

Cave tour a highlight at Summer School

A group of students took a leap back in time late last year to explore the science and engineering marvels on show at Ruakuri Cave.

The visit to the cave, which lies within the Waitomo Caves network, was part of the Hill Laboratories Waikato Science Summer School.

From 30 November to 5 December, 40 Year 12 students from around the central North Island spent the week at the University of Waikato, giving the students the chance to get a taste for what it can be like to study science and engineering at a tertiary level.

The group was hand-picked from 89 applicants by Rotary Clubs within Rotary District 9930.

The week began with a two-day field trip, during which students explored the areas of Kawhia and Waitomo. The group searched for fossils at Puti Point and Mangapohue Natural Bridge, collected zoo plankton samples at the Kawhia jetty and enjoyed a guided walk through Ruakuri Cave.

Whakatane student Sarah Futter from Trident High School said it was exciting to visit Ruakuri Cave to learn about how it was formed over millions of years, and the ways in which engineering techniques such as bridges and tunnels have been used to open the cave as a tourist attraction.

The remainder of the week was spent in Waikato University's science and engineering labs. Students were tasked with analysing water samples collected during the field trip from Kawhia and Ruakuri Cave, looking at plankton under the microscope, and building prototypes such as torches and bridges.

"Together the field trip and labs aimed to give the group a better understanding of the environmental and social changes the local coastal and cave environments have undergone over time," says Dr Ian Duggan, Senior Science Lecturer at Waikato University.

Waikato's Science Summer School is an annual event run by Rotary District 9930 and Waikato University's Faculty of Science & Engineering, with sponsorship from Hill Laboratories.

"We are proud to support the future of science and technology in New Zealand. These talented young students are the future generations of scientists and it is our privilege to support them through the Science Summer School. We look forward to the contributions they will make in their chosen fields in future years," says Martin Brock, Marketing Manager at Hill Laboratories.

View more photos from the 2014 Hill Laboratories Waikato Science Summer School over the page.

Applications for the 2015 Science Summer School will open online in June. Visit www.sci.waikato.ac.nz/sciencesummerschool



Students attending the Hill Laboratories Waikato Science Summer School were fascinated by a walk through Ruakuri Cave as part of the week-long event at the University of Waikato.



Trident High School student Sarah Futter spent time at Puti Point searching for belemnite fossils, during the field trip at the Hill Laboratories Waikato Science Summer School.



Learning on the go at Science Summer School



Devon Morgan (Reporoa College) and Ashley Prentice (Otumoetai College) building bridges in the Mechanical Engineering workshop.



Waikato University Earth Scientist Chris Morcom explains rips to students at Ocean Beach, Kawhia.



Clementine Davis (Mount Maunganui College) looking at plankton in the biology lab.



Sarah Futter (Trident High School) with the torch she has programmed in the electronics lab.



Jacob Kalma (Hamilton Christian School) and Olive Goodwin (Raglan Area School) at Kawhia.

Grad's new field guide proves popular



A field guide for New Zealand native plants has been launched by University of Waikato graduate and ecologist Catherine Kirby, with support from the Environmental Research Institute.

The Field Guide to New Zealand's Epiphytes, Vines and Mistletoes details 103 species of epiphytes (plants that perch on other plants), vines (climbing plants) and mistletoes (parasitic plants) over 261 pages. The introduction and nine chapters are accompanied by 320 photos, 123 taken by Catherine and the remainder contributed by a group of 43 photographers.

Developing the field guide was an interesting journey for Catherine who did everything herself, from compiling species descriptions through to the page layout. "I'm grateful for the opportunity to craft this book from scratch. There have been so many people who have helped me along the

way and it has been a great learning curve," says Catherine

Since October 200 books have been sold, including 60 on the night of the launch, which were proudly signed by the author. The field guide was printed by Print House Ltd in Frankton who are also managing orders through the Best Little Bookstore.

Director of the Environmental Research Institute, Professor Bruce Clarkson says this book is a good example of how to effectively communicate research results to the public.

"The final product is a credit to her hard work and at this rate the book seems likely to sell out within six months, so there may be a need for a second edition," says Prof Clarkson.

