



artisan



AN EXPLORATION INTO THE FUTURE
OF WEARABLE TECHNOLOGY

wear next_

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ACKNOWLEDGEMENTS

wear next_

**05 March —
22 March 2016**

AVA Gallery
Kai Tak Campus
51 Kwun Tong Road
Kowloon, Hong Kong SAR
Hong Kong

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What will we wear next?

Tricia Flanagan



Wearables are predicted to have 485 million annual device shipments by 2018.¹ The growth has already been expediential, we recognize it in the fitness and health sectors with the massive popularity of products like Jawbone, Misfit, Fitbit and Garmin, but the statistics show us that about a third of owners abandon these devices after six months.² This indicates that the design practices for current wearable technology have a reductionist view of human capacity.³

Other trends indicate the potential for wearables to restructure society, this is visible within the medical sector where a rapidly decentralizing model of healthcare is taking place, interaction between doctor and patient is mediated through wearable (or implantable, or dissolvable) patient worn monitoring devices that alert both patient and doctor when changes to care/medication etc. are needed. This completely changes the way consultations will take place with the 'digitally engaged patient'.⁴

A cultural movement has grown around the data produced by self tracking devices that has come to be known as the Quantified Self. On the flip side of sousveillance, the availability of personal and intimately detailed data from individuals is accessible to businesses to tailor marketing strategies etc. raising ethical and moral debates. Tracking of workers at Amazon warehouses for example, have improved efficiency in supply chain management, but at the same time dehumanizes the workforce into widgets of productivity who are under constant surveillance.⁵

Wearable technology combined with big data and cloud computing enables accessibility to information at a level unimaginable to previous generations. The democratization of data and increasing accessibility of programming languages combined with affordability and increased capacity of technology as well as flexibility of production methods such as 3D printing and laser cutting, are destabilizing traditional industrial manufacturing models and enabling expression and experimentation to be placed in the hands of everyday people.

Wearables inhabit a space at the intersection of the body and technology. Historically we have augmented our bodies with extra functionality since the Cro Magnon era. Wearing clothing enabled us to survive colder climates. There is evidence of textile that are over 30,000 years old. Eye glasses and fob watches are early examples of wearables that enhance human capacity and mobility. In the post-industrial era the soft fabrics of clothing and hard technologies of computing operated as separate disciplines, but in our contemporary world are finding common expression through wearables. The evolution of software with biotech has produced wetware, whilst materials technology has enabled textiles to integrate with the architecture of our urban environments and our bodies.⁶

INTERFACE

In dress making interfacing is a supportive structure between layers of material. It is a fusible or non-fusible substrate of woven or non-woven material with drape or rigidity selected for properties to suit a garments end purpose. Interfacing is invisible, hidden between the layers of a garment. Similarly, wearables can be viewed as an interface between the body and the world, where invisible digital and physical material realms form layers. The dictionary defines an interface as 'a surface forming a common boundary of two bodies, spaces, phases.' The term 'interface' is used in many contexts including chemical, biological and sociological – all of which are pertinent to wearables.

Textiles have a long history affiliated with the body, they inhabit a space between public and private. Computing has an intertwined history with textiles production as well, its heritage is in the mechanical technologies of the weaving loom, where density is conceived in terms of dpi (pixels), and structures were translated through the binary language of punch cards – the language which automated Jacquard looms and Pianolas alike.

What we Wear Next will be influenced by materials technology, bio and nanotech, digital crafting and issues of sustainability. These themes are taken up

in the **Wear Next_** exhibition.

MATERIALS TECHNOLOGY

Electrospinning can be used to produce custom 3D fabrics and textiles.⁷

Electroloom is a spray system creating garments that leverage traditional flat pattern making methods, but without the need for stitching, by fabricating an entire garment in a single step as the material itself is being printed (see p.18).

We can expect to see the use of new materials such as graphene in future wearables. Pablo Jarillo Herrero at the MIT Department of Physics in Massachusetts USA and the National Graphene Institute in Manchester UK are exploring the potential of this material and it's amazing properties. It can be applied in one atom thick sheets, is flexible and is ultra-high speed conductive, generates no heat and draws very low power.

BIO and NANO TECH

Biomimicry has inspired superhydrophobic self-cleaning fabric. Nanotechnol was designed by nano-scanning the structure of the lotus leaf and replicating it.⁸

Tangible media lab has used bacillus subtilis natto – a micro organism found in fermented soybeans to create a bacteria powered smart fabric. When implanted into slits in a textile structure, the organism reacts to body heat or humidity and swells causing the slits to open like tiny vents in the fabric, effectively cooling the body. **Instinct [in-stingkt]** visualizes which areas of the brain are active and magnifies the emotional response into movement of various individual shapes of the headpiece up and down in relation to the areas of the brain that elicit a specific emotion. It is a sculptural headpiece designed to enhance communication across cultural and geographical boundaries by amplifying emotional experience. Simultaneously a 3D printed actuator sends tingles up the spine of the partner communicator, who can sense the positive or negative feelings of the other person (see p. 14).

wear next_

DIGITAL CRAFTSMANSHIP

Many of the exhibition pieces in **Wear Next_** are created using tools such as laser cutters and 3D printers, these tools have become commonplace but are only just beginning to come into an aesthetic space of their own. Typically, 3D printers have been used to make cheap, plastic copies of objects and laser cutters automate cutting processes representing savings in man hours. Artists and designers are gradually defining the distinct qualities and unique characteristics that these tools can bring to a work. Traditional craftsmanship has evolved materials and techniques that are honed to result in quality objects – a delicate combination of function, form and aesthetic. We need to look to the crafts to inform good design, but it is not with nostalgia that we should revere the artisan, rather it is for the wealth of embodied knowledge that is bound in the relationship between the makers hand and the objects created. Traditional knowledge is blending with contemporary innovation to craft meaningful objects of desire that we will wear into the future. ⁹

SUSTAINABILITY

Wearables are a means of communication and can present or provoke debate on issues of social and cultural significance,

ethical and environmental issues. **Political Lace** draws on the tradition of Irish Lace to express a contemporary issue for Ireland. It commemorates women who die in childbirth before the age of eighteen (see p. 15).

