

A Sense of Place

A/Professor Charles Walker

colab @ AUT



Sensors in the Built Environment

March 04 2015





the university for the changing world

- Established as a university in 2000
- 110 year history of industry-relevant education
- 21,000 full time students
- 5 Faculties
- 16 Research Institutes

16 Research Institutes

- Applied Ecology (AENZ)
- Biotechnology (KODE Biotech)
- Biomedical Technologies (IBTec)
- *colab*
- Culture, Discourse and Communication (ICDC)
- Engineering Research Institute (ERI)
- Health and Rehabilitation (HRRRI)
- Knowledge Engineering and Discovery (KEDRI)
- Public Health and Mental Health (NIPHMHR)
- New Zealand Tourism (NZTRI)
- New Zealand Work Research Institute (NZWRI)
- Public Policy (IPP)
- Radio Astronomy and Space (IRASR)
- Sport Performance (SPRINZ)
- Stroke and Applied Neurosciences (NISAN)
- Te Ipukarea - National Māori Language Institute

5 Faculties

- Faculty of Business and Law

(Business; Economic Development; Entrepreneurship/Innovation; Employment; Law)

- Faculty of Health & Environmental Sciences

- (Applied Sciences; Health Care Practice; Public Health & Urban Environment; Rehabilitation and Occupational Therapy; Sport & Recreation; Inter-professional Health Studies)

- Faculty of Culture & Society

(Public & Social Policy; Language & Culture; Education; Hospitality & Tourism; Migrant & Refugee studies)

