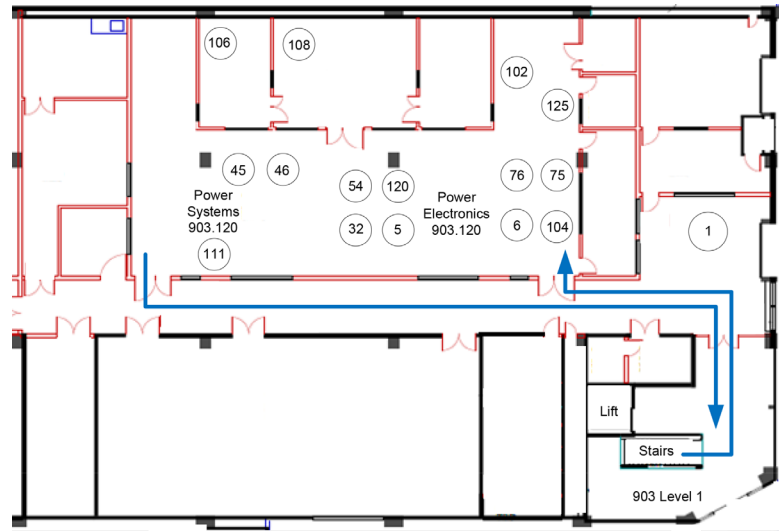
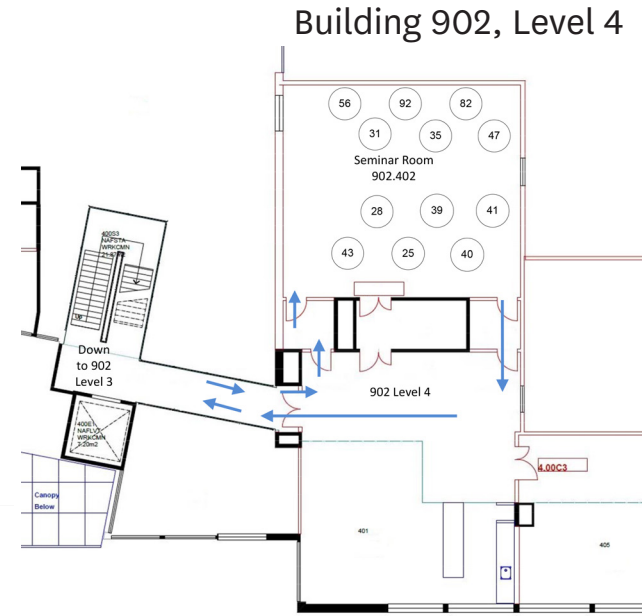


EXHIBIT LOCATIONS

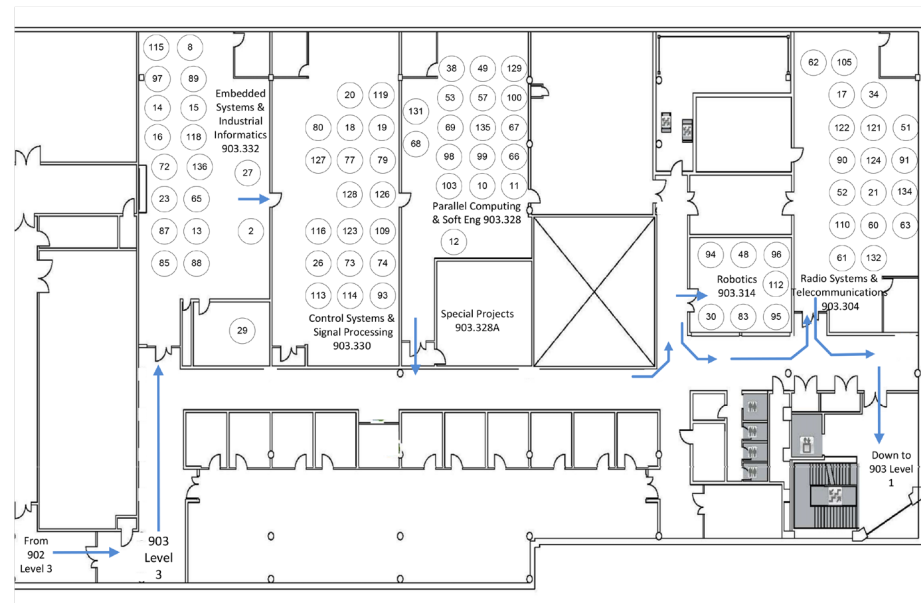
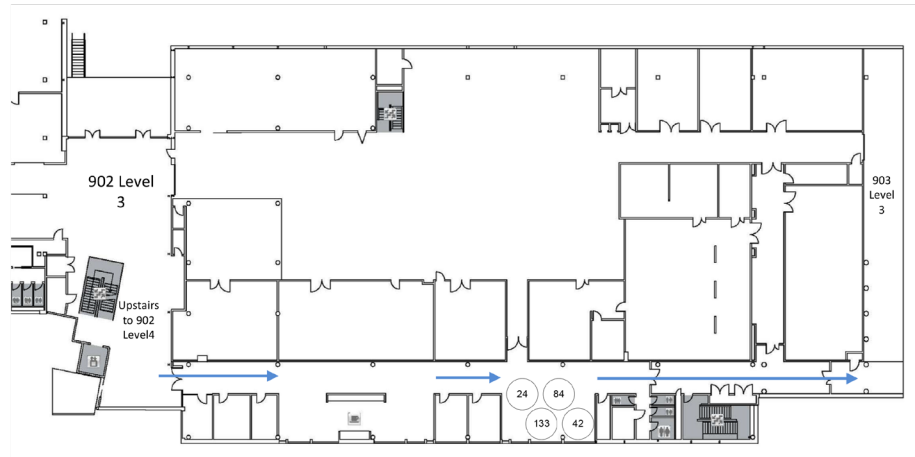