In this era of the Anthropocene we are exploring how design can be approached from a non-anthropocentric viewpoint to promote empathy toward others. The **BIOdress** is an ecosystem around the body. It links the human user to a part of their natural environment. By mapping a plants electromyography signals onto the body of the wearer the BIODress is able to articulate what the plant is sensing on visual and haptic level (see p. 9). The works exhibited in **Wear Next_** provide a snapshot into the broad spectrum of wearables in art and design in development internationally. Featuring works from Hong Kong, Australia, Ireland, United Kingdom, Germany, Japan and United States of America. The exhibition serves as a platform for dialogue and debate about our relationship with future technology, our techno-geneses and the evolution of interaction between the body, other bodies (human and non-human) the environment and the way we life in the world.

1. ABI Research. 2010. Wearable computing devices, like Apple's iWatch, will exceed 485 million annual shipments by 2018. ABIResearch.com. Accessed Feb 2, 2016. <https://www.abiresearch.com/press/wearable-computing-devices-like-apples-iwatch-will>.
2. Dan Ledger, 2014, Inside Wearables part 2, Endeavour Partners, July 2014, Accessed Feb 2, 2016.<http://endeavourpartners.net/assets/Endeavour-Partners-Inside-Wearables-Part-2-July-2014.pdf>
3. Patricia Flanagan, Despina Papadopoulos, and Georgina Voss, Intimacy and Extimacy: Ethics, Power, and Potential of Wearable Technologies, IN: Woodrow Barfield, ed. Fundamentals of Wearable Computers and Augmented Reality. CRC Press, 2015
4. Deborah Lupton, The digitally engaged patient: Self-monitoring and self-care in the digital health era, *Social Theory & Health* [2013] 11, 256–270. doi:10.1057/sth.2013.10; published online 19th June 2013
5. Littler, M. 2013. Amazon: The Truth Behind the Click. Produced by Michael Price. London: BBC
6. Amy Coopes and Steve Offner, The Future Weaver, UNSW MAGAZINE - UNIKEN, 11 JUN 2015, <http://newsroom.unsw.edu.au/news/science-tech/future-weaver>, Accessed March 1 2016
7. Ian Tattersall, Drenched in Symbolism, A Dazzling record of prehistoric carvings and paintings testify to the cognitive complexity of our species. *Scientific America* (July 2003), 289, p.88-89
8. White Joseph, Foley Marcus, and Rowley Aaron, A Novel Approach to 3D-Printed Fabrics and Garments, *3D Printing and Additive Manufacturing*. September 2015, Vol. 2, No. 3: 145-149
9. Hans J. Ensikat¹Email of corresponding author, Petra Ditsche-Kuru¹, Christoph Neinhuis² and Wilhelm Barthlott¹, "Superhydrophobicity in perfection: the outstanding properties of the lotus leaf", IN "Biomimetic materials". Editors: W. Barthlott and K. Koch, *Beilstein J. Nanotechnol.* 2011, 2, 152–161
10. Kaat Debo, Alexandra Verschueren and Tobias Klein Make 3D Printing Crystal Clear By Elizabeth Boorman | December 17, 2014 | 3D Printing, Art and Design, Fashion, Factory for 3D Printing, Accessed 2nd Feb 2016

LIST OF WORKS

- 1. *BIOdress 2014***
Sarah Adhitya, Beck Davis, Raune Frankjaer, Tricia Flanagan and Zoe Mahony
- 2. *Hacking the body 2.0 - practical investigations 2015***
Camille Baker and Kate Sicchio
- 3. *limbU 2015***
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- 4. *Under the skin 2015***
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- 5. *Emotional 2015***
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- 8. *BODYecology 2015***
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- 9. *enLight 2015***
Raune Frankjaer
- 10. *Electroloom***
Joseph White, Foley Marcus, Aaron Rowley
- 11. *VIBRANTe 2.0 2015***
Rafael Gomez and Erica Mealy
- 12. *Without fear - The Umbrella Movement 2014***
Chan Stacey Lok Heng, Kwok Tsz Lam Lamothly and Li Tak Yung Doris
- 13. *popn-blue and popn pink 2015***
Erina Kashiara
- 14. *Breezing light leaves 2015***
Erina Kashiara
- 15. *Embodiment***
Tobias Klein

EXHIBITION OPENING

Dr. Miu Ling Lam

7pm 05 March 2016
AVA Gallery

PARTNERSHIPS

The project fosters a partnership between AVA gallery Hong Kong and Artisan in Brisbane Australia. The project also nurtures established relationships between international partners Hong Kong Baptist University, Queensland University of Technology and Griffith University Queensland.