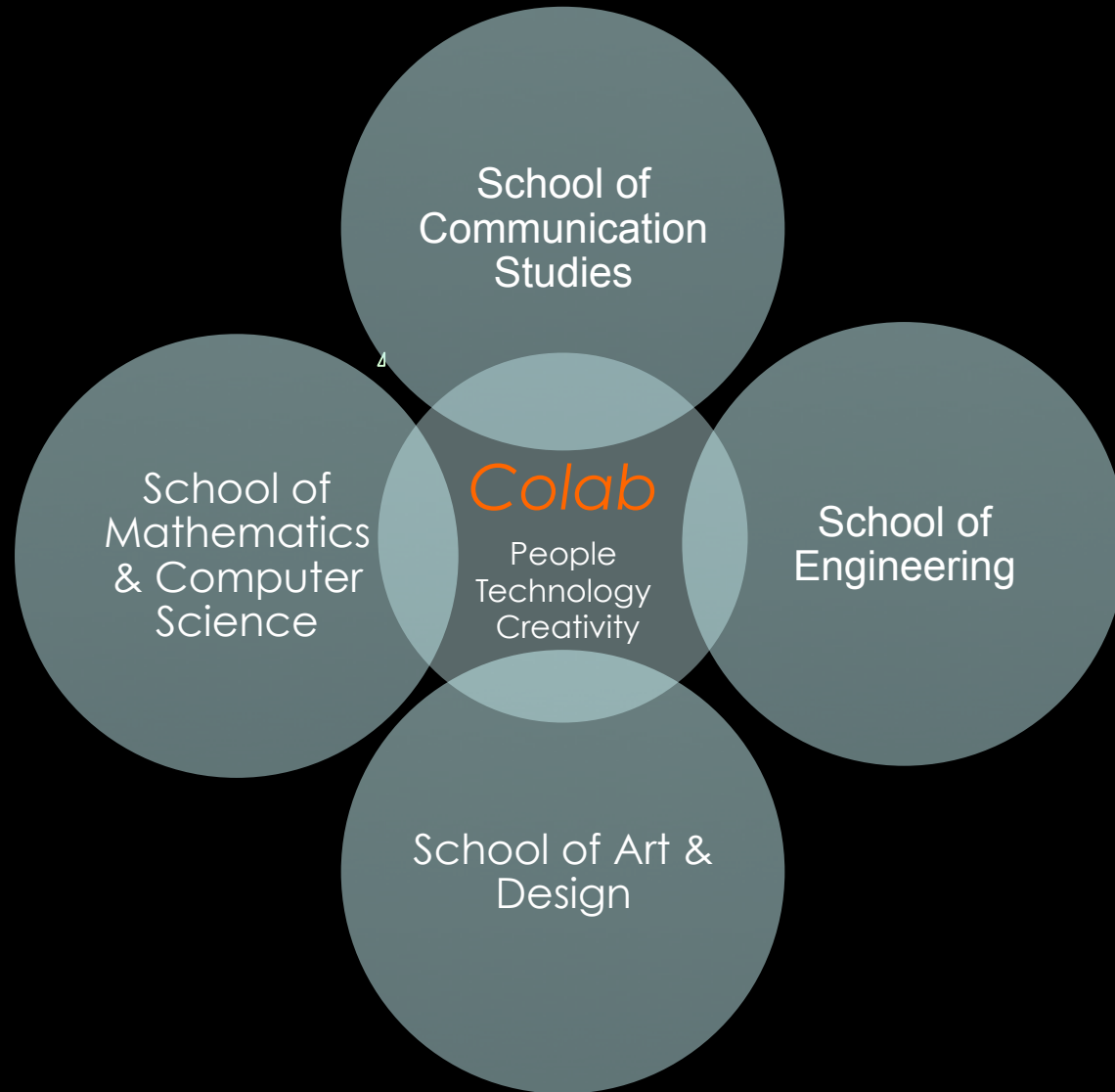
- Te Ara Poutama

(Language and Culture; Future Education; Technology for recording Māori history and knowledge)

- *Faculty of Design & Creative Technologies*



Faculty of Design & Creative Technologies



colab

- TEC *Encouraging & Supporting Innovation* Fund (2009 – 2012)

Income from:

- Student fees from Bachelors, Masters and PhD degrees)
- University Research Institute Funding
- TEC Performance Based Research Fund

- External research funding
- Revenue from workshops, short courses, events, etc.
- Scholarships
- Sponsorships
- In-kind support

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- COLLABORATION
- CONNECTIVITY
- CONVERGENCE
- COMMUNITY
- COCREATION
- COMPLEXITY
- CONTESTABLE FUTURES



Interactive Art Live, Auckland Council
Vaimaila Urale in association with Johann Nortje, Digital Art Live, 2012
<http://dal.colab.org.nz/exhibitions>

CURRENT RESEARCH CLUSTERS

SMART SYSTEMS : CREATIVE PRoGRAMMING :
PHYSICAL CoMPUTING : EXPERIENCE DESIGN

SERIoUS GAMES
TANGIBLE INTERACTIoN : NEW INTERFACES :

MoBILE TECHNoLoGIES
INTERACTIVE MEDIA

e-TEXTILES : WEARABLES
EXPERIMENTAL AUDIO

NEW WoRK & CAREER STRUCTURES
oRGANISATIoNAL THEoRY
PHILoSoPHY oF TECHNoLoGY

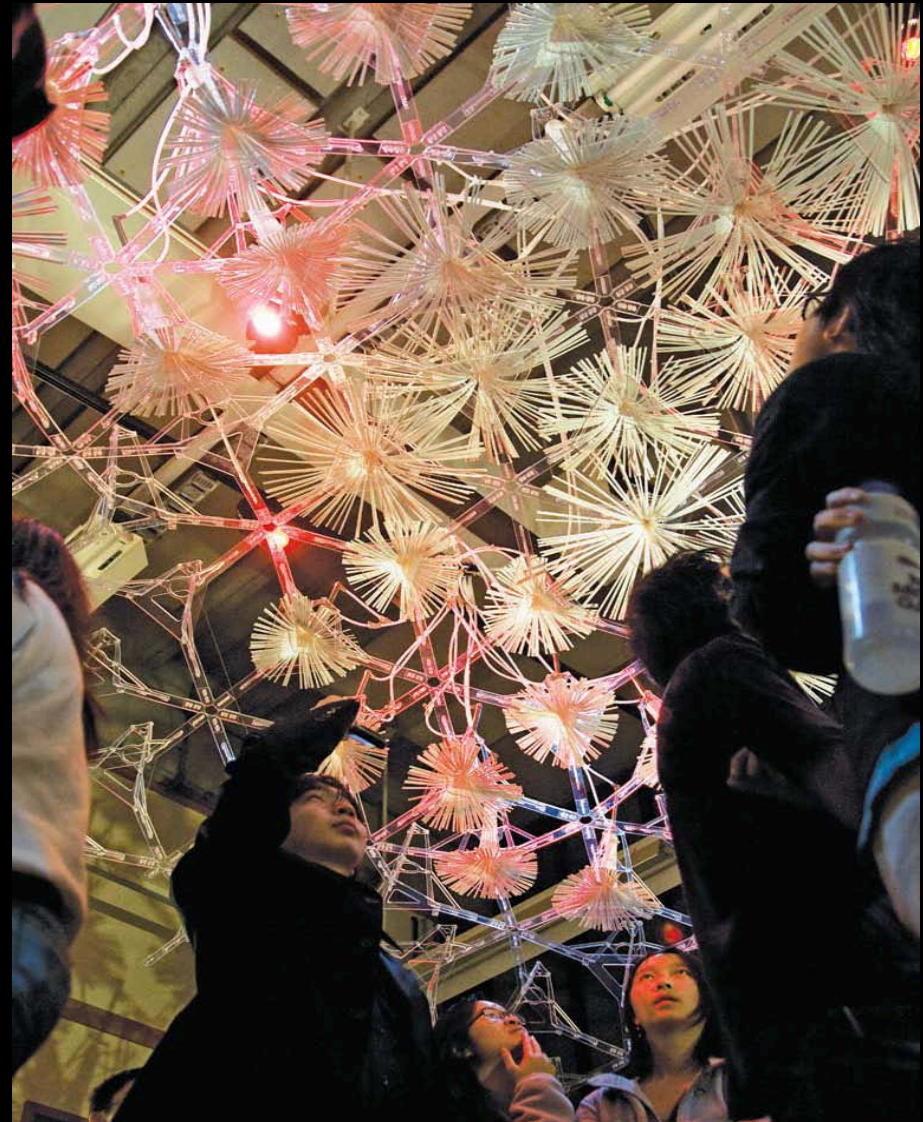
MATERIAL PRoCESSES :
3D MODELLING : RoBoTICS :
RAPID PRoToTYPING + FABRICATIoN
DIGITAL CRaFT : HACKING