Building 903, Level 1



Building 902, Level 4

Building 903, Level 3



Buildings 902 and 903 are located at:

Faculty of Engineering
Newmarket Campus
314-390 Khyber Pass Road
Newmarket,
Auckland

www.ece.auckland.ac.nz

Department of Electrical and Computer Engineering

Part IV Research Projects

EXHIBITION DAY 2018

Friday 14 September 2018

1-4pm

Final year electrical and electronic, computer systems, and software engineering students will present their research projects at this exhibition day.



ENGINEERING

PROJECT NUMBER AND TITLE	CATEGORY	STUDENTS	LAB	
135	Application of Machine Learning to Business process automation in the Meter to Cash domain	AI & Machine learning	Austin Sutherland, Ryan MacMillan	903.328
132	Assessing the suitability of the blockchain to support a virtual credit- card	AI & Machine learning	Frederick Fogerty, Thomas Coupe	903.304
10	Deep learning neural nets for detecting heart activity	AI & Machine learning	Joseph Horvath, Lu Shien Lee	903.328
103	Emotion Extraction using Videos (Industry Sponsored)	AI & Machine learning	Hang-Chi Chuk, Yao Jian Yap	903.328
87	Let's make some music	AI & Machine learning	Aimee Tagle, Sakayan Sitsabesan	903.332
113	Development of an analog-based noise-cancelling headphone for use in aircraft passenger cabins	Control Systems	Alda Topa, Neomai Matapa	903.330
80	Development of the propulsion control hardware for autonomous marine survey drone.	Control Systems	Boyi Ji, Xiaobo Yu	903.330
79	Heart Cell Model Acceleration using FPGAs	Control Systems	Ali Hasan, Muhamad Fazwan Mohamed Fuzai	903.330
20	Self-Balancing Cube	Control Systems	Felix Cheah, Junaid Khalil	903.330
19	Underwater Wireless Sensor Network	Control Systems	Anis Asyiqin Zulkarnain, Che Nur Syafika Che Othman	903.330
18	Wireless networked Control systems	Control Systems	Muhammad Khairani Samsudin, Nurfarahin Aziz	903.330
8	Hardware Acceleration of CAFFE on FPGA	Embedded Systems	Joshua Gudsell, Nilesh Magan	903.332
97	IoT-enabled sleep mask for optimal circadian rhythms	Embedded Systems	Kale Greenwood-Evans, Marcus Wong	903.332
15	Power Optimised FPGA Implementation of Advanced Driver Assistance Systems	Embedded Systems	Mark Yep, Sylvain Bechet	903.332
14	Security-Enhanced Autonomous Landing System for Air Drones	Embedded Systems	Bridget Hall, William Grant	903.332
116	The Internet of Cat Doors	Embedded Systems	Nozomi Oishi, Sak Lee	903.330
77	Touch Sensitive Game Controller	Embedded Systems	Cameron McCarthy, Henry Scott Macdonald	903.330
27	A Framework for Mixed Reality Aided Tools to Stimulate Learning Electric Circuits Fundamentals	Games & Education Aids	Hanliang Ding, Jerry Fan	903.332
41	A gamified student-response tournament platform	Games & Education Aids	Minha Kim, Theodore Oswaldi	902.402
43	A Minecraft large structure editor	Games & Education Aids	Andy Tang, Joseph Christian Dumogho	902.402
40	A repository for archiving and interchange of programming exercises.	Games & Education Aids	Bradford Miller, Michael Kemp	902.402
23	Augmented Reality based Teaching and Learning	Games & Education Aids	Jiaming Cen, Mayank Tushar Vikram Lal	903.332
38	Exploring manual communication in virtual reality	Games & Education Aids	Gyeun Rho, Kenney Chan	903.328
49	Exploring virtual reality for learning OOP concepts	Games & Education Aids	Raymond 'Akau'ola, Tevita Tanielu	903.328
39	Game-based learning of general troubleshooting/debugging strategies	Games & Education Aids	Chen Li, Emily Chan	902.402
25	Git Good - A Gamified Learning Experience for Teaching Distributed Version Control	Games & Education Aids	Benjamin Partridge, Kevin Hira	902.402
