



3 | **Alumnus wins
Picture Book
of the Year**



5 | **August
graduations
Recognition
for achievers**

Martinkus docos show reality of Afghanistan war

BY SHARON WEBB

Journalist John Martinkus reels off the date he was kidnapped in the Iraq war as if it's permanently scratched on his brain.

"It happened on October the 16th, 2004, at three in the afternoon," he said.

"We were car-jacked outside the hotel, had guns put to our heads and made to drive to a part of Baghdad not under government control. It was terrible. I thought: Here we go."

It's experiences like this that gave credibility to the television war reporter, now journalism lecturer in the UTAS School of Social Sciences; John's work for AAP and SBS in Timor, Papua, Iraq and Afghanistan is the reason the Australian War Memorial sought him out in 2012 for a month-long trip to Afghanistan with artist Ben Quilty.

They wanted footage of Australian soldiers at work there, to help people visiting the memorial and its website understand the experiences of Aussie troops.

The upshot was that John made three short documentaries, the first of which is now on the War Memorial's website.

It's likely most Australians have never heard such personal accounts of war and its emotional and physical effects on our soldiers as those in John Martinkus' interviews.

Being shot at and shooting others,

hearing the screams of injured mates and picking up children's limbs after an improvised explosive device goes off near a school are among the inevitably horrible scenes described by the soldiers, interspersed by the deep, reassuringly sane voiceover by John Martinkus.

His war reporting experiences in Iraq and Afghanistan meant he not only knew the geography, the terrain and the issues, but also the questions to ask to gain the insights needed by the War Memorial.

"There was tension in getting the military to understand what sort of footage we needed," John said, "but, in reality, with the War Memorial our access was much better than when I was with SBS's *Dateline*."

"I found a lot of the lower ranks were quite frank about what they were doing."

John grinned guiltily when asked how eager he was to go back to Afghanistan. Between 2004 and 2008 he spent long and short periods there reporting for SBS. He knows of only two other journalists who have driven the highway in the province of Uruzgan to the town of Tarin Kowt.

"I jumped at the chance to go back – out of professional curiosity," he said.

"I wanted to see what had happened since I left. It's a fascinating country, quite beautiful. And the people are amazing."



UTAS journalism lecturer and former SBS war reporter John Martinkus: His three documentaries commissioned by the Australian War Memorial will help Australians understand the work of our troops there. (Photo: Peter Mathew)

While it's obvious the reporter in John Martinkus would choose to spend his life reporting on war-torn countries, the survivalist Martinkus knew he had to give it away: gain a home, a family, a regular job. He has worked at UTAS since 2009 and enjoys it.

"Looking at others I knew who'd had similar experiences (to the

kidnapping) or worse, I knew I couldn't do that work indefinitely; I'd either be blown up or go mad.

"My wife was having twins, I was burnt out. I'd been doing it for 10 years," he said.

These days some curious journalism students ask him about his experiences.

"I have to stop myself telling

them stories with the presumption they know about it. They were only ten years old in the nineties; it's ancient history to them.

"But I do try to tell them journalists can be motivated by bettering people's lives; we're not after fame and fortune. I genuinely think those sorts of conflicts should be covered."

World ranking boost rewards drive for research excellence

BY PETER COCHRANE

THE UNIVERSITY of Tasmania's drive to enhance its international profile and standing has received a boost from the latest Academic Ranking of World Universities (ARWU).

In addition to UTAS moving up in the world rankings to 325, it has consolidated its position as the 10th-ranked institution in Australia, behind the coalition of major universities known as the Group

of Eight, and Macquarie University in Sydney. "The world ranking is a modest but nonetheless pleasing gain on 2012, given the strong competition that we face globally and straitened times domestically," Vice-Chancellor Professor Peter Rathjen said.

"Recent and ongoing recruitment of new academic staff and a jump in research income should ensure that we continue to make gains globally."

The Deputy Vice-Chancellor (Research), Professor

Paddy Nixon, said UTAS's performance in a number of key indicators contributed to its ARWU result.

"These include the number of papers published in the prestigious journals *Nature* and *Science*, and per capita performance.

"More broadly, between 2011 and 2012 we saw a 17.5 per cent increase in publications."

The ARWU is conducted by researchers at the Centre for World-Class Universities at Shanghai Jiao Tong University.

Making music in Nacogdoches exchange

BY PETER COCHRANE

Deep in the heart of Texas there is a special place for UTAS Conservatorium of Music students and staff.

That place is Nacogdoches in East Texas, a city of about 35,000 people and home to the Stephen F. Austin State University (SFA).

SFA's best known ex-students include Don Henley of The Eagles band, and the co-discoverer of plutonium, Joseph Kennedy.

For the past two years, an exchange program between the two universities has seen three SFA composition students each spend a semester in Hobart, and UTAS Conservatorium of Music piano student Clarissa Chan head for the Lone Star State last year. A second Con student, Michael Young, leaves this month to study band conducting at SFA.