PARTICIPATING EXHIBITORS

Sarah ADHITYA
Camille BAKER
Dean BROUGH
Steve BUHAGIAR
David CHAPMAN
CHAN Hong Wing
CHAN Stacey Lok Heng
Melissa COLEMAN
Liam CRIPWELL
Beck DAVIS
Chamya DISSANAYAKE
Thomas DUFFY
Louis van DYKE
Laurence FAIRBAIRN
Tricia FLANAGAN
Marcus FOLEY
Stella FRANKS
Raune FRANKJAER
Rafael GOMEZ
Yannie Hiu Yan HUNG
Holly HUTSON
Anna KALMA
Erina KASHIHARA

Tobias KLEIN
KWOK Tsz Lam Lamothly
Rainbow KWOK
LAW Wing Yi Kosa
Doris Tak Yung LI
Marco Ho Ching MA
Trang LE, Zoe MAHONY
Erica MEALY
Louis Chun Fai NG
Lauren RICHARDSON
Aaron ROWLEY
Natalia SCIGULLA
Kate SICCHIO
SIU Ying Lam
SIU Fung Lui
Sam STEWART
Liv TSIM
Ryan USTINOFF
Joseph WHITE
Benjamin WILLIAMS
Miaomiao (Lily) YE
Marnee ZAMOREA





BIODRESS 2014

**Sara Adhitya, Beck Davis,
Raune Frankjaer, Tricia Flanagan
and Zoe Mahony**

Cloth, thermochromic dyes, conductive thread, EMG sensors, particulate sensor, actuators and shape memory alloy

This work is an exploration of how human-made and natural systems can be effectively combined. Through this investigation the collaborators propose the development of the BIODress: a body-worn, environmental multimedia interface, which allows the natural environment to communicate with humans. This piece is the first representation of a broader exploration of interspecies communication and the development of a non-anthropocentric approach to sustainable design.

The BIODress is a body-worn environmental multimedia interface, exploring how design can be approached from an environmental perspective. It creates a mode of expression for non-human elements, such as plants, which are often forgotten in our ego-centric world due to their inability to compete against the human voice. By linking the human wearer to a selected element of their natural environment, the BIODress provides us with a heightened understanding of the environment's quantitative state. In particular, the user is linked to a specific plant, which is able to sense its surrounding environmental quality on a more subtle level, such as changes in air quality.

Environmental sensors enable BIODress to read what the plant is 'sensing' on a quantitative level. Design and technology enable the articulation of this state qualitatively in three different ways:

- Thermochromic dyes allow the garment to change colour according to the particulate levels detected in the air. The dyes are activated through heating the embroidered conductive thread.
- Actuators expand and contract pleats situated on the shoulders of BIODress, so that they appear to 'breathe' in response to the air quality. Faster breathing equates to poorer air quality, to the point of exhaustion.
- The fabric leaves attached to the garment are fashioned using a shape memory alloy, which allows the leaves to move synergistically with the plants internal energy, measured by an EMG sensor.



HACKING THE BODY 2.0 - PRACTICAL INVESTIGATIONS 2015

Camille Baker and Kate Sicchio

[Digital video \(duration 11:06 minutes\)](#)

The emerging fervour over wearable technologies that collect their user's intimate body data, such as medical or fitness monitoring, suggests that it is time some critical questions were raised. The ethics of corporate ownership of body data for consumerist agendas is rarely explored beyond the fine print on the device's instructions. Increased awareness and education around these issues could potentially allow more access, ownership and creativity in the use of one's own body data, and new ways to express personal identity via this data.

Hacking the Body 2.0 - Practice Investigations questions how body data may be able to demonstrate who we are through our movement and physiology. How does, for example, access to personal data enable the performer to show their identity, rather than what is subscribed by the corporation making the sensing device? How can we explore these issues while enabling people access to their own data, especially in performance contexts, in order to interact with it?

Hacking the Body 2.0 - Practical Investigations brings performers together in an attempt to address the

ethical issues around identity and data ownership when using wearable technology in performance. Through the project, Baker and Sicchio develop methods to hack commercial wearable devices, as well as making handmade e-textile sensing-devices for performance.

Thus Baker and Sicchio aim to engage performers to access their own physiological data, or that of another performer, for creative use but also to create unique and interactive performances. This will be developed through further iterations of sensing and actuation via devices and the technologies they wear. This may then allow them to interact or respond to bio-sensing to create a new movement 'dialogue' or interaction with other performers and therefore explore identities. The performers reclaim data by using the technology as a tool to devise movement and co-create or choreograph performance works. This method circumvents the ethical challenges of corporate ownership, by allowing the data to remain with the user. In turn this process can be considered a critical act of making, confronting issues of surveillance and control.



limbU 2015

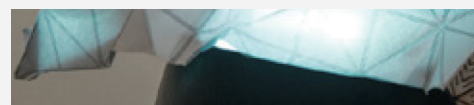
Troy Baverstock

ABS plastic, alloy speakers, neodymium magnets, USB charge circuit, battery charge circuit, RGB LEDs, digital amplifier, LiFePo batteries, accelerometer, gyroscope, magnetometer, barometer, temperature and humidity sensor, micro controller and Bluetooth.

limbU is a 3D printed and aesthetically designed attachment for prosthetic legs that functions as a medical diagnostic tool, activity tracker, phone charger and personal entertainment system.

Sensors built into limbU can potentially aid physicians in ongoing care for the wearer, by monitoring a limb's orientation, swing and intensity during daily activities. This data, combined with environmental sensing, furnishes an enhanced 'personal activity tracker' similar

to commercial fitness bands. Embedded Bluetooth speakers ensure media travels with the wearer and a phone charger provides a crucial convenience in today's digital world. Interchangeable aesthetic covers and lighting systems allow for unique ways for the wearer to express their identity based on mood, style or occasion. limbU seeks to shift the focus from what is absent by exploring instead, the possibilities of what can be value-added to the existing.



Media travels with the wearer and a phone charger provides a crucial convenience in today's digital world.



