s NADAAA): A “teaching tool” building wrapped in overlapping perforated zinc panels, with a four-level atrium at its heart.
Flagstaff Crisis Accommodation Centre, North Melbourne: Short-term housing for homeless men in four zinc-skylighted black wire-cut brick buildings framing a large interior courtyard.

CAREER AND INFLUENCES
As a teenager, Stefan Mee planned to study music but made a last-minute change to architecture. It came about, he reckons, from a love of assembling things, something he absorbed from his schoolteacher/handyman father, and a love of art materials, inspired by his schoolteacher/painter mother.

After graduation, Mee landed a job in architect John Wardle’s tiny two-person Carlton practice. Within a year he was project architect on his first major building, the Flagstaff Crisis Accommodation Centre in North Melbourne. This complex project prepared him for increasingly responsible design and leadership roles in a practice that was expanding into city projects, such as the high-rise The Urban Workshop, and taking on large educational institutional jobs. He was thrilled to be one of the design leaders for the Melbourne School of Design.

A UNIVERSITY MEMORY
I recall my thesis supervisor, Professor Philip Goad (BArch(Hons) 1984, PhD 1993, Medley Hall), saying it was important to write down your position on architecture every year or two as a way of clarifying what you had learnt and considered important. So I have always been a keen writer about particular projects as well as the ideas and direction of our practice.

Stefan Mee inside the new Melbourne School of Design, and (inset) the building’s bold exterior.

JULIE EIZENBERG
(BArch 1977, 
University College)

HANK KONING
(BArch 1977)

PRACTICE
Koning Eizenberg Architecture, Santa Monica, California

MAJOR PROJECTS INCLUDE
Temple Israel of Hollywood: Designed as a “garden in the park”, it has a ceiling made of undulating wood slats reminiscent of a Jewish prayer shawl.
Children’s Museum of Pittsburgh: Expands the original building with an award-winning three-storey steel and glass structure.

CAREER AND INFLUENCES
Julie Eizenberg, who studied architecture on her maths teacher’s suggestion, met Hank Koning in the first week of their architecture course in 1972. They have been working together ever since. Setting off for the US in 1979, the day after they married, they completed masters of architecture degrees at UCLA then started doing small design jobs in the garage of their Santa Monica duplex while waiting for “green cards” so they could work in local architecture practices.

But they never did. Working as volunteers to help revive an ailing shopping strip in midtown LA, they kickstarted a practice committed to sustainable architecture, community engagement and an approach summed up in Eizenberg’s 2006 book Architecture isn’t just for special occasions. The pair are best known for their award-winning work on schools, adaptive re-use of historic buildings and affordable housing.

A UNIVERSITY MEMORY
“Charismatic teachers: Blanche Merz (BSc 1941, Queen’s College) teaching maths and lighting; the Coldicuts — Allan (BE(CivEng) 1944) and Beth (BSc 1934, MSc 1936, GDipEd 1941) — teaching construction using early computer programming; Hugh O’Neill AO (BArch 1956, DArch 2013, Ormond College) giving classes on Asian architecture. And talking about ideas, we lived in Carlton and we would often end up in the pub — the Clyde or the Lincoln — talking about architecture.”

For more on this story, go to unimelb.edu.au/3010

Julie Eizenberg and Hank Koning at their studio in Santa Monica and (inset) the Children’s Museum at Pittsburgh.
The making of a maverick

for dramatic effect, but nothing like the inadvertent cussing I’d been led to expect. Education is at the core of his vision, and on the subject he holds, as he puts it, “strong and really unpopular views.” Carrie is a sitting member of the Melbourne School of Law and a BA in jurisprudence from the University of Melbourne. He’s a walking, talking provocateur who never backs away from controversy. He offers a civilised handshake – an act rather than a privilege that I don’t want to advocate for political correctness.

The genius of the move is that it builds on Australia’s expertise in medical research. It’s typical of the investor’s modus operandi that his entrance into the medical device market upends a few rules. The narrative of Australian higher education has been dominated by the “brain drain”, but Carnegie has been able to secure Sydney’s best brains by hopping up at least three US medical device companies – more are in the pipeline – and this Melbourne firm to Australia. The genius of the move is that it builds on Australia’s expertise in medical technology, an expertise grounded in eight hours of surgery, biological science and medical practice.

The same is true when it comes to tax incentives. “One of the great things about Australia is that the R&D tax incentive is a platform, as he puts it, “for great new ideas to group of investors in the hope of generating a few perfect corporate matches. Known as Carnegie’s Den, it is a platform, as he puts it, “for great Australians to build great Australian businesses.”