Snake Robot takes media by storm

A Snake Robot designed by a University of Waikato Master of Engineering (ME) student caused a stir in the media recently, with interviews and articles on television, radio, online, in newspapers and in magazines.

Coverage included interviews with One News and Newstalk ZB, and an article in the New Zealand Herald.

Pinwei Jin designed and built the remote control robotic snake, which he hopes will be used in the future for rescue operations.

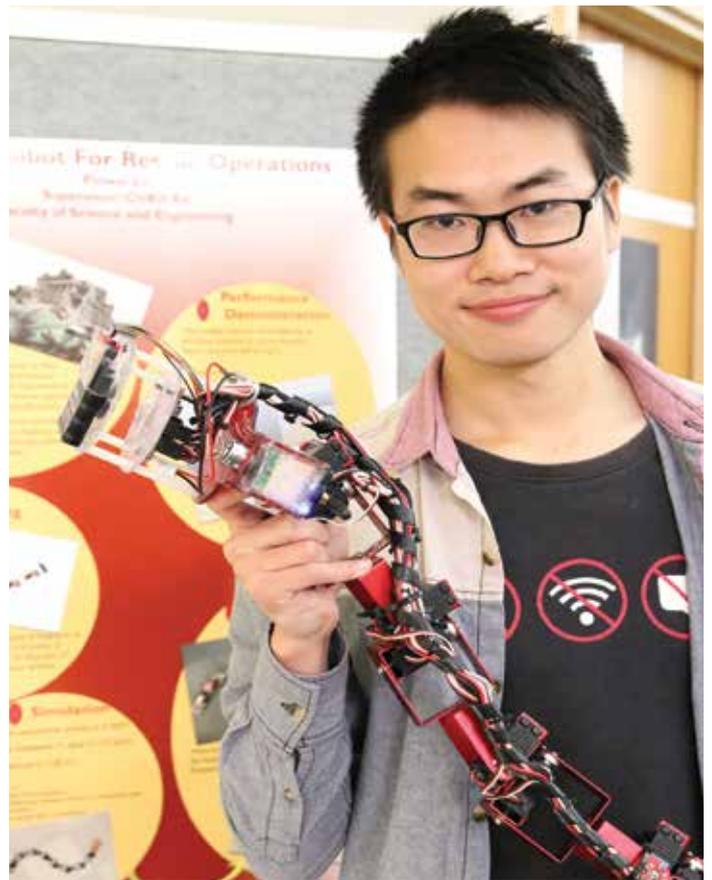
"Earthquakes and other natural disasters happen frequently in New Zealand and when it comes to the big ones, many lives could be saved if search and rescue operations were conducted more effectively and efficiently," says Pinwei.

Differing from the existing mobile rescue robot systems currently in the market place, he says his Snake Robot provides the flexibility of movement needed in cluttered and irregular environments created by disasters.

"The Snake Robot features a wireless camera on its head and is controlled by a wireless joystick to move forward, backwards, left and right. It has 16 degrees of freedom from the eight joints, nine segments, 16 motors and nine passive wheels. Essentially it can move along the ground like a snake."

Pinwei attended high school in a small town in central China. After completing a Bachelor of Engineering at Wuhan University of Technology in China, he heard about the University of Waikato from friends and based on the University's reputation, decided to enrol.

Pinwei is in the final stages of an ME in Mechanical Engineering supervised by engineering lecturer Dr Chi Kit Au. His prototype was on show recently at Waikato's Carter Holt Harvey Pulp & Paper Engineering Design Show.



University of Waikato Master of Engineering student Pinwei Jin with his Snake Robot prototype.

Scholarships for Maori students

In 2014, more than \$174,000 in scholarships was awarded to Māori Science and Engineering students from the University of Waikato.

The awards, which ranged from \$250 to \$20,000, gave 17 students a financial boost towards their undergraduate, masters or PhD studies.

The scholarships came from a variety of supporters, including Waikato University, private trusts, iwi and leading New Zealand companies.