Earlier this year, senior lecturer in composition Dr Maria Grenfell became the first Con staffer to take advantage of the exchange program when she was asked to fill in for Dr Stephen Lias, her opposite number at SFA, while he was on sabbatical for a semester. She took the family with her – musician husband David

Malone, also a UTAS staffer, and children, Lillian, 5, and Alexander, 9.

The idea for the exchange was born when Dr Lias visited Australia in 2010 for the World New Music Days Festival and met Kevin Purcell, the then Con Director, while he was holidaying in Tasmania.

Dr Lias has since written the SFA website: "UTAS makes an exceptionally good partner for us. Students can travel either way without a language barrier, both universities have fine programs in music that serve a regional and sometimes sheltered clientele, and both schools firmly support the benefits of international study as a transformational experience.

"Our students have come home from Hobart with glowing comments about the experience and have gained profound insight into their own place in the world."

The recently returned Dr Grenfell is similarly complimentary about SFA, while acknowledging the vast difference in size and orientation.

"The music department there is twice as big as the Con in terms of full-time enrolments," she said.

"There are about 390 music majors and it's very much a music education school. A lot of the



Knowledge exchange: Dr Maria Grenfell from the UTAS Conservatorium of Music took her family to Stephen F. Austin State University in Nacogdoches, East Texas.

students go straight into music teaching because as part of their four-year Bachelor of Music degree they can become Texas-certified as school music teachers."

Dr Grenfell had 11 composition students there, three of whom were postgraduate. "I taught two SFA students who studied at the Con last year. They were pleased that I was able to fill in for Steve Lias." She also taught an upper-level course in musical form and analysis.

"Several SFA students are keen to travel to Tasmania in the near future, so I am looking forward to my next exchange students. With the UTAS emphasis on internationalisation I hope that the relationship between the Con and the SFA School of Music can continue," she said.

Apart from her teaching at SFA, she was asked to give a presentation to composition students at the University of Houston.

"They were due to perform a piece of mine the next day but unfortunately I couldn't stay to hear it. I had to go back to Nacogdoches to teach."

As big as Texas is, Dr Grenfell did manage to see some familiar faces. During a visit to San Antonio, she caught a performance of the San Antonio Symphony at the landmark Majestic Theatre.

"The guest concertmaster that night was the Tasmanian Symphony Orchestra's concertmaster and Conservatorium Professor of Strings, Jun Yi Ma, who was spending a few months there working with the

TSO's ex-chief conductor, Sebastian Lang-Lessing."

For those readers who like both kinds of music – classical and blues – just across the street from the concert hall is the historic Gunter Hotel, where the legendary Robert Johnson once recorded.



Dr Maria Grenfell

First UTAS /University of South Australia physio graduates start work

BY SHARON WEBB

THE FIRST physiotherapy students from a postgraduate degree offered by the University of South Australia on a pathway directly from UTAS have begun work as fully qualified physiotherapists in Tasmania.

Joseph McCormack and Stephanie Peisker graduated last week in Adelaide and are now hard at work in physiotherapy practices Launceston and Burnie.

A third graduate, Ross Matton-Johnson, has gained work in Adelaide.

All three students first completed a 3.5 year Bachelor of Exercise Science in Launceston before taking on the Master of Physiotherapy

(Graduate Entry) degree. For the masters they completed study blocks in Adelaide and practical placements with Tasmanian physiotherapy practices.

UTAS anticipates having 12 graduates in the masters over the next 18 months.

UTAS physiotherapist Dr Marie-Louise Bird from the School of Human Life Sciences said the joint course plans to increase the number of physiotherapists returning to Tasmania to work.

"Although our degrees allow suitable candidates to enrol in several programs of physiotherapy, this pathway has most of the placements in Tasmania. We hope that this will allow the students to keep their contacts and so stay in Tasmania in

the longer term," she said.

Joseph said being able to do practical placements with Tasmanian physiotherapy clinics meant it was easier to make professional links in the state and gain work after completing the masters degree.

"Tasmanian practices and hospitals are always looking for young graduates to take on," he said.

Dr Bird said for each student intake of the University of South Australia physiotherapy masters degree (three so far), UTAS sends four graduates from either health science or exercise science.

She said the partnership with the university would continue until UTAS has its own program, currently being discussed.



Entering the physiotherapy industry: Joseph McCormack, Stephanie Peisker and Ross Matton-Johnson are starting work as physiotherapists in Launceston, Burnie and Adelaide, respectively.

Unitas

Unitas is the monthly newsletter of the University of Tasmania. It is printed in soy-based inks, on stock which is 80 per cent recycled and 20 per cent total chlorine-free pulp (FSC Mixed Source Certified). Aluminium printing plates are also recycled after use.

Circulation 1,500

Editor Sharon Webb Ph: 03 6324 3218

Email Media.Office@utas.edu.au

Production ACYS Ph: 03 6226 2591

Contributions are welcome, but items with a broad appeal will be given priority. The Editor reserves the right to edit copy or hold it over for a later issue and is under no obligation to publish contributed material. The opinions expressed in **Unitas** are not necessarily those of UTAS.

