



THE UNIVERSITY
OF AUCKLAND

FACULTY OF ENGINEERING

Department of Electrical and Computer Engineering

Building your future

Learning today to create tomorrow



*"The Engineer has been,
and is, a maker of history."*

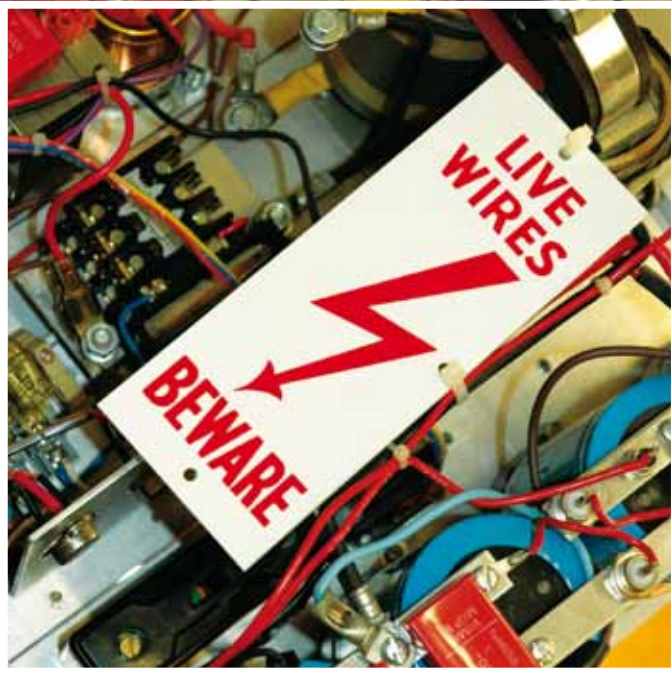
James Kip Finch

Does this sound like you?

- I want a world class qualification
- I like to invent ways to solve tricky problems
- I love being on the cutting edge of technology
- I want an exciting career that will take me places
- People describe me as intelligent and motivated
- I want to make the world a better place
- I am positive, proactive and practical
- Using electronics, software and computers in real world applications interests me
- I can't wait to work with state of the art equipment and researchers
- Making a difference in industry and society is important to me
- I wonder what it would take to turn the TV remote into a stun gun?

The Department of Electrical and Computer Engineering (ECE) might be your future. Read on... www.ece.auckland.ac.nz





Why choose ECE?

Electrical, Computer and Software engineers have been responsible for the creation of electric power, electronics, computers, electronic communication systems, modern flight controllers, automated manufacturing, and medical diagnostic tools.

The Department of Electrical and Computer Engineering (ECE) drives industry partnerships that enable cutting edge learning. We build on our experience and the innovation of our researchers to provide the very best standards in research and learning. We equip students with the skills required to embark on successful professional careers.

Auckland is New Zealand's largest financial and industrial centre so there's no shortage of career prospects. Students benefit from exposure to projects similar to those in industry. Graduates are in demand by industry recruiters, and many have found senior positions with New Zealand's foremost companies.

Our degrees

ECE is recognised internationally for its comprehensive and flexible educational programs in three recognised and respected bachelor degrees:

Computer Systems Engineering focuses on embedded systems, computational intelligence, distributed computing, information engineering, intelligent robotics, industrial decision support systems, home automation, automobiles and instrumentation. These fields are driving rapid change in industry and society, and leading to the creation of new businesses with both industrial and domestic applications.

Electrical and Electronic Engineering focuses on communications and information technology, control, the applications of microprocessors and computers, electric power generation and modern instrumentation and power electronics. These engineers develop new technologies which support the next generation of electricity transmission, industrial automation, electric vehicles and communication infrastructure.

Software Engineering focuses on the development of quality software systems. Software engineers work in many industries including banking, health, architecture, medicine and telecommunications. Jobs for software engineers are available nationally and internationally - from start-up companies to large multinationals and government departments to private consultancies.