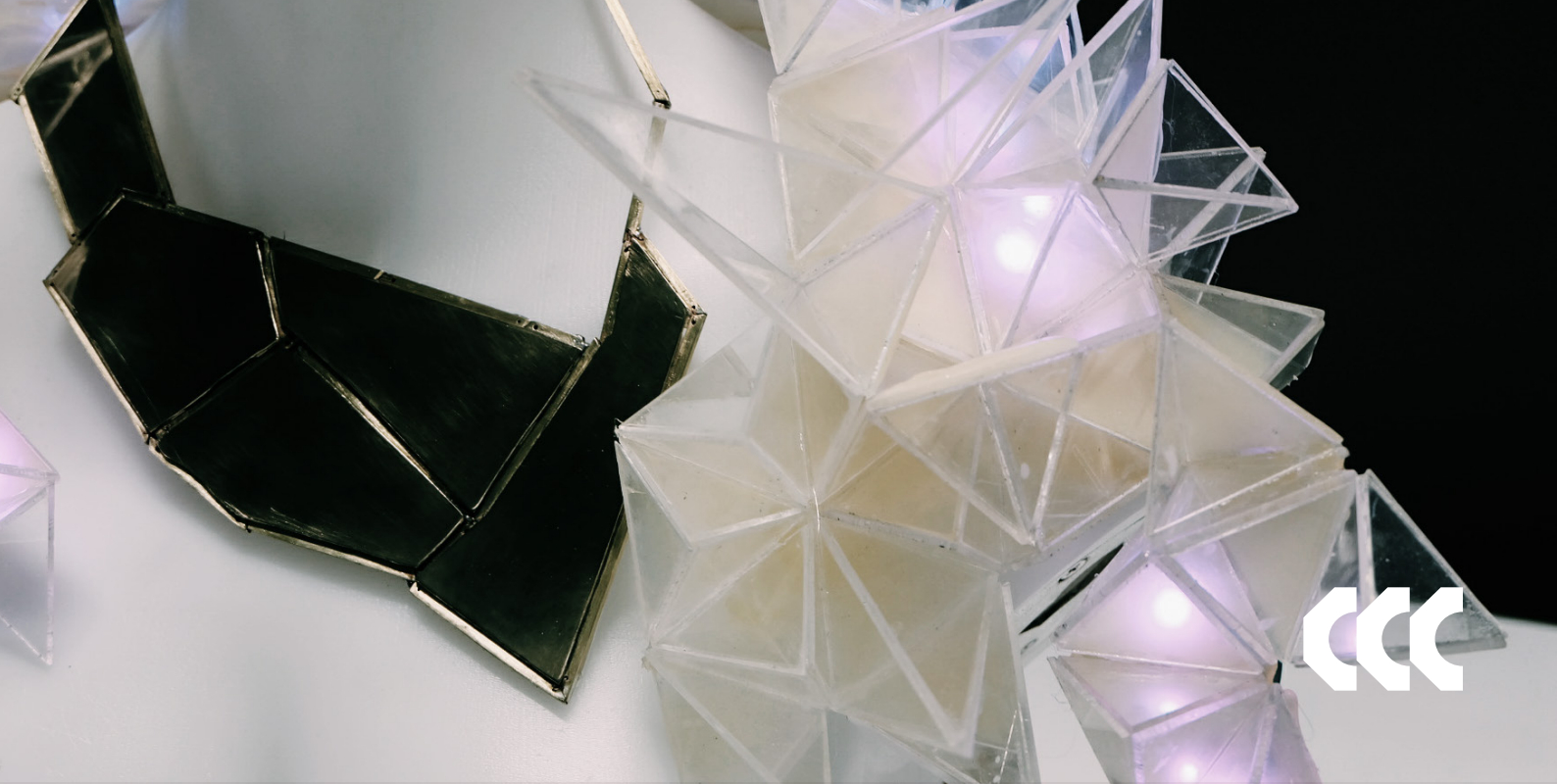
UNDER THE SKIN 2015

Dean Brough

Cotton spandex, leather (kidskin) and electronic materials

Under the Skin seeks to provoke debate on the future of wearables, a future where 'wearables' are discreet, seamless and potentially one with our body. Burgeoning E-textiles research will provide the ability to inconspicuously communicate, measure and enhance human health and wellbeing.

Alongside this, next generation wearables arguably will not be worn on the body, but rather within the body - under the skin. This work explores the idea that the future is a place where garments are not overt, not auxiliary and not apparent; a future where wearables are one with our apparel. Underwear closets our skin and is the most intimate and cloaked apparel item we wear; this work considers how wearables could transcend from the overt and, like underwear, exist unseen.



EMOTIONAL 2015

**Steve Buhagiar, Anna Kalma,
Lauren Richardson, Liv Tsim,
Ryan Ustinoff and Kosa Law Wing Yi**

Laser cut acrylic, brass, neopixels, Arduino nano and
vibration motors

Texting has become second nature to a generation that delights in connecting with each other through their mobile devices. However, humans communicate on many levels simultaneously. In our technologically savvy world, people are finding it difficult to interpret the true meaning and emotional context of a text message deprived of the myriad of more subtle signals given face-to-face.

The aim of Emotional is to eliminate the interpersonal barriers that messages have created, in order to enrich communication through texting and other means of distant communication.

The acrylic shoulder piece houses neopixels (lights) and communicates emotion through a visual display of colour. The brass necklace houses vibration motors and communicates emotion according to different

sequences of vibration. Studies have shown that vibration is an effective silent method of communication that humans can train themselves to understand, as we learn to understand any language. The brass necklace illustrates how technology can be hidden in accessories or clothing.