The opposites of this approach is inherited wealth used solely for personal gain. “The idea that somebody gets to inherit a large dairy farm from their grandfather and it ends up being a residential development – that’s just an economic rent seeking from the Middle Ages.”

Education, once again, is front and centre. “For Mark Carnegie, greater income equality is not merely a social justice issue. It is a means to an end: economic vitality, egalitarianism is portrayed by its critics as a sure way to douse the fires of capitalism and reduce them to coals, but for Carnegie, equality is a source of economic dynamism, not a damper.”

The key thing is opportunity and social mobility unblocking the creative destruction of capitalism in positive ways to make a better society,” he says. What Carnegie terms an “opportunity-oacity” – a society that places a premium on the discovery and cultivation of human potential and the breakthroughs of a belief system internalised from personal experience, as most belief systems are. Born into wealth, he has done something socially useful with his and others’ money. Aside from his own investments and those he brokers in the normal course of things, twice a year he calls on entrepreneurs to bring their ideas.

Investment banker

Mark Carnegie is a provocateur with a disarming vision for transforming society.

Mark Carnegie is by reputation a tough-talking, big-thinking investor with a combustible temper and a taste for provanity. But either the Sydney-based venture capitalist is striving to deceive when we meet at his office squirreled away in a narrow Paddington street, or his fearsome reputation ignores an altogether more relaxed temperament. Carnegie pats down the corridor in a crushed aqua linen shirt worn outside khaki chinos, his feet shod in dark tan loafers. I feel an urge to check the calendar. Is it a work day or a golf day?

Equally disconcerting is the genial air of this Melbourne born silvertail, son of a wealthy grandfather and it ends up being a residential development – that’s just an economic rent seeking from the Middle Ages.”

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The class of 2015 will find themselves entering a very different world of work than their predecessors of even a decade ago.

Val McFarlane meets the men examining how we work now – and what the future might bring.

Flexibility takes many forms. “Activity-based working,” where employees no longer have their own assigned workstation, instead using a range of areas to carry out specific tasks, is just one. Teams don’t necessarily sit together, instead using videocasting to communicate, or meeting in shared spaces. In at least one Melbourne bank – and increasingly around the world – the definition of office space is being stretched even further, to include areas where customers can work alongside bank staff.

Teleworking, or virtual working, with employees scattered across the city, country or even globe, is also increasingly common. At technology firm Cisco, 40 per cent of managers manage people who don’t work in the same location.

Research fellow Dr Jesse Olsen says there will always be jobs where such methods won’t work, but for those where they are appropriate, they can save money and present new opportunities. “Technology allows us to get lots of people to work together who might otherwise not be able to because of their personal circumstances, whether it is family commitments or because they live in different places,” he says. “If you get a lot of different types of people together they share different perspectives and you come up with different outcomes.”

He finds the “getting together” that makes the difference, regardless of whether it’s in person or over Skype. Olsen cites the 2013 decision by the CEO of Yahoo, Marissa Mayer, to put an end to staff working from home. “That stuff gives me the shivers,” Olsen says. “It’s exactly the kind of environment you need to do more than read the technology that allows – and encourages – employees to be on call 24/7.

“We forget the enormity of technological change that has taken place over a relatively short period of time,” he says. “Just think about how long things like smart mobile phones have been around. The first smartphone came out in the mid-1990s, the first iPhone in 2007, but where would we be without them now? The first thing I do when I get out of bed – in fact I don’t even get out of bed – is check my emails.”

Reports of the death of the traditional office may be an exaggeration, but there is no doubt the nine-to-five is changing, with flexibility the current buzzword.

Professor Peter Gahan, left, and Dr Jesse Olsen.

On the walls is positively encouraged at the Centre for Workplace Leadership. Much of the wall space in the Centre, on the sixth floor of the Business and Economics building in Melbourne, is covered in scribbles. There are lists, Venn diagrams, graphs … all ideas downloaded from the brains of the academics who work there. It’s just one of the signs that the Centre doesn’t just research the modern workplace, it is one. Here, academic and professional staff share the space. There’s a formal meeting room, but more informal places to gather – booths with comfy couches and a bar with high stools, like in the hipster cafes round the corner in Carlton.

Director Professor Peter Gahan (PhD 1997) hasn’t brought a pool table for the team yet, but one wouldn’t look out of place.