"The fact that our future scientists and engineers are being recognised for their hard work is awesome. This just goes to show that determination and a clear direction can be academically and financially rewarding. As a result I know that the families are incredibly proud of the achievements of these students and look forward to even greater things in the future," says Kevin Eastwood, Science & Engineering Māori Student Achievement Coordinator at the University of Waikato.

Master of Science (MSc) student Te Pua

Dempsey (Ngati Maniapoto/ Ngapuhi/ Waikato) received two scholarships totalling \$30,000, including a Rona and a Rena Research Scholarship. Te Pua is a former student of Melville High School. Caleb Sweeney (Otumoetai College, Ngati Awa/ Ngai Te Rangi/ Ngati Ranginui) was also the recipient of a \$20,000 Rena Research Scholarship.

Multiple scholarships also went to MSc student Kate Mauriohooho (Hamilton Girls' High School, Ngati Raukawa/ Waikato/ Ngati Maniapoto/ Ngati Tuwharetoa) who received two scholarships, totalling \$17,000 and Blaise Forrester-Gauntlet (Kelston Girls' College, Ngati Ranginui/ Ngai Te Rangi) who was awarded \$17,700 from four scholarships.

Northland student from Tauraroa Area School Jordan Shortland-Witehira (Tainui/ Ngapuhi/ Ngati Hine) received three scholarships totalling \$10,750 for his first year of a Bachelor of Engineering (Honours).

Another multi-award winner, who has been a big winner in the past, was Masters student Kiriana Isgrove (Hauraki Plains College, Ngāti

Tamaterā). Kiriana received nine scholarships totalling \$15,100.

Other winners include: Jesse Thomas (Waiopahu College, Ngati Raukawa), Grace Davies (Waihi College, Ngati Kahungunu), Alisha Willis (Melville High School, Tuho/ Ngati Tuwharetoa/ Kahungunu), Tayla Carson (Matamata College, Ngapuhi/ Ngatokimatawhaorua), Hiki Ngata (Tauranga Boys' College, Te Arawa/ Ngati Tahu/ Ngati Porou/ Ngai Te Rangi), Ashleigh Weatherall (Mahurangi College, Ngapuhi), Mahonri Owen (The Church College of NZ, Ngapuhi), Hamish Nicoll (Spotswood College, Te Ati Haunui-A-Paparangi), Courtney-Ruth Gill (Waikato Diocesan School for Girls, Te Whanau-a-Apanui), Gina Reed (Te Aho o Te Kura Pounamu, Te Ati Haunui-A-Paparanga/ Ngapuhi), and Billy Bodger (Taipa Area School, Te Atiawa).

View 2015 scholarship listings online:
www.waikato.ac.nz/research/scholarships/

Waikato IT girls leading the way

A group of students from Waikato Diocesan School for Girls have taken their interest in computer science to the next level, by creating an IT Girls Club as part of an ongoing partnership with the University of Waikato's Faculty of Computing & Mathematical Sciences.

The club is an extra-curricular group that aims to create opportunities for girls interested in computer science careers. The group visited the University of Waikato following a series of afterschool workshops taught by University of Waikato Computer Science tutor Nilesh Kanji.

The weekly school visits were a chance for Mr Kanji to take the students through the steps and mechanics involved in creating video games in the Game Maker environment.

"So far we've worked through Game Maker workshops on coding for games similar to Space Invaders and Pacman and we're almost finished one for a Platform game," says Waikato Diocesan student Devon Bree.

Mr Kanji has been impressed by the interest many of the students have shown and their dedication to taking what they have learnt one step further.

"Some of the girls have extended their games in their own time from what was described in the lessons. I was learning off them, and that is the real buzz from my point of view," says Mr Kanji.

The idea for the club was sparked when former Waikato Diocesan School for Girls student Jojo Stewart and a Google Student Ambassador made a visit to a school assembly to speak about their study experiences.