Toby Collett

BE (Computer Systems, first class honours) 2003,
PhD 2007

Winner of Young Engineer of the Year in the 2008 - New Zealand Engineering Excellence Awards

Dr Toby Collett co-founded INRO Technologies with a team of engineers from the University of Auckland. INRO is New Zealand's foremost robotics company and winner of the Gen-i 2008 Start Up Company of the Year Awards. INRO retrofits cars and forklifts with robotic control systems, effectively replacing the driver. Toby leads a development team that has successfully designed, commercialised, and sold an advanced retrofit vehicle automation system – a world first – in under 14 months.



Vedrana and Maja Krivokuca

Current 4th year students of Computer Systems Engineering

We have always been interested in how things work and wanted something where we could apply science to practical situations and see the outcome. When we joined ECE we discovered that anything you could imagine you could do in Engineering.

The course is quite challenging and requires a lot of independent thought and research. Last year we were asked to build a Robot. It was a design project so we were not taught how to do it step by step. We had to find that out for ourselves. At first we didn't even know where to start but by taking it one step at a time we did it and got an amazing feeling of achievement. Our classes are small so we get to know everyone well and we all help each other when we strike problems.

We have so many opportunities ahead of us when we graduate. This is a course that will take us places – plus we're loving it!

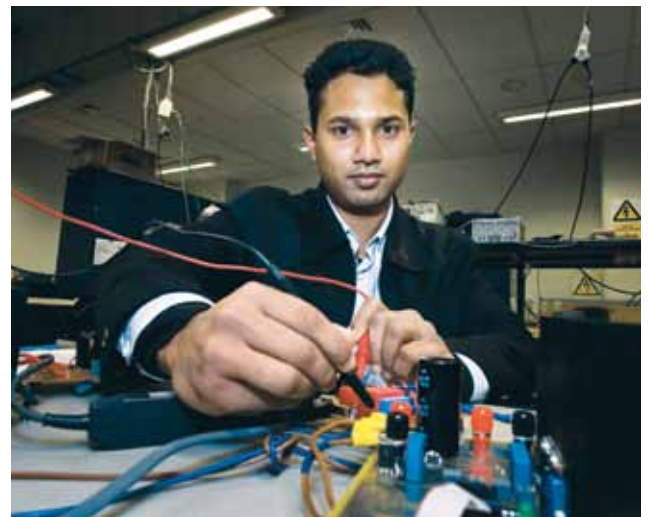


Sarah Young

Graduated BE – Software in 2005

I have enjoyed programming since primary school, but had very little idea about how computers actually worked or how to create complex software systems. When I studied Software Engineering I was amazed to learn about the variety of programming languages that exist. It also challenged my entire way of thinking about how software could be built.

Since graduating, I have predominantly worked as a software developer for large telecommunications and airline companies. I like having the opportunity to learn about other industries, as well as watching the abstract work I do at my desk transform into something that other people can see and use. A project I particularly enjoyed was building a website for people to check flight departures and arrivals on their cellphones.



Duleepa J Thrimawithana

BE (Electrical and Electronic, first class honours)2005, PhD 2009

Currently a Research Fellow and Lecturer in the department.

I research decentralised energy generation schemes for domestic uses. This exciting new research includes the development of novel grid integration techniques for various green energy sources and bi-directional wireless links for charging electrical vehicles. This is pretty cool stuff, right at the cutting edge of international green energy research.

When I teach at the university I try to bring examples of my research into the classes and do lots of demonstrations. I really identify with the students and their needs because it's not that long since I was one myself. I love seeing them enjoying what they are learning and achieving great results.

Contact:

Department of Electrical and Computer Engineering
University of Auckland
Private Bag 92019
Auckland 1142
New Zealand

Email: ece-info@auckland.ac.nz
Phone: +64 9 373 7599 x 88185
Fax: +64 9 373 7461

www.ece.auckland.ac.nz