It’s exactly the kind of environment you would expect from Gahan, who has spent his life researching ways of making the Australian workforce happier and more productive. A former Director of Workplace Innovation at the Victorian Department of Industry, Innovation and Regional Development, he has studied the impact of workplace changes over many years.

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Too wrapped up in their jobs, a risk increased by the technology that allows – and encourages – employees to be on call 24/7.

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Reports of the death of the traditional office may be an exaggeration, but there is no doubt the nine-to-five is changing, with flexibility the current buzzword.
From boat to schoolyard to Australian future, a new research project will examine the history of our child refugees.

BY GABRIELLE MURPHY

It was with no English but boundless energy that Joy Damousi started her educational journey in a crowded inner-city kindergarten in Melbourne. A year later, her English little improved, she was thrown into the local primary school.

“The schools were bursting with kids who spoke little or no English,” she recalls of those days in the 1960s. “But although my first language was Greek, I don’t recall any problem joining in with children in the street and kicking the football.”

“For us Greeks, Italians, Yugoslav, Australian Rules football was our communal language, bringing us into the mainstream and establishing an insider status, of sorts, in the face of wog and dago labels regularly projected at us.”

These schoolyard experiences were the start of a distinguished academic career that would lead Joy Damousi to become one of Australia’s most respected historians and the University of Melbourne’s first female – and the Faculty of Arts’ first – ARC Laureate Fellow.

The Australian Laureate Fellowship recognises world-class research and is Melbourne’s first female – and the Faculty of Arts’ first – ARC Laureate Fellow. The fellowship awarded to Professor Damousi and her team of researchers (from left) Dr Alexandra Dellios, Niro Kandasamy, Anh Nguyen, Sarah Green, Samuel Malek, Dr Mary Tomic, Dr Flachet Erevinas and Dr Jordana Silverstein. Left: Professor Damousi at primary school. Picture: Chris Hopkins

Her latest book, Memory and Migration in the Shadow of War: Australian Greek Immigrants after World War II and the Greek Civil War, will be published this year.

It took more than a year for the family to reach safety in the US. Damousi believes the scholars’ knowledge and expertise will contribute to our understanding of the history of refugees in Australia.

“Its unusual, definitely rare, that as historians we find ourselves in a position where we can double as informants and informers,” she says. “In combining these roles, we hope to provide a detailed, insightful and instructive history that will benefit us all.”

As the conflict escalated, many Tamils, including Kandasamy’s family, were forced to flee. A toddler when she arrived in Australia in 1992, Kandasamy grew up in Western Sydney, which she now calls home. Her thesis will explore the effects of long-term resettlement on Sri Lankan refugee children.

Samuel Malak, from Sudan, will examine the settlement experiences and needs of young Sudanese migrants for their successful integration into Australian society. During the civil war in his home country, Samuel was forced to serve as a ‘child soldier’ in the Sudan People’s Liberation Army.

Through a child’s eyes

From boat to schoolyard to Australian future, a new research project will examine the history of our child refugees.

WE WANT TO EXPLORE HOW THIS HISTORY IS TIED TO AUSTRALIA’S INTERNATIONAL ROLE ON REFUGEE AND MIGRATION ISSUES AND COME TO AN UNDERSTANDING OF THE IMPACT OF CHILD REFUGEES IN AUSTRALIA IN CULTURAL, SOCIAL AND ECONOMIC TERMS.”

in George Street, and then Napier Street, Fitzroy, as had many migrants before them.”

Damousi’s parents were part of the massive postwar influx of Greek immigrants to Australia, one of the largest intakes in the nation’s history. Between 1945 and 1959, Australia took in about 63,000 permanent arrivals from Greece, 24,000 of them assisted by the federal government. Many settled in Melbourne, particularly in the inner-city suburbs of Fitzroy, Collingwood and Richmond.

Of her childhood days roaming the streets and laneways of Fitzroy, Damousi and her mother hold opposite views.

“My father George was a village bootmaker who migrated from Florina in the Olympian year of 1936 and then arranged for my mother Sofia, a dressmaker, and one-year-old sister Mary to join him in 1939. They initially settled in George Street, and then Napier Street, Fitzroy, as had many migrants before them.”

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“We want to explore how this history is tied to Australia’s international role on refugee and migration issues and come to an understanding of the impact of child refugees in Australia in cultural, social and economic terms.”

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Of her childhood days roaming the streets and laneways of Fitzroy, Damousi and her mother hold opposite views.