Jojo has recently finished the first year of a Bachelor of Computing and Mathematical Sciences at Waikato University. She completed a first-year programming paper at the university while in Year 13 and was also awarded a Computer Science Undergraduate Scholarship which gave her \$5000 and



Waikato Diocesan School students Chelsea Lin (left) and Devon Bree (right) are part of the school's IT Girls Club, which made a visit to the University of Waikato to continue their lessons with Computer Science tutor Nilesh Kanji and university student Jojo Stewart (pictured centre).

the opportunity to bypass selected first-year papers and jump straight into second year. Due to her talent in communicating computer science to others she was selected as a demonstrator and has worked with Mr Kanji on the IT Girls Club lessons.

Interested in starting your own IT Club?

Email Nilesh Kanji: nkanji@cs.waikato.ac.nz

Hot competition at Formula SAE Australasia



The University of Waikato Formula SAE team found the heat a hindrance at the Formula SAE Australasia competition in Melbourne last December.

The University of Waikato Formula SAE (Society of Automotive Engineers) team was placed 12th of 26 teams at the Formula SAE Australasia competition in Melbourne last December.

The placing took into account static and dynamic events, such as design, business and cost presentations, quality tests and racing events.

Waikato University Bachelor of Engineering (Honours) fourth-year

students Sam Brien, Todd Carswell, Josh McIntyre, Nick Milne, Ben Sharp and Phillip Ross had high hopes of a top 10 finish going into the competition, yet experienced setbacks during the scrutineering test and endurance racing event.

During the first two days the team encountered difficulties in the scrutineering round, with the judges requiring the team to strengthen the chassis. "On the third day we passed and scrambled to complete noise, brake and tilt tests - all required to race in the competition," says team leader Sam Brien.

The team passed the noise, brake and tilt tests with no changes required and were granted a run in the acceleration and skidpad (figure of eight) events, placing 8th and 15th respectively. This was followed by the autocross event, a one flying lap event, in which they placed 10th.

The final day was the endurance event which consisted of 22km of racing shared between two drivers. Each team had two chances to place their best time. "In the first heat we played it safe, driving slowly and making sure that we finished. During the second heat in the afternoon the drivers gave it everything, but the car overheated in the hot 31 degree Melbourne weather and we were unable to complete the race."

Based on the first heat the team were placed 14th for the endurance event.

Each year the Waikato team builds an open wheeled single seat-style race car to compete in the Formula SAE competition.

View more photos: www.facebook.com/wesmofsa



Masters student Clare Beet has received a Research Institute Scholarship.

Thanks to a Research Institute Scholarship, Clare Beet is off on her first trip to Antarctica to study the effects of climate change on invertebrates.

Clare is one of five Master of Science students from the University of Waikato awarded a 2014 Research Institute Scholarship (RIS) of \$12,000. She is undertaking her research with the university's Environmental Research Institute.

Research scholarship paves the way to Antarctica

Clare and three others from Waikato traveled to Antarctica in January to collect soil samples, in particular samples containing springtails - a 1.5mm long, six-legged insect-like creature - and mites. Springtails are the largest land-based animal that live year-round in Antarctica and are sensitive to climate-driven environmental changes.

To assess the changes in the environment, Clare will look at the subtle differences in the genetic structure of each species, comparing them with other previously examined populations in Victoria Land.

As a result of global climate changes, Antarctic terrestrial ecosystems have been experiencing some of the most rapid temperature changes on Earth, and these changes are likely to result in considerable disruption to these ecosystems.

Clare believes it is critical to develop sensitive biological tools to provide an early warning of changes that will be seen in Antarctic ecosystems.

"We will genetically examine invertebrates collected from throughout the Mackay Glacier area to assess the distributions and genetic identities within the region. Because of the high levels of genetic variability of animals within this area, we will be able to readily link population genetic response to changes in air temperatures.

"There are a lot of sites that we don't have any information on, so we'll collect samples and data to get an idea of when populations have been isolated in those places. I'm pretty excited and feel very privileged to go to Antarctica as not many people get the chance."

Clare's interest in the environment began when she was young, growing up in Raglan where she was involved in early Raglan Harbour Care plantings.

Find out more about the invertebrates project: www.ictar.aq/invertebrates.cfm

Waikato grad crunching numbers for ANZ

University of Waikato Computer Science graduate Claudia Wu spends her days making sense of numbers to ensure ANZ is lending responsibly.