For a list of **Unitas** deadlines and guidelines, visit us at: www.utas.edu.au/events/unitas.html

Ron's Coat wins picture book prize



Winner of the 2013 Children's Book Council of Australia's Picture Book of the Year: Artist and UTAS alumnus Ron Brooks with one of the paintings from *The Coat*. (Photo: Peter Mathew)

BY SHARON WEBB

UTAS alumnus and artist Ron Brooks has been awarded the 2013 Picture Book of the Year by the Children's Book Council of Australia.

The book, *The Coat*, was written by fellow Tasmanian Julie Hunt and illustrated and designed by Ron, who headed up graphic arts at the then Tasmanian School of Art in Hobart for six years from 1988.

One of Australia's best known illustrators, Ron has been known to be mobbed by children in countries such as Japan; his books have been published in more than 30 languages.

He has produced many beautiful picture books but is probably best known for the seminal *John Brown, Rose and the Midnight Cat* (with Jenny Wagner).

Other well-known books

are *The Bunyip of Berkeley's Creek* (with Jenny Wagner), *Henry's Bed* and *Henry's Bath* (with Margaret Perversi), *Old Pig* and *Rosie and Tortoise* (with Margaret Wild).

In 2001, *Fox*, also written by Margaret Wild, also won the CBCA Picture Book of the Year

Award, Best Children's Book in the Queensland Premier's Literary Awards and the Patricia Wrightson Prize (NSW Premier's Literary Awards).

Ron lives near Huonville, where he writes, designs and illustrates picture books for kids.

He sees himself as a

"book-maker" rather than just an illustrator, saying: "I am strongly committed as an artist to the genre of children's picture books, but that passion of involvement has more to do with the wonder of what happens between good writing, good pictures and the

Freycinet Peninsula.

"The reason I illustrate is because of the writing. What drives me is beautiful text – when an author has used language in such a way that it turns my heart around.

"All the books I've done, I've loved the stories."

The Coat is the story of an unappreciated coat languishing on a scarecrow in a field. No-one wants it until a man wanders along, decides he could use a warm coat, so puts it on. It is plainly too big, but, as the coat gets its freedom, it becomes quite magical. Off flies the man in his new coat, as the coat has an appointment in the city (Big Smoke) at 6pm.

Ron Brooks has been nominated for the 2014 prestigious Hans Christian Andersen Award, the highest international distinction given to authors and illustrators of children's books, to be announced in March next year in Bologna.

"What drives me is beautiful text – when an author has used language in such a way that it turns my heart around."

young reader."

Unlike many illustrators, Ron doesn't have a particular style; it differs according to the requirements of each book. He often places picture book characters in Tasmanian-inspired landscapes such as the forests of Mt Field or the rocky coastline of the

Bouquets



Adam Langworthy

UTAS Agricultural Science PhD student Adam Langworthy is the winner of the AEV Richardson Memorial National Student Award for 2013. The 22-year-old from Hobart received his award at the Ag Institute Australia forum in Devonport. The award recognises the best research from undergraduate students who have completed an honours research project as part of an agricultural science (or related) degree. Adam identified a new legume as showing promise as a feed source where other legumes would not grow.



Ben Duckworth

UTAS alumnus Ben Duckworth was a member of the architecture team that won the design competition for a new Flinders St Railway Station in Melbourne. Ben, who graduated with a Bachelor of Architecture degree with honours in 1997, was working in Switzerland with architects Herzog & de Meuron until earlier this year when he moved to Melbourne with Australian architects HASSELL. The design by a joint HASSELL + Herzog & de Meuron team was voted winner of the Flinders Street Station redevelopment competition, topping a shortlist of five concepts by architectural firms around the world. In total, 118 designs were submitted. Ben Duckworth has worked on many important architectural projects including the renewal of the Tate Modern on London's South Bank, regarded as the most important museum of modern art in the world and perhaps, more importantly, a truly public building.

Emma Pharo, Hui Jiao, Leon Barmuta, Heather Monkhouse and Tracy Douglas

The Australian Government's Office of Learning and Teaching has awarded citations each worth \$10,000 to Dr Emma Pharo, Dr Hui Jiao and Associate Professor Leon Barmuta, all based at the Sandy Bay campus; the Conservatorium of Music's Dr Heather Monkhouse; and Mrs Tracy Douglas at Newnham. OLT citations are awarded to staff who have made significant contributions to student learning in a specific area of responsibility over a sustained period.

Up close



Matthew Hingston

Head of the student advice team

Before UTAS ...

I worked in mining and factories in Tasmania while going through uni; later I lived and taught English in Japan and Kenya. I started a PhD before being drawn into student support because I was familiar with living overseas and seeing students going through a cultural and linguistic adaptation process.

I'm passionate about my job because ...

It combines two things – assisting Tasmanian students to realise their potential and helping students new to Australia adjust to and thrive in a new environment.

I'm inspired by ...

The Tasmanian wilderness (we are so lucky – long may it last), the youthful delight in the world I see in my kids, and the music of Bach – the closest (legal) thing you can get to youth, delight and wilderness indoors and with a pause button.

When I'm not working, I ...