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On paper, Glenda Fisher and Cassandra Yam don’t look like they’d have much in common. Glenda (MEd 2005), 65, has spent her life in education, principally helping school students with disabilities. Cassie, 20, a third-year Bachelor of Commerce student, is headed for a career in accounting. But after being paired through the University’s Access Connections Mentoring Program, the two women have formed a strong bond that benefits them both. They tell Val McFarlane about their relationship.

My experience has been very different to Cassie’s. I completed my initial teaching qualifications in Special Education at Melbourne University in 1969. When I described what my days were like back then to Cassie – rolls marked, Wednesday afternoon sport, halls of residence living – she said it was like being back in school, and it was. I’ve been a professional educator for 48 years and currently work for the Catholic Education Office, helping senior school students with diverse needs to transfer from school into further education, training or work. I enjoy working with young people and seeing them succeed. Mentoring is another opportunity to do that.

Cassie is such a delightful young woman but quite shy. She shied away from shining the spotlight on herself and was reluctant to emphasise her considerable talents. I helped her with her resume and through my connections at the Graduate Union, set up a mock interview panel for her, with myself and two colleagues who are experts in accountancy, which Cassie is studying.

We interviewed her for an hour and a half – she really had a tough time of it! We taught her not to be afraid to take time to consider what to say and how to answer questions effectively.

As she was leaving she said she had an interview at a major accountancy firm the next morning. We were delighted when we got an email later in the day saying that she’d been offered a position.

It doesn’t matter that we’re in different fields. Mentoring is about teaching the students how to look for and acknowledge what isn’t working for them and give them the skills to change that and move forward, as a complement to their academic learning.

I’ve found being a part of this program very rewarding and I would do it again. It has been an absolute joy meeting and working with Cassie. She wanted to learn and that made my job 10 times easier. We’ll keep in touch. I’ll be interested to follow her career.

Cassie had always heard people saying that mentors were really important and they could help you so much but I didn’t know what to expect when I signed up for the program.

When I first started at Melbourne University I was applying for an internship the morning after. It was impractical timing. I felt so much better and more prepared. I just made sure to remember what Glenda and her colleagues had told me. I guess it worked because I was successful and I got the internship.

When I first started at Melbourne University I was looking for advice on how to actually doing it. But through my conversations with Glenda I learned that no one expects you to know everything right away.

This semester I’ve been on exchange at Boston College in the US, where I’m studying Chinese as well as finance. I always assumed I’d just go straight down the accounting path, but the more I learn about how many different options there are after uni, the more I’m thinking I don’t know where I’ll end up. But I’m looking forward to starting my internship at the end of the year. I hope Glenda and I will keep in touch. I’m so grateful to have been able to meet her, let alone have her as my mentor. It’s been amazing.
EVOLUTION OF THE UNIVERSITY

So much is the same, yet so much has changed. Here are some of the ways in which the University of Melbourne has been transformed over the 50 years from 1964 to 2014.

STUDENT NUMBERS

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
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<tbody>
<tr>
<td>1964</td>
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</tr>
<tr>
<td>1989</td>
<td>22,402</td>
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PERCENTAGE OF STUDENTS FROM OVERSEAS

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
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<td>7%</td>
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<tr>
<td>1989</td>
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<tr>
<td>2014</td>
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SMOKING REGULATIONS

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<th>Regulation</th>
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<td>1964</td>
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</tr>
<tr>
<td>1989</td>
<td>Smoking banned in campus buildings</td>
</tr>
<tr>
<td>2014</td>
<td>Campus declared smoke-free</td>
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LARGEST FACULTY

<table>
<thead>
<tr>
<th>Year</th>
<th>Faculty</th>
</tr>
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<tbody>
<tr>
<td>1964</td>
<td>Arts</td>
</tr>
<tr>
<td>1989</td>
<td>Education</td>
</tr>
<tr>
<td>2014</td>
<td>Medicine, Dentistry and Health Sciences</td>
</tr>
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</table>

Taste of success

GEORGE SYKIOTIS
(BCom 1995)

George Sykiotis remembers the meal his mate, celebrity chef George Calombaris, cooked the night they cemented their business partnership on a handshake.

“He was working at One Fitzroy Street and he did a baklava souffle and calamari carbonara. That was spectacular!”

The two Melbourne men, sons of Greek migrants, complement each other. Calombaris is the frontman with the knife skills, the chef with an outstanding creative culinary touch. The fast-talking Sykiotis is the money man who makes their plans work.

“George is the soul of our business, I’m the heart of the business,” he says.