With a background in computer science, statistics and data mining, Claudia's position as a senior portfolio analyst within the Retail Risk Management division of ANZ is a great fit.

"Our team manages ANZ's policies and strategies for retail and business banking. In a typical day, I look after an analytical 'data mart' and make sure the data that comes in is accurate for analytical purposes," says Claudia.

Claudia also builds models using historical data from the 'data warehouse' or the 'data mart' to work out what has happened before, and forecast what could happen in the future. She then uses the data to segment and predict customer behaviours, calculate ANZ's profit and loss, and overall, make sure the bank is lending responsibly.

"At ANZ I use the data mining skills I learnt at Waikato University every day. The first step is to understand the data and the data structure, to know what useful information I have and how to pull it from the database. I then manipulate the

data to the shape I need and apply statistical methods and business knowledge to discover the information I want. From there I turn that information into knowledge, and use the knowledge to help make business decisions."

Claudia did her research before deciding on a degree. "I went online to Seek and found the number of jobs was increasing in the field of analysis, which requires people to know about databases, statistics and business knowledge. These job ads were often on the web longer than others, and I realised there could be a shortage of people who can do both database programming and analysis."

With this in mind, Claudia structured her Bachelor of Science degree accordingly, by deciding to major in Computer Science, with supporting papers in Statistics and Mathematics.

Claudia completed the majority of her high school studies in China, before moving to New Zealand and completing Year 13 at Avondale College in Auckland.

Read more graduate profiles from FCMS: www.cms.waikato.ac.nz/about/our-students



Computer Science graduate Claudia Wu works for ANZ as a senior portfolio analyst.

Twenty-five degrees of design



An innovative promotional website has been created to showcase the design projects of last year's 25 final year Bachelor of Computer Graphic Design (BCGD) students at the University of Waikato.

The design projects were on show at 'twentyfive', the annual Computer Graphic Design Degree Show, held in October.

Students work individually to plan, develop and carry out a small-scale design project, which is showcased at the end of year show.

Last year design projects covered everything from decorative children's party supplies, to branding for a health and fitness company, and a set of teaching tools for learning Cantonese slang.



The website was designed by BCGD students Louis Graham, Olivia Paris, Rose Rogers and Olivia Buhler.

Visit the website:

www.degreeshow.waikato.ac.nz



Golden Jubilee Scholarships

Faculty of Science & Engineering and Faculty of Computing & Mathematical Sciences students have been awarded four of the 10 University of Waikato Golden Jubilee Scholarships on offer, giving them \$10,000 a year each for up to four years of study.

The scholarships were offered as part of the university's 50th celebrations in 2014 and have been awarded to students who demonstrate a high level of academic excellence, leadership potential and community citizenship.



Tara Fernandez-Ritchie

Tara Fernandez-Ritchie, a former Sacred Heart Girls' College student, will study mechanical engineering at Waikato University this year. Tara was her school's 2014 dux and alongside the sciences is also a gifted organ and jazz piano player.

"I like the challenges science and maths present, and the fact that you often have to work in teams to solve problems or create products or solutions. That's what drew me to engineering," Tara says.

"To me, engineering is the basis of the infrastructure of a country, and traditionally it's been a male-dominated field. I like the idea of more women being a part of such an important discipline. It also requires a good blend of theory and practical, and practical is something I know I need to work on."

Kelsey Ferris from Whangarei Girls' High School was also the dux of her school. She will begin a Bachelor of Science (Technology) majoring in biochemistry and biotechnology.

"Entering into the study of science allows not only the expansion of this passion, but the opportunity to use it in everyday life, possibly helping future generations combat illnesses," says Kelsey.

Not only is Kelsey a budding scientist, she is also an avid sportswoman having achieved multiple New Zealand and Pacific records in archery.

"I'm so excited to start the newest chapter of my life at the University of Waikato. The practical hands-on work I will be doing as part of my studies is probably what I am looking forward to the most. I can't wait to get my lab coat and safety glasses on so I can dive in."



Kelsey Ferris



Nicholas Humphries

Te Anau local Nicholas Humphries lives and breathes software development and has received the Golden Jubilee Scholarship to study towards a Bachelor of Engineering (Honours) majoring in software engineering.