Used to renovate houses. I now recover from previously renovating houses and play with my kids.

My family life includes ...

Two young kids – so a lot of books, an inordinate amount of trains and also regular wakes in the night at present due to a teething 10-month-old and a two-year-old convinced that 6am is a great time to be alive. It is not.

I'm currently reading ...

Much less than I used to. Some Thoreau, some Heidegger and an old faithful, Tolkien, all underway at different stages with various wrappers, pens and small items of apparel for bookmarks.

Lately I'm listening to ...

A mixture of the mulleted (classic rock) and the bewigged forms of classical – ah the duality of man. Anything big and Bach is flavour of the month, as they are great for throwing kids around to. Hille Perl playing Sainte Colombe is a favourite for quieter moments. I'm also having a go at trying to like Mahler but all that late-romantic flailing about still makes me ill.



The view from here

Harmless, toothless but threatened: safeguarding the whale shark's future

LARA MARCUS, a Spanish PhD student from the Institute for Marine and Antarctic Studies, is fascinated by whale sharks. She and her research team recently swam with the huge animals at Ningaloo Reef in WA.

When talking about whale sharks I am often asked the same question: "Is it a whale or is it a shark?"

It's hard to believe whale sharks are harmless, toothless (not quite true as they have small teeth) sharks. Indeed, they are the largest fish in the world and they can grow up to 18 metres!

Although they are magnificent and charismatic animals

little is known about them and they are one of the least-studied shark species.

Whale sharks aggregate in tropical places such as the Seychelles Islands, Mozambique, India and Ningaloo Reef, WA. People are attracted to their slow movements and friendly traits; some describe encounters with the animal as unforgettable.

But the down side is that easily approached, whale sharks

have been the target of fisheries in South East Asia for many years and are considered a vulnerable species.

Whale sharks have fascinated me since my first interaction with them in the Seychelles in 2005. What better opportunity than a PhD project to approach them and gain new insights into their lives?

With a fabulous team of experts supporting my project, I have embarked on investigating

what and where whale sharks eat – their feeding ecology.

It is rare to see a whale shark feeding, often in coastal surface waters, where it opens its colossal mouth to filter zooplankton including copepods (tiny crustaceans), fish eggs and krill from huge amounts of water.

But is zooplankton enough to maintain such a huge animal? Are krill an important component of whale shark diet? Are they eating fish or other organisms in deep waters? So many questions to be answered!

Luckily for me, some biochemical techniques can determine diet. By looking at prey and consumer composition we are able to differentiate copepods from krill and fish.

In May I went to Ningaloo Reef during the whale shark season to get samples.

In comparison to the Great Barrier Reef, Ningaloo is close to the shore, making it easy to swim with manta rays, turtles, reef fish, dolphins and the star of the show – the whale sharks. Bull and tiger sharks are only for the bravest.

Our team included people from the University of WA, the Australian Institute for Marine Science and UTAS.

The goal was to use different plankton nets and ingenious traps to collect anything that could be eaten by whale sharks. We also collected whale shark biopsies.

For the biopsies, a small plane helped us to locate the sharks. A bunch of snorkellers with assigned roles jumped into the water, taking photos of whale sharks' characteristic 'spot-line' patterns for identification and tagging them to check their movements.

Then with a modified hand spear we took biopsies.

Over 10 days we swam with 102 sharks, taking 53 biopsies – the largest biological data set in the world.

Our next task is to analyse the samples and the data to see what we can learn.

Experimental marine science costs are high and, thankfully, a few organisations are committed to the conservation of our oceans: the Save Our Seas Foundation, The Winifred Violet Scott Charitable Trust and the Holsworth Wildlife Research Endowment have supported my project with their grants. Their contributions are essential for students like me, who are trying to make a difference.

With their support, I will continue to further our understanding of whale sharks, providing conservation authorities with the information to safeguard their future.

Graduation ceremonies warm hearts and inspire minds

August graduation ceremonies celebrated students' achievements in Hobart and Launceston.

Overall 1592 students graduated, with 841 attending ceremonies.

UTAS Vice-Chancellor Professor Peter Rathjen congratulated the graduates.

"Graduations occupy a particularly special place in the academic calendar," he said.

"When the friends and family of our students join us on these occasions, graduations become more than ceremonies – they become an inspiring community recognition of the academic achievements of our students.

"I know University of Tasmania staff and students and the wider community join me in congratulating our graduands and wishing them every success in their future endeavours."



Graduating in Launceston: Chancellor Michael Field presided over his first graduation ceremonies as chancellor of the University of Tasmania.



Graduating in Launceston: Happy graduands from the School of Nursing and Midwifery (turquoise hood) and the Faculties of Business (orange) and Health Science (lilac) chat before the Albert Hall ceremony.



Graduating in Hobart: Petra Schnierer studied online for her Masters of Environmental Planning and received her testamur watched by her three-year-old son, Arlo.



Graduating in Hobart: Emeritus Professor Allan Canty, head of the UTAS School of Chemistry, saw his son David receive his PhD in medicine.