Together with two partners they run Made Establishment, which is behind some of Melbourne’s big-name restaurants including the Press Club and Hellenic Republic.

Much has been made of their unusual approach to establishing new restaurants. They don’t just create the restaurant, they buy the property it’s on.

“The freehold is critical, because that way you have some insurance,” he says. “Rents in the city have doubled, tripled, but we keep ours at reasonable levels.”

And besides, buying property was what his parents did years ago. “It’s called ROI,” he says, “return on investment.”

Sykiotis’ skill with numbers emerged in childhood when he did the books for his parents, who ran a series of cafes across Melbourne. He maintains he can still add faster than some calculators. He calls it “smelling numbers.” His ability in commerce was cemented at the University of Melbourne, but not until after learning a painful lesson.

“It happened in 1999, during his second year. He was 18.

“I started realising there was more to uni than just going to lectures. I was partying too hard. I failed six out of my eight subjects and ended up before the disciplinary review board.”

The board gave him another chance: probation and part-time studies for two years. Afraid of what his parents would say, he told them he was opening a restaurant and would therefore be studying part-time.

Eight years after starting at the University, Sykiotis graduated with a commerce degree.

“The thing I learnt in uni was discipline and there was an opportunity to be exposed to different sources of information, things I would not normally have had access to. I developed some amazing skills.”

And most importantly, he adds, he was given a second chance.

JENI PORT
The bigger picture

CORRIE CHEN

(C)picture: CHRIS HOPKINS

Corrie Chen has ambitions, big ones, the kind that require millions of dollars and nerves of steel. She wants to direct a feature film.

Temporarily, the young Melbourne filmmaker describes her dream project as an Australian-style Deadwood, a riff on the old Wild West played out on the Victorian goldfields in the 1850s with plenty of love, death and lawlessness revolving around the arrival of Chinese immigrants.

The storyline is close to her heart and her experience as the daughter of Taiwanese migrants. “I am interested in people on the fringes of society because they are not heard of very often,” she says.

“It started with telling migrant stories because that came naturally to me, but it’s filtering now into other genres.”

Corrie Chen arrived in Australia as an eight-year-old in 1994. When she hit her teens her parents had expectations about her future career, the kind involving law or accounting.

“The Asian thing,” she says, “is that your ideal profession should be contributing something to society, like a doctor or an accountant.”

She enrolled in media at RMIT with thoughts of perhaps becoming a journalist, and it was during a course on film that her lecturer saw in her a kernel of the kind that require millions of dollars or nerves of steel. She wants to direct a feature film.

She enrolled in the Victorian College of the Arts School of Film and Television, receiving a Bachelor of Film and Television (Hons) in 2008 and following it up with a Master of Film and Television in 2011.

Her parents remain unsure of what exactly she does, but there’s no doubt her film work has touched many, dealing as it does with some of the big issues confronting Australia in the 21st century.

In 2014, Suicide and Me, exploring the stories of three young suicide survivors, aired on the ABC. It won her Best Direction in a Documentary at the Australian Directors’ Guild Awards.

The 2011 short comedy Bruce Lee Played Badminton Too looked at the dreams of an isolated young man who loves badminton and Bruce Lee. It was highly commended at the 2013 World of Women Film Festival. Reg Maker Contact, her latest seven-minute short film, now in post-production, is a story about dementia and alien life forms.

“It’s about an old man who lives by himself in the middle of nowhere. He’s suffering from dementia and he’s really obsessed with finding proof of extra-terrestrial life. On the eve of him being forced out of his home and into a nursing home, he finds an object that he believes is that proof!”

Riding the rise in Beijing law

YAO YI

(LLM 1996)

There is one thing that Yao Yi, partner in the Chinese law firm East & Concord Partners, has in spades: it’s the ability to adapt to change.

A graduate of Beijing’s Renmin University, Yao’s undergraduate degree in economic law and masters in civil procedural law secured her a position at the Beijing Foreign Economic Law Office, a state-owned law firm specialising in foreign investment.

That was in the early 1990s when a new area of commercial legal practice in China was emerging. “We had just opened the stockmarket in 1992,” Yao recalls. “This was all new in China.”

When a visiting partner from Minter Ellison invited her to work in Melbourne she jumped at the chance and applied for a scholarship to the University of Melbourne Law School to complete a masters in company law and the securities market.

“I was encouraged to do some research in this area,” says Yao, who completed her thesis over two years while working at “Minter” part-time. “The Australian legal system was quite different but gave Yao invaluable legal experience.”