Becoming a software engineer has been an aspiration of Nick's for most of his time at Fiordland College, where he was the head boy in 2014.

"My interest in this area began in a year 8 computer studies class where I learnt that computers use a computer language to function. From there I started creating websites, teaching myself Java from YouTube tutorials, and eventually getting to the stage now where I can develop professional websites and mobile applications for both Android and iOS."

Former Hillcrest High School student Jordan Schroder is also about to begin a Bachelor of Engineering (Honours) majoring in software engineering. Jordan says the scholarship "validates the effort I put into my studies and extracurricular activities over the past two years. I'd like to think it probably also validates the good job my parents have done in raising me."

He says the scholarship will test his confidence but he looks forward to coming to grips with university life.

"I can't wait for university to start. I always hear that university life is far more flexible and I hope this is true because I would appreciate the time to pursue my out-of-school interests and define myself as a person."



Jordan Schroder

E-van makes debut on campus

A University of Waikato utility van, originally powered by a 1.3 litre petrol engine, has undergone a complete revamp and is now sporting an electric motor and an eye-catching new paint job.

The conversion process began in 2013 with a group of fourth-year Bachelor of Engineering (Honours) students and was completed last year by a new group of fourth-year students including James Watkins, Stephen Gibbons, Oliver Lord and Louis Gillen.

The van recently made its first long-distance trip to Christchurch, where it joined New Zealand's first electric vehicle efficiency rally at the EVelocity event run by the Association for the Promotion of Electric Vehicles (APEV).

"In 2013 the student team worked to get the van functioning, while our team had the challenge of getting the van certified for road use. This involved implementing a large range of safety measures to ensure the vehicle complies with the Low Volume Vehicle (LVV) standards," says James Watkins.



A team of Waikato University engineering students recently showcased their converted electric van at NZ's first electric vehicle efficiency rally. From left James Watkins, Stephen Gibbons, Oliver Lord and Louis Gillen.

The van was designed with the purpose of being used around the University of Waikato campus during the day and charged overnight.

Study engineering at Waikato:
www.sci.waikato.ac.nz/engineering

Engineering student's design a trail blazer



University of Waikato engineering student Luke Sinclair has designed an ultralight wood-fired stove that can boil a litre of water in less than 10 minutes.

The tramping enthusiast came up with the idea early last year when he and class mate Kendall Bristow completed a 100-day, 3000km trek from Cape Reinga to Bluff.

"People have always looked to the wilderness for an escape from the chaos of everyday life, yet we often bring with us shoulder destroying packs full of wasteful gas canisters. While initially convenient, these canisters become less convenient when they

run out and leave you in the middle of a mountain range eating cold beans," says Luke, speaking from experience.

During a year-long research and design project, as part of his final year Bachelor of Engineering (Honours), he completed extensive research and testing. His initial idea has been developed into a highly efficient, lightweight and functional backpack stove, which he says is perfect for campers, trampers, extreme adventurers or any outdoor enthusiast.

"The design of the Trail Blazer integrates rocket stove efficiency with an outer cone that insulates

the chamber while also acting as a sturdy base. A removable feed tube allows easy access to the chamber when starting a fire and the feed tube is angled to allow fuel to feed the fire automatically as it burns."

The former Pukekohe High School student says the design also ensures a clean burning flame and no mark is left on the environment. "Secondary combustion is achieved as air heated against the chamber rises up through the intake holes creating the right conditions to ignite smoke. Ash is contained and the base is elevated meaning no mess and no scorching."

Not only is the Trail Blazer clean, but it's also versatile and compact, featuring a collapsible support designed to hold a soup cup, a frying pan or anything in between. "The support cone, feed tube and pot support are all simply detached and stored within the 180mm tall by 75mm diameter main chamber."

The prototype is made from stainless steel, weighing just 300g. But Luke hopes to improve the design, by sourcing thinner stainless steel and eliminating welds, to reduce the weight further and decrease production costs.