31	Piano Learning VR/Tool	Games & Education Aids	Qianzhi Huang, Will Molloy	902.402
28	Web App for Competitive Coding Assignments	Games & Education Aids	Charles Carey, Nathan Kear	902.402
6	A Versatile battery charge for EV's and other applications	Green Energy Technologies	Fatin Nabilah Anuar, Luqman Mohd Salleh Sahimi	903.120
125	App based wireless lighting system controller	Green Energy Technologies	Lexmen Selvaraj, Pasan Pahalawatta	903.120
102	Battery less controller for lighting systems	Green Energy Technologies	Kyung sun Lee, David Valentine-Smith	903.120
32	Battery monitoring system for emergency lighting	Green Energy Technologies	Azizul Hakim Noor Hadi, Mawardi Md Ali	903.120
45	Control and Coordination of AC-DC Power System with Hybrid Energy Storage System	Green Energy Technologies	Benjamin Dunn, Shivam Patel	903.120
110	Business Card App	Human Computer Interactions	He Ram Lim, Samule Li	903.304
60	Gesture Recognition App using User-Centered Design	Human Computer Interactions	Dylan Boyd, Warren Yeu	903.304
61	Gesture Set Interface using Participatory Design	Human Computer Interactions	Alex Yoo, Gillon Manalastas	903.304
63	Hand-gesture based 3D navigation	Human Computer Interactions	Aprajit Gandhi, Karim Cisse	903.304
73	Spoken Te Reo Numeracy Game for Smart Devices	Human Computer Interactions	Maggie Ngo, Sueyeon Lee	903.330
62	VR simulation of war and conflict scenarios	Human Computer Interactions	Muhammad Ridwan, Vaishnavi Muppavaram	903.304
26	Automatic Speech Transcription Web Application	Image & Voice Processing	Chamara Ratnayake, Dylan Hall	903.330
93	Investigation into the implications of vocal performance on speech and signal processing	Image & Voice Processing	Isabella Shields, Saareem Ahn	903.330
100	Modelling and Assessing Exercise Technique	Image & Voice Processing	Joshua Brundan, Nathan Henderson	903.328
109	Multispectral Camera Pre-Processing for Grapevine leafroll disease Detection	Image & Voice Processing	Ali Al-Omari, Leila Deljkovic	903.330
134	Speech-To-Text Technologies for LLS Audio-Visual Archives	Image & Voice Processing	Jacky Lo, Victor He	903.304
16	Vehicle tracking using Multiple Cameras	Image & Voice Processing	Chanokpol Janveerawat, Jelijah Joshua Asi	903.332
29	Human-Centered Interfaces for Modern Intelligence Environments	Intelligent Systems & Industrial Informatics	Huihao Huang, Wayne Liang	903.332A
85	Large scale data acquisition for IoT applications using LPWAN technology	Intelligent Systems & Industrial Informatics	Adil Bhayani, Saviduruu Mohan	903.332
13	Probabilistic sensor fusion for localisation in GPS-denied applications/areas	Intelligent Systems & Industrial Informatics	Benjamin Yu, Jilada Eccleston	903.332
115	Search and Rescue Application	Intelligent Systems & Industrial Informatics	Daniel Wong, Victor Lian	903.332
65	Smart Helpdesk System	Intelligent Systems & Industrial Informatics	Abdul Syed, Saad Iqbal	903.332
105	Blockchain for the NZ healthcare system	Parallel & Cloud Computing	Xinli Huang, Yuanwei Qi	903.304
57	Circuit sketching and electronic log book on Android tablet	Parallel & Cloud Computing	Daniel Jimenez, Jamal Koya	903.328
136	Cyber Physical Security Systems	Parallel & Cloud Computing	Alexander Baird, Kathryn Jagger	903.332
66	Implementing MapReduce in fog computing environment for efficient big data analytics	Parallel & Cloud Computing	Tao Ge, Baiwei Chen	903.328
99	Real-Time Object Detection for the Visually Impaired	Parallel & Cloud Computing	Eli Salter, Seoyoung Choi	903.328
67	Traffic congestion prediction based on taxi GPS trajectory data	Parallel & Cloud Computing	Mehdi Shah, Sahil Chauhan	903.328