SENSING PLACE
SMARTER URBAN FUTURES
RESPoNSIVE ENVIRoNMENTS

DATA VISUALISATIoN : SIMULATIoN
IMMERSIVE VR

TRANSMEDIA

ENTREPRENEURSHIP & INNoVATIoN

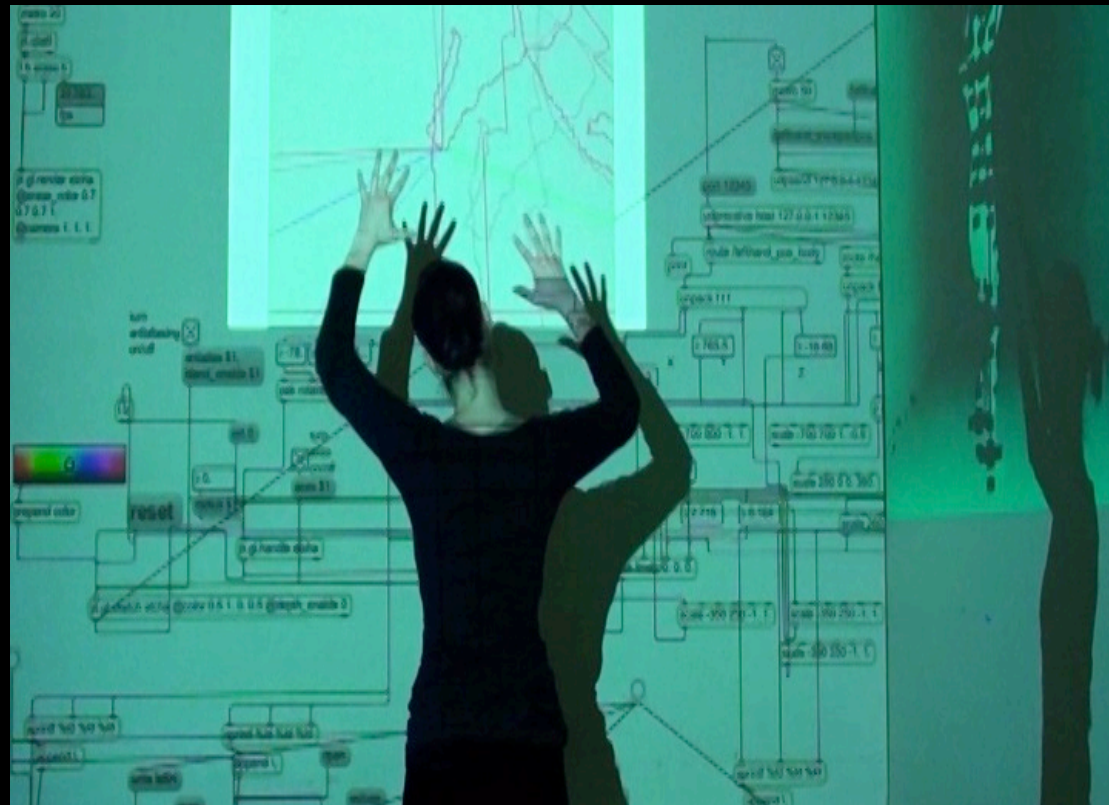


Sense-able systems, 2011

MASTER of CREATIVE TECHNOLOGIES & PhD STUDENTS

work with academics and industry partners from a broad variety of backgrounds

... designers, computer scientists, artists, engineers, media gurus, software companies, game developers, public bodies or social entrepreneurs