Emotional communicates the emotional state of a person at the time they write the text message to the wearer ensuring the wearer can interpret the text message accurately. Emotional uses Bluetooth technology to connect the garment to the user's phone. When a message is received, a signal is sent to the garment, which then reacts using varying degrees of vibration and light according to the sender's emotion. The person sending the text message will also wear the device as it has the ability to read emotion through a sensor.





INSTINCT [IN-STINGKT] 2015

**David Chapman, Stella Franks,
Holly Hutson, Chan Hong Wing
and Siu Ying Lam**

Mixed media – cloth, servo motors, camera and
microphone sensors, vibration motors, LEDs, 3D
printed ABS plastic housing, Raspberry Pi and Arduino
microprocessors

**Instinct [in-stingkt] is an
illustrative sensory concept
designed to amplify emotional
experience, transcending
boundaries and connecting people
in new ways.**

Instinct [in-stingkt] acts as an emotional translator for vision, hearing and socially impaired users. To enable this, the user wears a discrete camera and microphone sensor that acts as their eyes and ears by deploying expression and voice inflection recognition sensors. The two actuators (mechanisms that convert energy into motion) were created in two separate countries and instinctually facilitate a technologically improved emotional connection.

The Hong Kong made actuator exhibits emotion - these are expressed via the headpiece - creating an interesting platform for discussion. The various shapes of the headpiece individually move up

and down in relation to the areas of the brain that a specific emotion stimulates, creating a dramatic show of emotion that is often not acknowledged. The geometric shapes symbolise the organic shapes of the brain as a visual emotional structure.

The Brisbane created actuator notifies the user by enriching and enhancing the emotional connection. The actuator sends tingles up their spine via the enclosed 3D printed actuator. Through natural instinct, the user will be conditioned to interpret the positive or negative feelings that have been projected. Neopixels simultaneously light up under the surface of the 3D printed component (placed along the spine) in a visual display to stimulate the other sensors. Instinct [in-stingkt] is a product that simulates an emotional response, an aspect of the human experience sometimes taken for granted.

The geometric shapes
symbolise the organic
shapes of the brain.



POLITICAL LACE 2015

Melissa Coleman

Black lace, conductive thread and electronics

Political Lace is a protest piece to be worn around the neck that uses a white light to visualise the loss of a human life. It commemorates women who die before the age of 18 in childbirth.

Across the globe, every 7.5 minutes, a girl becomes the victim of a combination of preventable circumstances - lack of education, marriage before adulthood and poor healthcare. For each girl that dies in childbirth a single white light lights up the lace collar and then fades out.

15

A protest piece to be worn around the neck that uses a white light to visualise the loss of a human life.



BODYECOLOGY 2015

Tricia Flanagan

Hand spun merino lambswool, indigo, acrylic, steel, wood, electronics. Techniques: Spinning, plying, substantive dying, double cloth weaving.

In contemporary culture we are facing a sleep crisis. The apparent acceleration of modernity is one in which everything is speeding up and there are always better things to do than sleep.

This is an attention economy but we like to think that we are choosing to consume. The impulse is to consume our own insomnia through the customisation of sleep to work around deadlines or lifestyles. Our sleep cycles are no longer in tune with diurnal time – 24/7 electric light, neon cityscapes and the proliferation of electronic screens stimulate us to stay up late at night and every morning the mechanised time of our alarm clocks wake us, then on weekends we binge on sleep to catch up. 'Social jet-lag'¹ is the result of this ongoing conflict between biological and social time that takes its toll on the body and manifests in many health issues. Research has linked sleep to memory, learning, metabolism and the immune system. Sleep deprivation leads to health consequences such as obesity, hypertension, diabetes and cancer, and is linked to diseases such as chronic heart failure, chronic obstructive pulmonary disease and Alzheimer's disease.²

Somewhere at a deeper level, our hermeneutic goal is to return to healthy sleep but the healthy sleeper is not one revered in our culture. Critical sleep theory considers the history of sleep culture and acknowledges its

problematic contemporary condition, one in which the industrial revolution had the effect of mechanising time as labour was commodified into productive and non-productive time. Before this we slept in different ways, in medieval times in shorter blocks of three or four hours rather than eight hours a night. Sleep is considered a weakness that overcomes us. We embrace a work ethic that only sees value in productivity and places taboo on sleeping in public. Homer called sleep 'deaths brother'.

BODYecology is an installation that generates bespoke blankets from sleeping participants. Humanistic intelligence is the term used by Steve Mann to describe the synergy between human and computing systems, where both operate as if one organism, circumventing any conscious operative narrative. In BODYecology the sleeping state at night determines the depth of colour of a hand spun merino lambswool thread that is drawn at a constant rate across a portable dying machine, when soundly asleep the thread dives deeply into the indigo dye bath, when lightly sleeping or stirring it is shallow or skims the surface. In the day the resulting variegated coloured thread is woven into a blanket, a physical embodiment of the ontological experience of sleep. Each blanket is generated through the process over approximately a month of sleeping and weaving.



enLIGHT 2015

Raune Frankjaer

Neoprene, optical fibre fabric and electronics

The enLight is a mixed platform device consisting of a jacket with embedded technology and a mobile app. It is designed to break down interpersonal boundaries in public space and enhance social integration within the public sphere.