"My ultimate goal is to get this to the point where it could be manufactured and distributed on a profitable scale. On a personal level my goal is to walk the 4000km Pacific Crest Trail from Canada to Mexico, fuelled solely by the Trail Blazer."

Biology research fellowships



Four Claude McCarthy Fellowships have been awarded to University of Waikato students, with two going to students from the Faculty of Science & Engineering.

Biological Sciences PhD students Emily Douglas and Kohji Muraoka (pictured left) were each awarded a fellowship.

Emily Douglas' thesis topic is *Resilience and response of estuaries to nutrient enrichment* for which she received \$4000.

Kohji Muraoka is studying *Lake mixing and phytoplankton diversity – analysis from regional to global scales* for which he was awarded \$3500.

The fellowships will enable Emily and Kohji to travel overseas to present research work at a conferences, and/or conduct research leading towards their respective PhDs.

Science scholars win big

Twelve school-leavers from across the Waikato have been awarded a share of \$200,000 to pay for their first year of a Bachelor of Science (BSc).

The windfall comes from the David Johnstone Charitable Trust Science and Education Scholarships, one of the most significant scholarships awarded in the Waikato in terms of the number of students it assists every year. This year a total of 34 students were awarded scholarships of \$6000 each.

The winning students enrolled at the University of Waikato in a BSc in 2015 are Laura Counsell from Matamata College, Jayden Etheridge-Barnes from Te Kauwhata College, Huon Fraser from St John's College, Scott Harvey from Te Aroha College, Teah Higgs from Te Awamutu College, Joshua Lovelock from Morrinsville College, Filip-David Molnar from Hamilton Boys' High School, Cameron Pearce from Forest View High School, Tekiteora Rolleston-Gabel from Nga Taiatea Wharekura, Emma Voss from Cambridge High School, Maddison Wadham from Sacred Heart Girls' College and Cerise Willis from Melville High School.

Scholarships to lead the way

Two postgraduate electronics students from the University of Waikato have been awarded Dick and Mary Earle Scholarships in Technology for 2015.

Master of Engineering student Sean Charleston (pictured right) has been awarded \$17,000 for his research into 3D shape measurement of moving objects for industrial applications. Each pixel in these cameras returns a distance value to the scene. One of the key limitations in these cameras is that they need to take multiple captures to form one image and if there is any motion in the scene, the final image will be distorted. His research will look into correcting this motion, which could help with up-and-coming technologies such as gesture control and automated vehicles.



Steven McCabe, a PhD student, has been awarded \$5000 for his work in implantable electrode structures and their RF (radio frequency) effects. People with implants such as pacemakers or spinal cord stimulators are not eligible for MRI scans due to the RF field that can induce dangerous levels of heating in the tissue near the implant electrodes. Steven is looking for ways of reducing this heating effect, with the end goal of making an MRI-safe electrode.

What's on

22 MAY 2015

University Open Day

Attend mini-lectures and info sessions on degrees, check out the science and engineering displays and enjoy interactive activities throughout the Waikato University campus.

9-10 JUNE 2015

Waikato Experience Biology (WEB) Days

Year 13 Biology students and teachers are invited to attend seminars and lab work covering topics such as DNA technology, human evolution, biotechnology, and animal behaviour/plant responses to the environment.

Visit www.sci.waikato.ac.nz/webdays

11-12 JUNE 2015

Osborne Physics and Engineering (OsPEen) Days

Talks and practical demonstrations focus on applications of physics, and provide students with examples of how the physics they are learning at school can be used in real life.

Visit www.sci.waikato.ac.nz/ospendays

17 JUNE 2015

NZIC Analytical Chemistry Competition

Teams of Year 13 students are set an analytical task, requiring accurate and careful analysis of an unknown substance.

Visit www.sci.waikato.ac.nz/chemcomp

8 JULY 2015

Science Open Day

This event offers students and their parents the chance to explore the areas of science available to study at Waikato University through hands-on workshops.

Visit www.sci.waikato.ac.nz/scienceopenday

9 JULY 2015

Engineering Open Day

Spend the day on campus with staff and students, experiencing engineering through hands-on workshops.

Visit www.sci.waikato.ac.nz/engopenday

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