While a future in Australia appealed, she received a call from a colleague at the Beijing Foreign Economic Law Office saying the firm was restructuring and she had a chance to be a partner. Yao returned home and a year later was one of eight partners and 16 lawyers at the new East & Concord Partners firm.

“Changes in the Chinese legal system over the past 20 years have been dramatic,” she says. “When I returned in 1994, Beijing had about 3000 lawyers and only a couple of partnership law firms. Now we have over 3000 firms and 30,000 lawyers in Beijing.”

The four-tiered Chinese court system, presided over by a judge and a panel of assessors, hears criminal and civil matters, but she prefers to offer commercial matters to the China Economic International Trade Arbitration Commission. “You can get a final arbitration awarded after one hearing,” she says of the commission, one of the largest arbitrators in the world.

Now with 61 partners, 116 lawyers and more than 200 support staff, East & Concord Partners is carving out a niche as a medium-sized firm for mostly local clients.

Post-merger, Yao’s time is largely spent managing the business, integrating the two firms and building a new IT platform – but she still takes a hands-on approach to clients and China’s fast-changing legal landscape.

“The biggest challenge for lawyers in China is keeping up with changes to regulations. I have practised for over 21 years and I have to learn new regulations every day.”

"I am interested in people on the fringes of society because they are not heard of very often."
When Katie Potts makes up her mind to do something, it gets done. Growing up in a small country town on the Victoria NSW border she was so determined to study in Melbourne she chose a degree, Geomatic Engineering, that wasn’t offered locally. “I blindly picked it, but once I started to do it I really enjoyed it.”

So much so that at just 26 she has completed her PhD and is a founding research fellow at the University’s Centre for Disaster Management and Public Safety.

“Disaster management is where my passion lies,” Potts says. In the era of climate change and ever more frequent freak weather events, her career fits into a niche that has grabbed the attention of governments and industry all over the world. The softly spoken, articulate engineer from Wahgunyah is at the forefront of the field.

Geomatics is essentially 3D mapping and visualisation of land. “It’s quite diverse, from GPS satellites to remote sensing and surveying, and it also has a land administration and planning aspect to it, which is the aim I ended up in,” Potts says.

Central to her work is the layering of information from a variety of sources to identify risk in specific locations. “Property aspect to it, which is the area I ended up in,” Potts says. “It’s quite diverse, from GPS satellites to remote sensing and surveying, and it also has a land administration and planning aspect to it, which is the aim I ended up in,” Potts says.

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“My island home

Bridget Daly (PGDipTeach(Sec) 2013)

E leaf hut villages, volcanic islands, windswept beaches and emerald jungles – the Solomon Islands is the type of place you might expect to see on the Discovery Channel, but for Bridget Daly, it’s home. After she completed her studies in 2013, Daly’s husband accepted a job with World Vision International on Guadalcanal. “When the opportunity arose it was too good to pass up,” she says.

It was a move that would prove serendipitous for her career as well. During her first weekend in town, she attended the Coconut Olympics – a hotly contested event featuring unconventional sports such as coconut curling. Between heats, Daly was introduced to the curriculum co-ordinator of Woodford International School. Soon after, she landed a teaching role in its primary-years program.

Twelve months on, Daly is still pinching herself. “I never imagined I’d be living and working on an island in the Pacific,” she says.

While the surroundings are vastly different to Melbourne, the daily routine isn’t that dissimilar. “It’s early starts and late nights,” she says. “But I’m also learning a new language, culture and different ways to approach life and teaching, which makes the experience a truly rich one.”

Excitable chatter can be heard from the classroom as students eagerly await their next lesson. They come from a variety of backgrounds – Kiribati, South Korea, Papua New Guinea, Malawi and the Solomons. Roles are often reversed as they teach Daly about their cultural traditions.

“Every day I am brimming with joy over the conversations I’ve had and the learning I’ve witnessed,” she says.

But being a teacher in the Solomon Islands is not without its quirks. “We don’t rely on computers,” Daly jokes, “they’re temperamental at best.”

The technology may be unreliable and the hours long, but there are poignant moments that make it all worthwhile. “I had one student who was so terrified of speaking in front of the class that he would stammer and fidget his way through presentations. Working slowly, I grabbed every opportunity to celebrate his victories. Then one day, he and his classmates wrote a rap, which they presented at assembly. It was incredible! To see struggling students grow into a place of confidence and then go on to achieve great things is more precious than gold. It’s what it’s all about.”

Enduring bonds: For alumni, graduation isn’t the end of their relationship with the University.