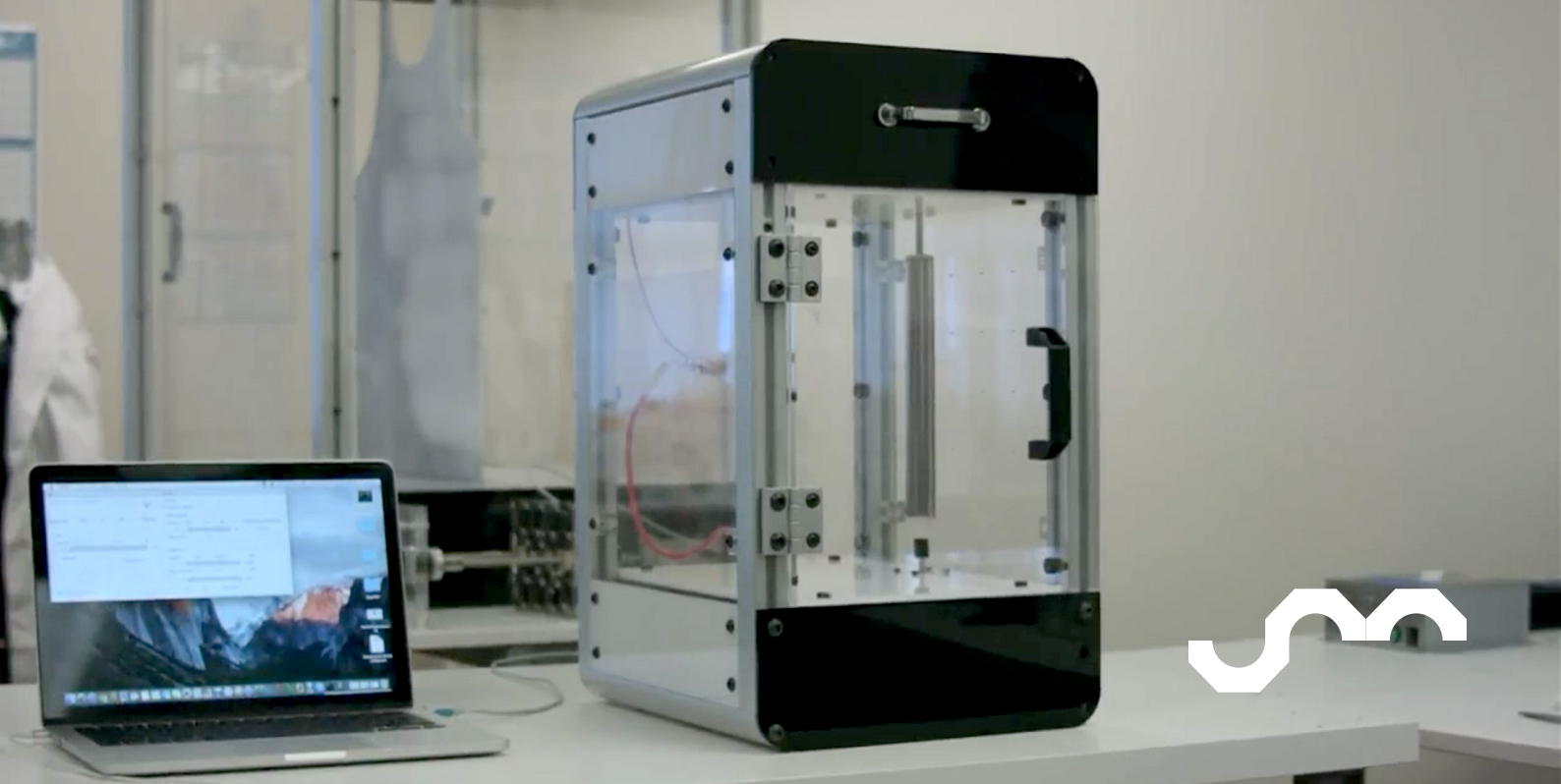
The jacket can be configured by the wearer and facilitates interaction with other enLight wearers. Controlling the jacket requires no direct action from the wearer, as it utilises data from integrated sound and proximity sensors to analyse the user's nonverbal cues and react accordingly.

Visual feedback, using the jacket's luminous fabric as a single pixel display, occurs when

the pre-programmed actions are performed. Notifications are expressed with icons and a small vibration motor adding tactile stimuli. A zipper switch is integrated into the design, serving as a 'kill switch', to ensure full user control of the jacket at any given time.

enLight is fashioned from neoprene with an inlay of polychrome fibreoptic fabric (a flexible substrate), and is as easy to wear as a conventional garment. It has a Soft User Interface (SUI) with no screen or any other way of using text or image-based communicative tools. enLight's operation relies on biometric and contextually relevant data, in conjunction with non-verbal communication cues.

Controlling the jacket
requires no direct
action from the wearer,
as it utilises data.



ELECTROLOOM 2014

**Joseph White, Foley Marcus,
Aaron Rowley**

[Digital video \(duration 2:00 minutes\)](#)

Electroloom is creating a "textile factory in a box". It uses Field Guided Fabrication (FGF) electrospinning technology to convert raw liquid materials, including polyester and polyurethane, directly into a finished, seamless fabric.

Electroloom seeks to one day develop a robust machine capable of creating finished, wearable garments. In 2015, the team successfully created their first prototype skirt, singlet, and hat using the FGF process. They see a future in which designers are able to create custom garments within the comfort of their studios or homes, rather than relying on the extensive textile industrial complex.



VIBRANTE 2.0 **2015**

Rafael Gomez and Erica Mealy

Clear Resin, Electronics, LEDs, Optic Fibre

VIBRANTE 2.0 was inspired by a research project for Parkinson's disease patients aimed at developing a wearable device to collect relevant data for patients and medical health professionals. Vibrante is a Spanish word that translates to vibrant; literally meaning shaking or vibrations.

It also has a dual meaning including vibrancy, energy, activity, and liveliness. Parkinson's can be a debilitating disease, but it does not mean the person has to lose energy, activeness or vibrancy.