Pritika Lal, spatial in-formation, Master of Creative Technologies, 2012

CREATIVE TECHNOLOGIES

Students graduate with

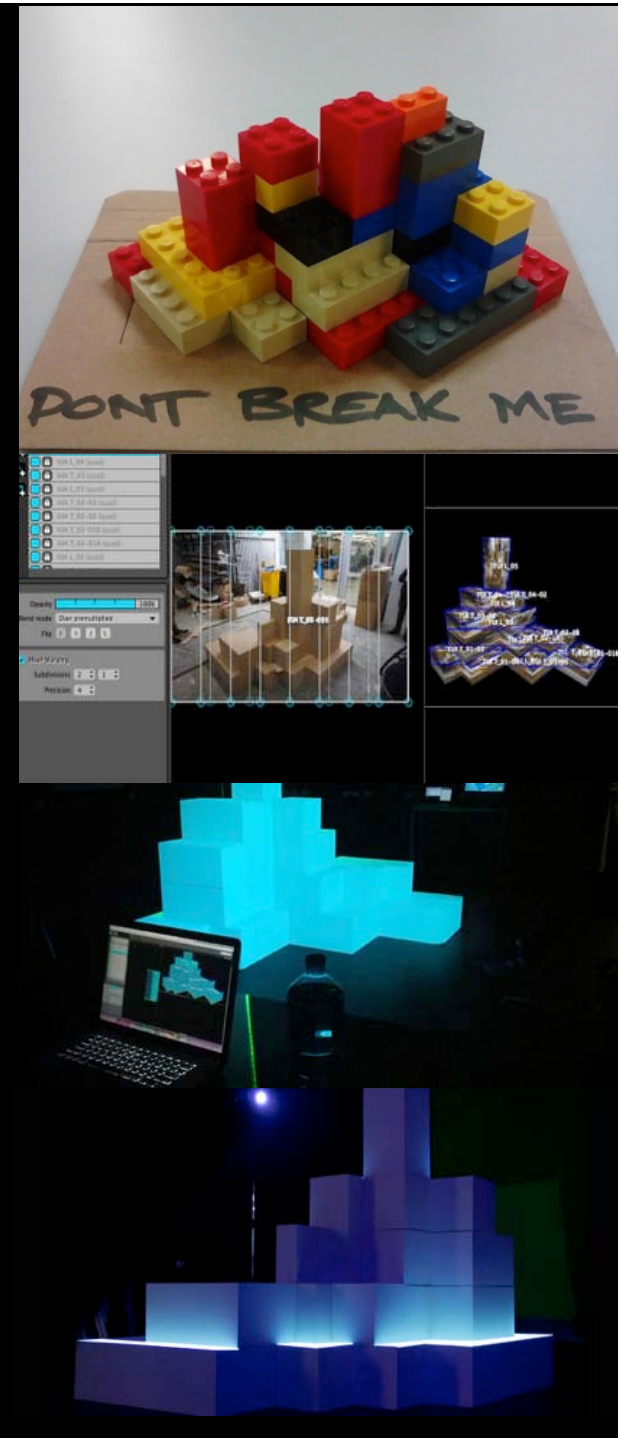
- *imagination*
- *advanced technological skills*
- *entrepreneurial attitude*