5	A New DD Concrete Pad for Pavement Applications	Power Electronics & Electronics Systems	Ching Wai Lai, Yik Chi Tso	903.120
112	National Instruments Autonomous Robotics Competition 2018	Power Electronics & Electronics Systems	Jiayuan Yang, Xupeng Cao	903.314
21	Sleep Mat-e: Electronic Sleep Mat	Power Electronics & Electronics Systems	Arjun Kumar, Keison Tang	903.304
111	Comprehensive assessment of Anti-islanding schemes for Grid connected inverters	Power Systems	Ahmad Faizan, Farhana Basheer	903.120
108	Electricity Smart Meter Data Applications using Big Data analytics and ANN	Power Systems	Georgina Price, Scott Witney	903.120
46	Islanding Detection in Microgrid	Power Systems	Viren Manglani, Yousef Rashid	903.120
106	Peer-to-Peer Transactive Energy Model for New Zealand Electricity Consumers	Power Systems	Danyon Wye, Timothy Lopez	903.120
72	Smart Grid automation using IEC 61499 / IEC 61850 and Machine Learning	Power Systems	Heimana Palmer, Sanath Vettivel	903.332
90	Coverage Enhancement for Millimetre-Wave Indoor Wireless Communication Systems	Radio Systems	Haziq Shibli Ismail Fairoz, Muhammad Ashraf Mohd Ramzan	903.304
124	Development of a Ground Station Antenna for UAV Communications	Radio Systems	Kaiyang Li, Zheng Liu	903.304
91	High Performance Indoor Wireless System Deployment	Radio Systems	Filip Jovanovic, Saurabh Khire	903.304
52	Investigation of electromagnetic coil design for MRI imaging systems	Radio Systems	Paul Pamaka, Peter Te'o-McFall	903.304
17	Measurement of kiwifruit ripeness using radio waves	Radio Systems	Alvin Huang, Tristan Newhook	903.304
96	Companion robot focusing on Multimodal Emotional Behaviour Generation	Robotics	Joel De Zoysa, Li Jong	903.314
94	Guide and logistics robot system	Robotics	David Smith, Igor Markovic	903.314
1	Mobile Baxter in Industrial Workspace	Robotics	Hamish O'Neill, Roman Amor	903.332
95	Verbally interactive companion robot	Robotics	Daye Pan, Dae Joon Kim	903.314
114	Development of an assistive device for deaf users to detect emergency sounds.	Signal Processing	Peiyi Liu, Seung Hong	903.330
126	Feature Extraction and Classification of Power Quality Events	Signal Processing	Angus Webb, Darius Ze Thong Tan	903.330
127	Feature Selection for Bio-medical Patterns	Signal Processing	Sanchit Munshi, Yilong Wang	903.330
88	Human activity recognition using wearable sensors	Signal Processing	Lorenzo Datuin, Prashant Naicker	903.332
89	Internet-of-Things for Ubiquitous sensing for Environmental noise Mapping	Signal Processing	Adiraek Siamwala, Zac Lochhead	903.332
69	Alternative Purposes of Gaming: Redefining Gamification Techniques for Mobile Applications	Smart Phone & Tablet Applications	Joshua Cleland, Timothy Frew	903.328
48	Finance chatbot	Smart Phone & Tablet Applications	Sejal Patel, Sidharth Parthasarathy	903.314
83	Personalised healthcare data storage	Smart Phone & Tablet Applications	Huaitao Bao, Injae Park	903.314
30	Smart Phone based Virtual Fitness Trainer	Smart Phone & Tablet Applications	Jonathan Soulsby, Nathan Hur	903.314
11	Smartfashion 2.0	Smart Phone & Tablet Applications	Ira Syamira Sukimin, Serena Toon	903.328
2	Travel Logger	Smart Phone & Tablet Applications	Saaketh Chittajallu, Tae Young Hwang	903.332
82	An AI aid for doctors	Software Development Tools and Processes	Junan Xia, Chaejung Bang	902.402
12	Collaborative Lo-Fi Game Design Tool	Software Development Tools and Processes	Terran Kroft, Zihao Yang	903.328