As technology moves from being worn to becoming implantable and completely hidden within the body, the very notion of its physicality

becomes difficult to grasp. While the human body hides implantable technology, VIBRANTE 2.0 intentionally hides the human body by making it invisible to reveal the technology stitched within. Wires become veins, delivering lifeblood to the technology inside, allowing it to pulsate and exist, while motherboards become networked hubs by which information is transferred through and within the body, performing functions that mirror and often surpass human performance capabilities. Ultimately, VIBRANTE 2.0 seeks to prompt the viewer to reflect on the potential ramifications of the complete immersion of technology into the human body.

Performing functions
that mirror and often
surpass human
performance capabilities.



PHOTOGRAPHY Wong Ka Wing
MODEL Lee lee lee



WITHOUT FEAR - THE UMBRELLA MOVEMENT 2014

**Chan Stacey Lok Heng, Kwok Tsz
Lam Lamothy and Li Tak Yung Doris**

[Waterproof fabric, umbrella, tent poles, backpack and
plastic plant](#)

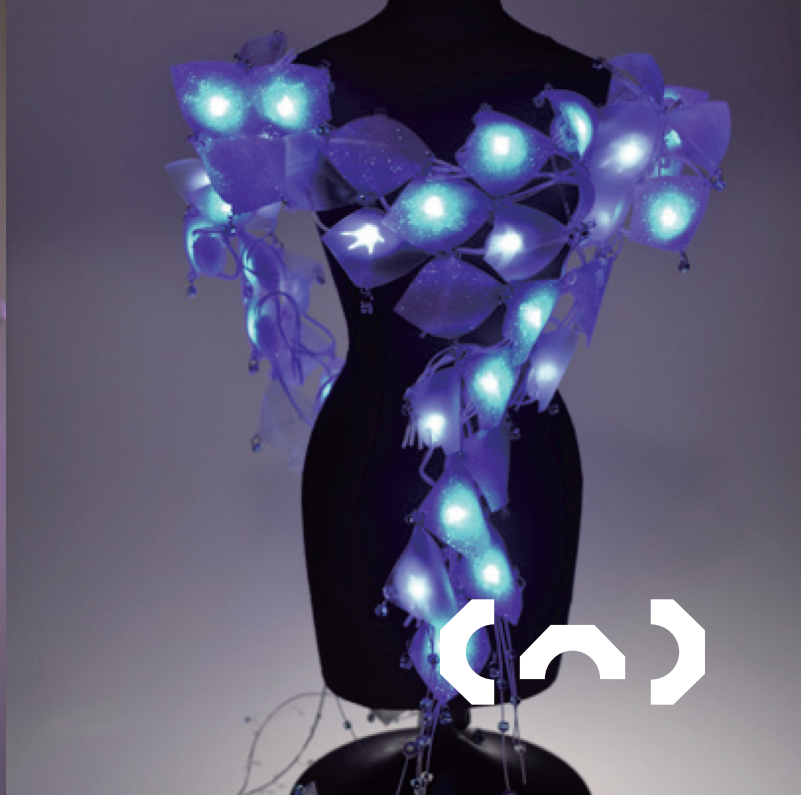
The extended sit-in protest in Hong Kong in late 2014 that the Without Fear – The Umbrella Movement work was inspired by has become known as the ‘Umbrella Revolution’.

The movement involved mass civil disobedience by pro-democracy protestors in Hong Kong’s Central Business District. During this time, the umbrella became a unique symbol of the struggle faced by protestors, as they used umbrellas to protect themselves from teargas and to conceal their identity. In this context, Without fear – The Umbrella Movement is designed with civil safety in mind. It is not only a fashion piece, it is also designed to protect the protestors. Without fear – The Umbrella

Movement is a transformational and functional wearable. The garment has been designed to enable wearers to build a shelter during times of protest, and empowers users by enabling them to wear shelter on their bodies whilst carrying a folded umbrella for protection on their back.

Without fear – The Umbrella Movement is designed with an umbrella fixed onto the backpack of the dress, allowing protestors to free their hands. Waterproof fabric protects the wearer from rain, water spray and teargas. During the day, the dress is an elegant outfit that allows the wearer to blend-in with non-protestors; at night, the dress transforms to a protective shelter, a tent.





POPN-BLUE AND POPN-PINK 2015

Erina Kashiara

Clear Resin, Electronics, LEDs, Optic Fibre

The popn-blue and popn-pink respond to the wearer's mood and engagement. When at rest, the bags present a calm and gentle colouring via their LEDs.

Then, when the wearer picks up the bag to walk, the lights start to blink. The array of light continues to react to the wearer's engagement, as well as the environment, shifting through a spectrum of colours and pulsing patterns

BREEZING LIGHT LEAVES 2015

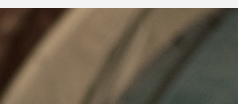
Erina Kashiara

LED, brass ring, hard PVC, electronic circuit, ABS 3D parts and battery

Beyond just their utility, clothing and accessories function as an expression of the wearer's character and emotions.

Body language is likewise capable of expressing much about a person, hands for example are widely used to gesture and communicate. Breezing light leaves is a wearable piece that explores the potential of amplifying these non-verbal expressions, by reacting to the wearer's hand gestures and movements. A sensor in the bracelet picks up the movement of the wearer and the neckpiece reacts to the hand movement, emitting light accordingly.

The array of light continues to react to the wearer's engagement.