Sea voyage to reduce ocean plastic



Dr Jennifer Lavers

On the high seas: Dr Jennifer Lavers and her research team will voyage on this 1940s, restored *Yukon* tourist vessel to collect data on the plastic killing Australian marine wildlife.

BY **SAMANTHA MOUNTFORD**

Jennifer Lavers has set sail on a four-month voyage to collect data on the millions of multi-coloured plastic remnants killing Australian marine wildlife.

Dr Lavers, an honorary fellow at IMAS, is carrying out the first Australian analysis of micro-plastics on the surface of the East Australian current, sailing over four months from Hobart to Sydney and then

back south aboard the 1940s, restored *Yukon* tourist vessel.

After studying plastic pollution in seabirds, she seeks to gain vital data on plastics in the ocean. Accompanying her on the voyage are Paul Sharp and Silke Stuckenbrock, co-founders of the Two Hands Project, dedicated to generating public awareness about consuming and disposing of plastics thoughtfully.

“East Coast Odyssey will help us see what is really happening on our

“East Coast Odyssey will help us see what is really happening on our patch – it’s crucial we find out how much pollution is out there so we can find solutions that will make the biggest impact.”

patch – it’s crucial we find out how much pollution is out there so we can find solutions that will make the biggest impact,” Dr Lavers said.

“We now have some evidence to make some strong linkages between the plastic ingested by a seabird and the containments that are also

found in that bird.

“Plastic seems to be a means for introducing heavy metals and PCBs into birds and other marine wildlife, including fish”.

Members of the public are paying passengers; while the team takes control of the ship and research, passengers will take the luxury of a cruising holiday. The proceeds go towards supporting research and the conservation of marine wildlife.

Captain David Nash, one of the project founders, said: “East Coast Odyssey is a historic opportunity to take a low-impact holiday, feel the amazing sensation of a wooden ship under sail at sea and contribute to vital research.”

East Coast Odyssey involves Yukon-Tours, Wildiaries, Two Hands Project, Dr Jennifer Lavers, Ian Hutton Tours, Marine Action Conservation Society and yachtsman David Pryce.

Follow the voyage via <http://eastcoastodyssey.wildiaries.com>

Play takes a new direction for ABC announcer

BY **LANA BEST**

Hobart playwright and University of Tasmania Centre for Performing Arts alumnus Paul McIntyre will surprise his followers with a dramatic change of genre in *The Monster’s Apprentice*, to be performed by CentrStage at the Annexe Theatre, Inveresk, 11 – 14 September.

Directed by a more recent UTAS graduate, Troy Ridgway, the show is a unique blend of theatre and storytelling, peppered with haunting notes from Prokofiev’s *Peter and the Wolf*, and nothing like Paul’s comedy pieces in the past.

Instead, the well-known ABC Radio presenter has come up with something darker and more dramatic by resurrecting an idea he had more than a decade ago.

“When I was studying at UTAS, I read a story about young Vasily Stalin and how a teacher of his found a suicide

note in his locker,” Paul explained.

“The teacher contacted Vasily’s father, Josef Stalin, who then took three years to reply, in the end suggesting that his son was just a naughty boy who should be given a clip around the ears.

“I remember how interested I was at the time in exploring the psyche of Vasily, and when I started doing some research I discovered that this person, largely forgotten by history, had a very traumatic childhood.

“I always had an idea for a play in my mind, and after a couple of drafts that I wasn’t happy with I put it aside – until 2010 when I decided to finish it once and for all and, despite the lack of references to Vasily in literature and the difficulty in translating what was available from Russian to English, it’s all come together quite quickly since then.”

A team of some of the best creative minds from across

Tasmania has jumped on board to help transport the Annexe Theatre back to 1938 Russia.

Katie Hill and Laura Bishop are designing the lights and soundscapes, Chris Jackson and Leigh Oswin have packed away their directors’ chairs and will be stepping on the stage, with Tia Landeg lending her voice to the production.

“This is the second play I have had performed by CentrStage and it really is the most magnificent company in terms of supporting Tasmanian writers,” Paul said.

“My last play, *Who Knows*, attracted sell-out audiences, was picked up on the big island, and is making its debut internationally next year – all because of the support they gave me.”

After the Thursday, 12 September performance of *The Monster’s Apprentice*, CentrStage is inviting audience members to a question-and-answer session with the cast and crew of the show.