Wherever you are, you’re likely to find other University of Melbourne alumni. At the last count, there were nearly 338,000 graduates in 156 countries.

In a number of locations – Beijing, Shanghai, Hong Kong, Singapore, Indonesia, Malaysia, Japan, Vietnam and the United Kingdom – there are active alumni associations, driven by volunteers. Each runs a program of events to connect alumni with each other and keep them involved in the life of the University.

“The associations provide networks for all University of Melbourne alumni, wherever they are in the world, at whatever stage in their career,” says Jaclyn Birtchnell, the University’s Alumni Relations Manager (Advocacy and Recognition).

“They are invaluable for new alumni in that they instantly expand their social and professional networks, and offer the potential for career support, professional development and employment opportunities.

“But they also offer the chance for more established members of the alumni community to share knowledge with others in the same industry and explore new partnerships.”

One easy way for graduates to connect with their local network is by attending a Welcome Home event. These events, organised by the University’s Alumni Relations team in partnership with the alumni associations, bring new and older alumni together to share their experiences of Melbourne.

Attending a Welcome Home event is often the first step in making connections that last a lifetime,” Birtchnell says.

Even in countries without formal alumni associations, there are opportunities to connect with fellow graduates. In 2014, events for international alumni included exclusive dinners with travelling academics in Uganda and Malawi, cocktail functions in Taipei, Cambodia and the Philippines, and large-scale events, hosted by Australian state and federal governments, for alumni living in Denmark, Germany and Oman, among others.

“Getting involved with your local alumni community is a way of tapping into a wealth of knowledge and experience,” Birtchnell says.

Alumni are urged to keep the University informed of their mailing address and supply a current email address, so they can be invited to relevant activities.

Birtchnell says, “We love to hear where alumni are and what they are doing, and it means they won’t miss out on any exciting opportunities.”

To learn more about alumni associations, or find your nearest one, visit go.unimelb.edu.au/7ghn

Update your contact details via the Alumni portal at go.unimelb.edu.au/7ao

I am very glad to remain connected

Singapore-based Alumni Council member Rachel Teo (BCom 1991, PGDipEco 1990, International House) is a strong advocate for the benefits of overseas associations. Rachel kept in touch with the University following graduation but only became actively involved in the Singapore Alumni Association when it looked like it might close down, helping revive it with some other local alumni.

“It has since gone from strength to strength and each year runs a dynamic program of activities to engage and entertain the 4500-plus alumni living in Singapore.

“I have been involved with the alumni association for over 10 years now,” Teo says. “I am very glad to remain connected as it is great to meet more alumni both my own age and older. I enjoy meeting new alumni and am always happy to learn of their involvement with different sectors. I encourage new graduates to continue building their network as they will get to meet more alumni and through it make valuable business and social connections. Indirectly there will be mentors that you may meet along the way and in time you will also likely mentor someone younger.”

Indonesian-born graduate Ryan Hineman (BCom 2002) has also connected with peers in his home country. “When I was there, Melbourne never felt like home to me,” he says. “However, now that I have left Melbourne, I feel like I am missing it all the time.”

“I think that is important to stay connected with my fellow alumni because I believe to achieve great things, one needs to collaborate with fellow great individuals, and UoM graduates happen to fit that description.”

“Besides, I need friends to reminisce with and share the nostalgia that I have for Melbourne.”
AWARDS, HONOURS & ACHIEVEMENTS

Four alumni were honoured in the 2014 Financial Review and Westpac 500 Women of Influence Awards. They were Amritpal Mundia (BA 2004), CEO of the Climate Council of Australia, Shelley Weltzien (MAECE 1993), Principal of Shelley Weltzien Architect, Dr Bronwyn King MA (BS 1987), Research Oncologist at the Peter MacCallum Cancer Centre and Ewart Griffiths (BS 1982), Director of the Bioinformatics team at the Peter MacCallum Cancer Centre. Their contributions to the wider society, and their longstanding commitment to the University and their communities, have been noted.

Northern Lights: The Positive Power of Sweden. Finland, Denmark and Norway is the fifth book by former SRC Professor Andrew Scott (BA(Hons) 1990, Janet Clarke Hall). The talk explores how the English-speaking world might learn from the achievements of the four main Nordic European nations, which successfully combine economic prosperity with social equality and environmental responsibility.