92	Evaluating the benefit of modern fast solid state memory	Software Development Tools and Processes	Ethan Hand, Max van Duin	902.402
98	Generating code through voice commands	Software Development Tools and Processes	Fraser McIntosh, Max Griffith	903.328
24	Let the Knowledge Flow - Building a Personalised Seminar Recommender System	Software Development Tools and Processes	Kyung Ho Chun, Vincent Wong	902.L03
84	Personality based interface	Software Development Tools and Processes	Leighton Jonker, William Chao	902.L03
35	Rule based Program Behavioural Monitoring	Software Development Tools and Processes	Alexander Blinder, Luke Tudor	902.402
56	Scam call detection	Software Development Tools and Processes	Darius Au, Pulkit Kalra	902.402
133	The future of secure data transfer, especially in relation to healthcare and sensitive, time-sensitive messaging	Software Development Tools and Processes	Monica Henriques, Uros Mihajlovic	902.L03
47	Using visualisation to learn refactoring	Software Development Tools and Processes	Andrew Lyall, Nathan Gavin	902.402
122	Allocating users to radio channels to improve data throughput in wireless networks	Telecommunications	Jae Yoon Chung, Tevita Pulu	903.304
121	Communication through unreliable mesh networks	Telecommunications	Chenggang Lin, Jingyuan Wu	903.304
51	Development of RF Exposure system for investigation of electromagnetic bio-interaction	Telecommunications	Nathan Kinney, Vishwajith Nelumdeniya	903.304
34	Wireless channel measurements during construction of the new UoA Engineering building	Telecommunications	Hozea Lopez, Yuk Ho Cheng	903.304
119	Anomaly Detection using Sat Nav traffic data	Transport Technology	James Ashworth, Jonathan Yeoh	903.330
118	Embedded Systems for road safety and traffic management	Transport Technology	Alexandra Andela, Roma Nory	903.332
128	In-car sensing for road safety and traffic management (Industry Sponsored)	Transport Technology	Mike Lee, Yuanpeng Zhou	903.330
123	Machine Vision for road safety and traffic management	Transport Technology	Nabeela Ahmed, Yashaswini Amberkar	903.330
129	Sustainable Transport through Digital Technology (Industry Sponsored)	Transport Technology	Eugene Fong, Jaedyn Damms	903.328
42	Data storage and visualisation tools for modern cancer drug development	Web tools and Application	Andrew Stewart, Tim Meyer-Smith	902.L03
68	Kindergarten assistant	Web tools and Application	Abby-Junyi Shen, Mohan Cao	903.328
53	Learning fundamental programming concepts without coding	Web tools and Application	Oliver Allen, Xavier Downs	903.328
131	Market analysis and competitor identification application (Industry Sponsored)	Web tools and Application	Shibani Timblo, Sindhu Singamneni	903.328
74	Voices of New Zealand: A cloud-based speech recording system	Web tools and Application	Tao Shi, Ziyin Kong	903.330
76	A leakage flux measurement system	Wireless Power Technologies	Dallas Watene, Jack Hughes	903.120
54	A wireless charger for electric ferries (EFs)	Wireless Power Technologies	Damien Tao, Muyang Wang	903.120
120	A Wireless Interface with Combined Contactless Power and Data Transfer	Wireless Power Technologies	Matthew Goodall, Tiffany Reynolds	903.120
75	Investigation of efficient secondary controllers for IPT systems	Wireless Power Technologies	Kheavin Chap, Jianquan Liang	903.120
104	Scaled Down In-motion Charging Systems	Wireless Power Technologies	Hyeyun Jeong, Haozhuo Ling	903.120