Helping Tassie kelp forests survive

BY SAM EAST

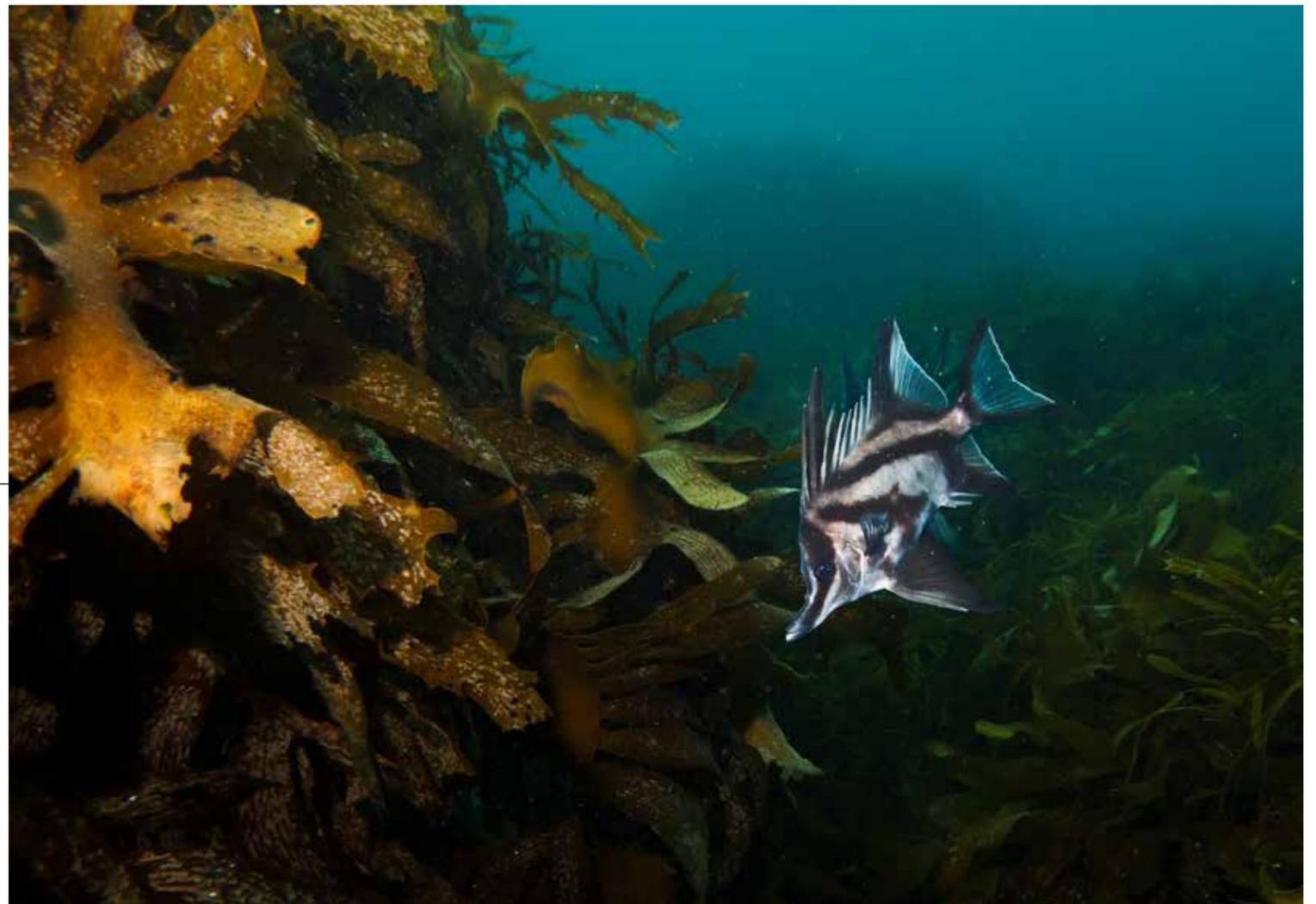
Two UTAS institutes are on the frontline of kelp research in Australia, thanks to a grant from the Australian Research Council.

The project will determine whether healthy kelp forests engineer their environment to make conditions more suitable for their continued survival, thus increasing their stability and resilience in response to threats caused by people.

Lead investigator Professor Craig Johnson from the Institute for Marine and Antarctic Studies, and Dr Jeff Wright from the Australian Maritime College's National Centre for Marine Conservation and Resource Sustainability, will team up with collaborators from the University of Technology in Sydney and the University of Georgia in the US.

"We are looking at the internal dynamics of a kelp forest and whether the structure of the kelp forest itself drives the way in which it reproduces, grows and expands," Prof. Johnson explained.

He compares kelp forests with terrestrial forest to put the importance of kelp in context: "Imagine a young eucalypt alone in a paddock. It's probably more vulnerable to



Kelp forest research: Determining whether healthy kelp forests engineer their environment to make conditions more suitable for their continued survival.

"Healthy kelp forests provide habitat for hundreds of other species, from fish right through to microscopic invertebrates of all kinds."

stressful environmental factors than it would be if it was surrounded by other plants in an established forest.

"Given the various pressures on kelps, a key question is whether there is a minimum density below which kelps struggle to flourish."

While cataclysmic events like storms can have an impact on both aquatic and terrestrial forests, the

team will focus on the resilience of a healthy kelp population.

Dr Wright said it was in Australia's best interests to maintain healthy and vibrant kelp forests.

"Like terrestrial forests, healthy kelp forests provide habitat for hundreds of other species, from fish right through to microscopic invertebrates of all kinds.

"In Tasmania, kelp forests are important in the maintenance of rock lobster and abalone fisheries. While abalone eats kelp, predators like rock lobster rely on kelp for habitat.

"We can better manage our kelp forests if we know how the baby plants survive, and how their rates of survivorship feedback to determine the resilience of those populations."