Laureate Professor Sam Berkovic AC (BMedSc 1974, MB BS 1977, MD 1984) and Professor Ingрид Schiefner AO (PhD 1990) have been awarded the $300,000 2014 Prime Minister’s Prize for Science for their contribution to the study of epilepsy, its diagnosis, management and treatment. The two clinician-researchers, whose work was featured in the last issue of 2013, have led the way in finding a genetic basis for many forms of epilepsy.

Dr Dennis Rimmer (DPM(Clin), BA(Hons) 1994, LLB 2001) has been appointed Chief Executive of the City of Port Phillip and is one of the most recently Associate Secretary at the Australian Government Department of Government Services. He has also been a Deputy Secretary in the Department of Prime Minister and Cabinet and a Deputy Secretary, Director and Assistant Director in the Victorian Department of Primary and Cabinet.

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Coming clean on my polar mission

BY DR KATHRYN MUMFORD

The first time I saw snow I was 23 and flying into Casey Station in Antarctica, after 10 days sailing through huge seas and ice in the Southern Ocean. That final 20-minute helicopter trip, flying around icebergs, was an incredible introduction to the continent.

Once at the station, there wasn’t much time to enjoy the scenery; everyone had a job. The most important immediate task was transferring stores ashore before the ship left. It would not return for three and a half months.

Since that first trip I have travelled to the Antarctic stations at Casey, Davis and McMurdo, and the sub-Antarctic base at Macquarie Island, every second year or so as part of a collaboration between the University of Melbourne and the Australian Antarctic Division.

I’m working with a team to develop technologies for the remediation of contaminated sites. Before the 1980s it was common for rubbish to be dumped close to stations, later to be covered by snow and ice or simply pushed out onto sea-ice that melted over summer, sending it to the bottom of the ocean. Long-lasting damage to the surrounding flora and fauna has put a stop to these practices. Diesel, the main means of power generation and the source of inevitable spills, is also a problem.

We are now working to clean up these areas in the simplest, most cost-effective way – and trying to influence other nations with a presence on the continent to do the same. For now, most countries believe it is too difficult and costly to clean up their sites. We want to change this.

Obviously the environment of Antarctica provides a unique set of challenges when designing and implementing remediation systems. Low temperatures, freezing conditions, low soil nutrient contents and variable and high water flows all affect the suitability of systems that might be used in temperate climates. One of the areas that we have been focusing our efforts on is the development of Permeable Reactive Barrier (PRB) technologies. This involves creating a trench filled with reactive material that traps and degrades fuel contaminants into harmless products while allowing water to pass through. These developments have been highly successful, with a number of PRB installations completed at Antarctic and sub-Antarctic stations. Antarctica has provided some of the most rewarding and exciting experiences of my career. It is a land of extremes, the highest, coldest and windiest continent on Earth where wind speeds can reach 200 km/h.

It is generally assumed that if the wind speed (in kilometres per hour) gets above your body weight (in kilograms), you shouldn’t walk outside due to the possibility of being swept away. In October and November this happens regularly, but in later months you can get caught off guard. On one memorable January night a group of us were working in the science laboratory. We didn’t notice the wind picking up and at dinner time, we suited up and headed for the door – which wouldn’t open due to the extraordinary wind force.

We weren’t going to make it back to the living quarters for dinner. Luckily we had a stash of emergency chocolate so hunkered down for the night. This event made me appreciate the unpredictability of Antarctica. Although I was living comfortably, with ready access to many modern conveniences, the tables can turn quickly.

Most of the field seasons that I have spent in Antarctica were over Christmas. This is when much of the accumulated annual snow begins to melt and the contaminants that interest me begin to migrate and interact with our PRBs.

Christmas in Antarctica is cause for great celebration. One of my strongest memories is of volunteering on Christmas Eve to go out and collect ice. Led by a runway technician, we boarded one of the Hagglunds track vehicles and headed out beyond the station limits to an area of thick blue ice.

Here he fired up a chainsaw and started cutting huge blocks of ice to take back to the station. The biggest was carved into a penguin about a metre high. Smaller blocks were cut into plates of progressively smaller size. When stacked together they made a two-metre-high Christmas tree that was then decorated with seafood for the Christmas Day feast. And the ice officers made a nice addition to our after-dinner whiskies.

I grew up in Bairnsdale in regional Victoria, and for me, the chance to move to Melbourne and study at the University of Melbourne was beyond my family’s means. Determined to realise my dream of obtaining a university education, I applied for a scholarship and was lucky enough to receive one. My goal is to focus on journalism or the arts - something that will empower me to address wider community issues. I hope to someday be a strong influential voice that can return to society the knowledge and prospects it has given to me.

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