Eco -Syn: Interactive Marine Environment game

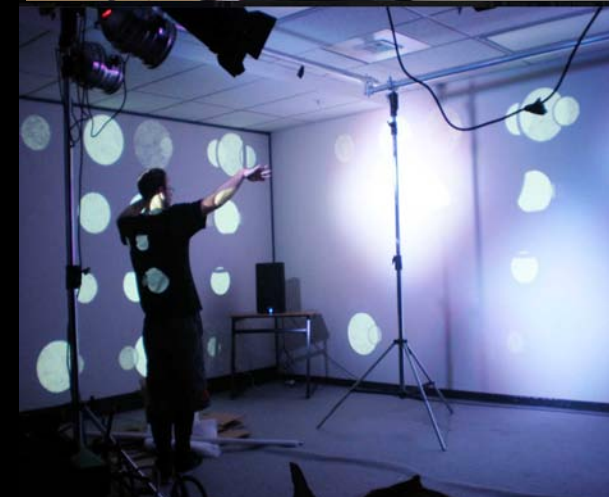
Collaborative Research Projects

- *Augmenting Genius Loci*: AR and sensing place
- *iForm-Ambience*: stereo-lithographic sculptures from GPS data generated by movement through space
- PIGsty: Play, Interaction, Games Unit
- *Emotional Textiles*: Intelligent sensing and response in knitted textiles
- *Bits/Atoms/Bodies/Spaces*: embedded media in fashion and architecture
- Innovative forms of e-publishing
- *The Peripatetic Learner*: place and the mobile university
- *Learning Web Technologies*: an Agile approach
- *Gaming the City*: playing in place
- *The Mediated Citizen*: living in a smarter city
- *Futurespacific*: future scenarios for South Auckland
- *Auckland as a complex system of systems*
- *Women in the City*



Faculty Labs Network

- Textile & Design Lab
- Sensors, Interaction & Immersion
- Additive Manufacture, Rapid Prototyping and 3D Printing
- Performance Capture
- Virtual Engineering & Simulation
- Mobile Innovation Network
- Smart Cities
- Innovation & Entrepreneurship in the Digital Economy
- Play, Interaction & Gamification (PIGsty)



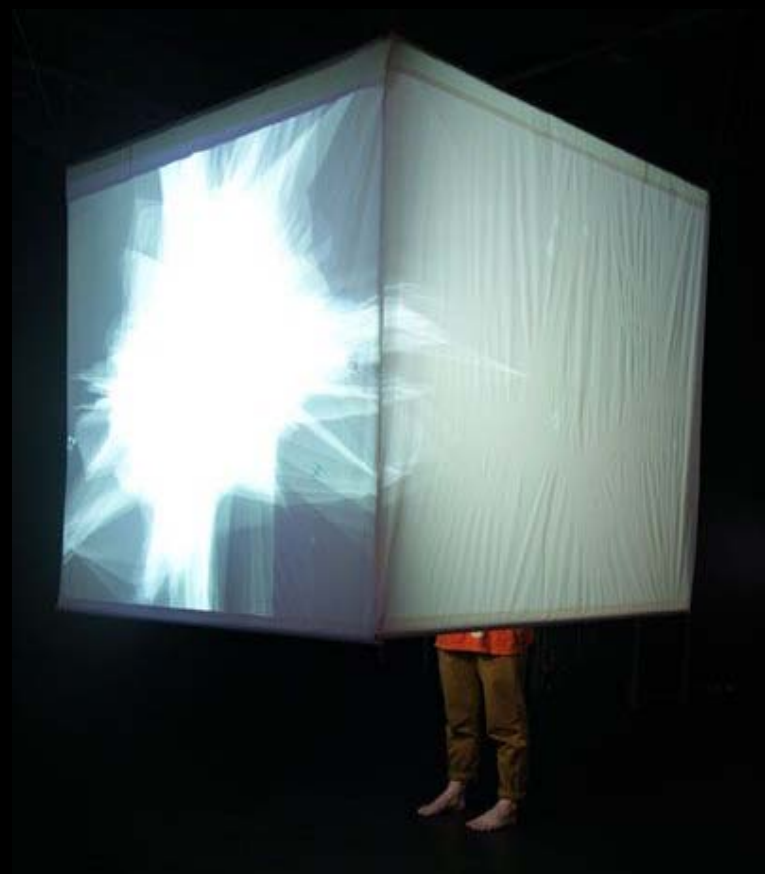
Recent *colab* events & workshops

- Interactive Art & Artificial Intelligence Symposium
- *Creativity & Cognition Conference, Sydney*
- NZ Game Developers Association Conference
- *Meetups – with Transmedia NZ, Interactive Design, Makers Group*
- MINA (Mobile technologies Innovation Network Aotearoa) Conference
- *Animation Revelations Conference*
- DocLab Interactive Documentary Workshop with National Film Board of Canada
- *Shapeshifting- Transformative Paradigms of Fashion & Textiles Conference*
- Mobile Filmmaking workshops
- *Augment Yourself! Workshops*
- 3D Printing symposium
- *Smart Cities And Transport hackathons*
- Tech Hackers' panel
- *Interactive games arcade*

The Collaboratory

partnership with AUT offers :

- Comprehensive understanding of the city as a complex system
- Collaborative multi-disciplinary teams of academic researchers, industry, public and professional partners
- A university engaged with the city as a living lab
- Contemporary thinking and fresh ideas
- International research and education linkages, projects and exchanges
- Contact with future smart citizens
- Ability to connect to different audiences



www.colab.aut.ac.nz