The researchers previously received an ARC grant for a project on kelp's response to climate change stressors.



Dr Jeff Wright

Underwater vehicle lands at AMC

BY NICOLE MAYNE

The Australian Maritime College will play an integral role in pioneering water physics research, thanks to the arrival of the autonomous underwater vehicle *UBC-Gavia*.

Under an agreement with the University of British Columbia, it will be based at AMC for five years and used to conduct surveys on seafloor mapping, mixing in the water column and under-ice flow dynamics in lakes and oceans.

The torpedo-shaped device is made of anodised aluminium, pressure rated to 500m and features a sidescan sonar and optical camera capturing images at four frames per second. It can be used to measure water column velocities, temperature, salinity, chlorophyll, turbidity and dissolved organic matter.

Dr Alex Forrest, researcher and lead on this

collaboration, said the *UBC-Gavia* was capable of collecting data from locations that would otherwise be inaccessible, such as under ice, in caves and far away from surface vessels.

Unlike remotely operated vehicles, AUVs can be pre-programmed to provide a three-dimensional picture of the physical processes taking place.

"My specialty is examining environmental fluid mechanics; I'm interested in how water mixes near the ice surface, forms eddies and generates turbulence," Dr Forrest said.

UBC-Gavia last saw action at Lake Kilpisjärvi, Finland, in May to investigate winter limnology (the study of lakes during winter) and the impacts of climate change in temperate and polar lakes.

It had been thought ice cover stops all water motion in lakes but the researchers discovered a distinct pattern of upwelling in the middle.

"This finding is exciting as it hasn't been



Underwater vehicle to explore uncharted territory in AMC research: Jeff Williams and Dr Alex Forrest lift the *UBC-Gavia* out of the iced waters of Lake Kilpisjärvi in Northern Finland.

shown previously. Mixing is happening basin-wide in these lakes, driven by Earth's rotation, which we've always assumed was negligible either under winter conditions or in lakes in general," Dr Forrest said.

The team plans to visit the same lake next year to collect data on what drives the onset of these processes and combine it with their

modelling efforts.

Meanwhile, *UBC-Gavia* may be used in cross-disciplinary projects off the east coast of Tasmania investigating the influence of shelf-break dynamics on harmful algal blooms and the seafloor mapping of urchin barrens. Negotiations are also under way for a research trip to Antarctica during 2014 – 15.

Rag trade project the right fit for engineering students

BY AARON SMITH AND PETER COCHRANE

Third year UTAS engineering students **HAMISH HINGSTON** and **MATTHEW CHRISTIAN** have developed a design for new machinery to improve working conditions at Hobart's St Vincent de Paul workshop for people with intellectual disabilities.

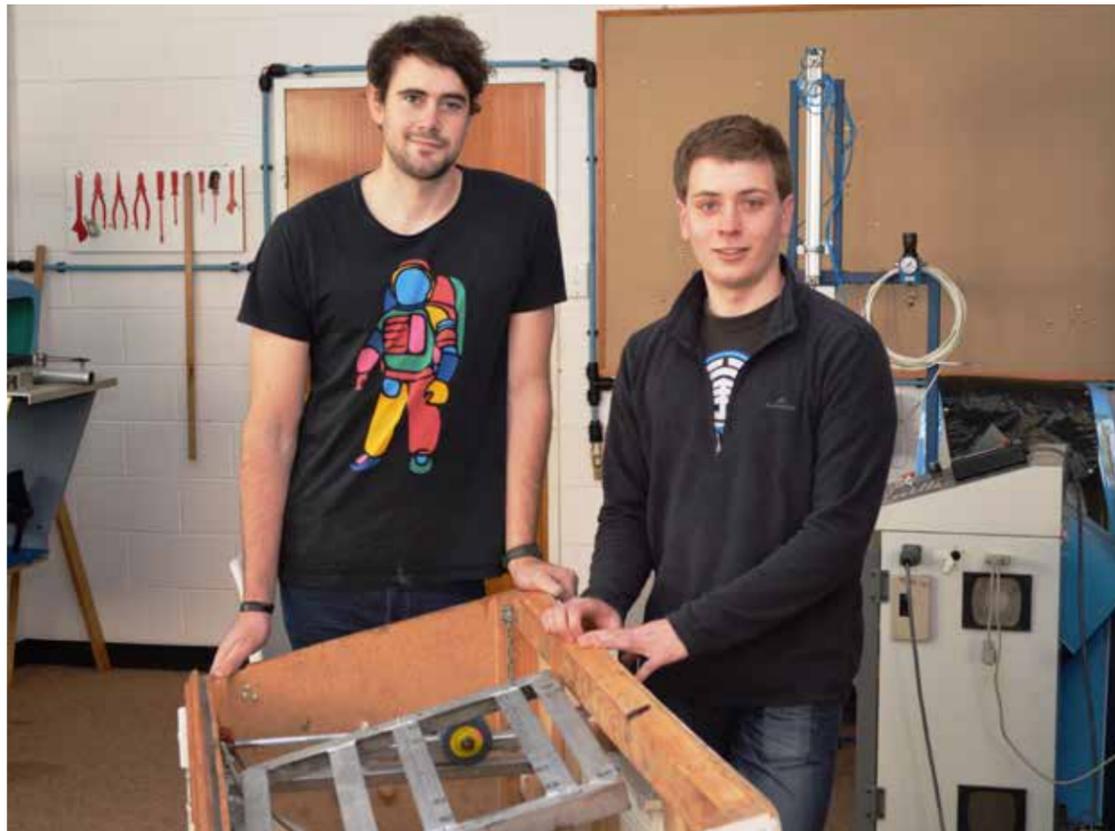
The best three of 13 designs by 24 engineering students was presented to St Vincent Industries at its board meeting earlier this month; Hamish and Matthew's was judged tops.

Earlier this year Dr Tony Sprent, adjunct senior lecturer in the School of Mathematics and Physics and also chairman of TADTAS, a voluntary organisation involved with design and fabrication of technical aids for people with disabilities, was approached by St Vincent Industries to help update and redesign machinery used to cut up rags.

The workshop has 24 stations where workers cut the cloth into suitably sized pieces which are then bagged for sale. The equipment at these stations, while still working well, is ageing and in need of upgrading and the enclosures are poorly designed ergonomically.

"It was an ideal project for engineering students - well-defined with interesting aspects such as occupational health and safety and the need to ensure that the workstations were ergonomically comfortable," Dr Sprent said.

According to the training coordinator at St Vincent Industries, Donna Coetzee, the organisation has had trouble getting people to maintain these unique machines. They had been looking for someone to create a new design for seven years until Dr Sprent



UTAS engineering students design St Vincent de Paul workshop machinery: Top designers Hamish Hingston and Mathew Christian with a disembowelled work station.

was recommended.

"New machines will allow us to offer more places to people with different disabilities, where we can adjust the height and other aspects to suit more people in the workplace. To have adjustable machines tailored to the individual

will create many more opportunities for people," she said.

Senior engineering lecturer Dr Tim Gale needed a second first-semester project for his third-year mechanical and mechatronic design students; the St Vincent de Paul project was an exciting, real-life

situation for his students to work on a solution.

"The proximity of the workshop to the Sandy Bay campus makes this an ideal project for students," he said.

"Conducting projects with industry, such as Pasmenco for

"(New machines) will allow us to offer more places to people with different disabilities, where we can adjust the height and other aspects so it will suit more people in the workplace."

example, often involves lengthy OH&S training inductions. This has not been necessary for this project and the students come and go fairly freely.

"They are enjoying it as they know their work will serve a community enterprise long after they have graduated," he said.

Dan Teague, the CEO of St Vincent Industries said his board was excited about the project and looking forward to seeing the finished prototype.

What's on

LECTURES

18 SEPTEMBER

Visiting Guest Lecturer Professor Barry Brook

A future techno-garden?
Resolving the 21st century's
development-conservation dilemma.

Time: 11.30am

Venue: Life Sciences Lecture Theatre
1, UTAS Sandy Bay campus

RSVP/information:

Vanessa.Mann@utas.edu.au

20 SEPTEMBER – 1 NOVEMBER

Charles Blackman: A family affair

Charles Blackman is one of Australia's most important figurative artists, renowned for his evocative images that move between the dark and light of the imagination. 'Charles Blackman: A family affair' will inform and educate on the untold story of this great Australian artist's life as the partner of Genevieve de Couvreur, and father of Bertie and Felix Blackman.

Time: 9am – 5pm.

Venue: Academy Gallery A and B,
Inveresk campus, Invermay Road,
Launceston.

CONCERT

21 SEPTEMBER

Last Night of the Proms concert

The University Wind Orchestra is pleased to present its own version of this most British of concerts. Tickets: Adults \$25, concession \$15, family \$65. (03) 6323 3666.

Time: 7.30pm

Venue: Albert Hall, corner Cimitiere
and Tamar Streets, Launceston

Information: www.utcmp.org.au or
email: concerts@utcmp.org.au

PUBLIC EVENT

30 SEPTEMBER

2013 Dorothy Pearce Address: delivered by David Hunt

The Dorothy Pearce Address is a public event held annually in honour of TasCOSS Honorary Life Member Dorothy Pearce, who died in March 2013. David Hunt is an internationally renowned community development strategist and organiser, and gifted storyteller. He is the founder of David Hunt and Associates, Washington, DC, an institution dedicated to citizen empowerment and community

development.

Cost: \$10 TasCOSS members and
concession, \$20 non-members.

Time: 5 – 7pm

Venue: Stanley Burbury Theatre,
University Centre, Sandy Bay campus

RSVP: Essential by Tuesday 24
September, admin@tasco.org.au or
(03) 6231 0755

SEMINAR

11 OCTOBER

City Talks: Urban Landscape Seminar Series

What if we made the Hobart Rivulet a

feature of our city centre?

Time: 11am – 1pm

Venue: MS2 Lecture Theatre,
Medical Science Precinct,
Liverpool Street, Hobart

RSVP/information:
tasmania@aila.org.au