EMBODIMENT

Tobias Klein

[Waterproof fabric, umbrella, tent poles, backpack and plastic plant Gliclee print on Hahnemuehle pearl](#)

Magnetic resonance imaging (MRI), is a medical imaging technique used in radiology to visualize detailed internal structures. MRI makes use of the property of nuclear magnetic resonance (NMR) to image nuclei of atoms inside the body, using uses a magnetic field to align the magnetization of some atomic nuclei, and radio frequency fields to systematically alter the alignment of this magnetization. This causes the nuclei to produce a rotating magnetic field detectable by the scanner—and this information is recorded to construct an image of the scanned area of the body. Magnetic field gradients cause nuclei at different locations to rotate at different speeds. By using gradients in different directions 2D images or 3D volumes can be obtained in any arbitrary orientation.

Squire's fundamentals of radiology (5th ed.). Harvard University Press.

Embodiment is a series of 2 large scale prints exploring the artist body through the use of non-invasive Magnetic Resonance Imaging (MRI)scans. Through this

visualization techniques, a form of soft embodiment is created within the emergent immersive environment of a virtual continuum. Raw data of a human MRI scan is taken as a starting point for a series of territorial investigations, iconising the soft boundaries of voxel data driven constructs. Here, digital processes are used to create three-dimensional images from the inside of the body, as a result of interactive static and variable gradients of magnetic fields.

The work is consciously produced out of scale and relation to the human point of origin and positions itself in direct opposition to the lost moment of interior as to our supposed looking outward based understanding of space. The large scale prints are embedded within a translation matrix, rendering the natural within the augmented and creating a further layer spatial complexity

The body's densities are imaged, digitized, manipulated, projected and re-imagined, creating a tentative four-dimensional representation: a simulacrum.

BIOGRAPHIES

1. *BI0dress (2014), Sara Adhitya, Beck Davis, Tricia Flanagan, Raune Frankjaer and Zoe Mahony*

A transdisciplinary group, Adhitya, Davis, Flanagan, Frankjaer and Mahony first met during the Haptic Interface workshop developed by Flanagan and hosted by the Academy of Visual Arts, Hong Kong Baptist University in December 2014. With collective experience that spans fashion, art, sculpture, textiles, technology and urban design, the group began their collaboration through a common interest in sustainability, the environment and the role technology plays in envisioning alternative futures. The group continue to collaborate and are currently developing wearables beyond the Anthropocene, through their exploration of public activism via data democratisation. Between them, the artists have exhibited works in Germany, Australia, Ireland, Italy, China, Hong Kong, United States and the United Kingdom.

Dr Sara Adhitya is an urban designer with a multidisciplinary background in environmental design, architecture, urbanism, music and sound design. She collaborates with design, research, governmental and non-profit organizations around the world towards improving the sustainability of our cities. Awarded a European doctorate in the 'Quality of Design' of architecture and urban planning, her research is concerned with the multisensorial design of our environment in space and time. She is currently a Research Associate at the Universal Composition Laboratory of the Civil, Environmental and Geomatic Engineering department, University College London.

www.cege.ucl.ac.uk/arg/ucl-squared/

Dr Beck Davis: See Curator Biographies, inside back cover.

Dr Tricia Flanagan

See Curator Biographies, inside back cover.

With a background in architecture and photography, **Raune Frankjaer** was a self-employed artisan for several years before becoming involved in new media. She holds a Master of Arts in Intermedia Design from the Trier University of Applied Sciences, Germany. Frankjaer's work investigates the application of a digital wearable interface that acts as a technological mediator between physical and social environments. Deeply invested in the pursuit of a more sustainable and liveable world for all, she sees the role of design and designers as creating new and better solutions to the products and processes presently available. Currently she teaches Spatial Media and Digital Artefacts at Trier University of Applied Sciences while spending her spare time exploring new ways of applying technology to expand the boundaries of human perception and connectivity.

www.frankjaer.de

Zoe Mahony has been a fashion designer, business CEO and educator. Mahoney has extensive Australian and European experience in RTW markets with roles in design, production, ethical supply chains, and marketing. She is a seasoned educator, teaching design thinking, communication, and new

technologies. Her current research focus is in the multidisciplinary field of Innovative Wearables in Fashion Design that combines science, technology and fashion. Recipient of the Churchill Fellowship, Mahoney has written on design studio practice in England Belgium and France.

In addition she engages in curating, exhibiting and Freelance design projects. These include collaboration with established and emerging artists/designers such as Luke Sales from "Romance was Born", Australian Fashion Icon Linda Jackson, Paper Artist Benja Harney, Performance artists Justin Shoulder and Dalas Delaforce, Guerilla Knitter Michelle McCosker. Most recently she contributed to the Haptic Interface 2014 Exhibition with the Applause Collar, a responsive wearable.

2. *Hacking the body 2.0 - practical investigations (2015), Camille Baker and Kate Sicchio*

Camille Baker is a UK-based performance artist, researcher and curator working across various art forms including participatory performance and interactive art, mobile media art, fashion technology, and responsive interfaces and environments. Baker has a fascination with all things emotional, embodied, sensed, visceral, and relational. She works on participatory projects that involve video, communication devices and bio-feedback. Baker continues to work with new and emerging technologies to explore expressive methods via art and performance in order to connect people with each other in better, more embodied and emotional ways.

www.swampgirl67.net

Kate Sicchio is a choreographer, media artist and performer whose work explores the interface between choreography and technology. Her work includes performances, installations, web and video projects and has been shown in the USA, Canada, Germany, Australia, Belgium and the UK. Exhibition venues include Banff New Media Institute (Canada), WAX Brooklyn (New York), FoAM (Brussels) and Arnolfini Arts Centre (UK). Sicchio's PhD focused on the conceptual framework of 'choreotopology' or the use of real-time video systems within live performance.

www.sicchio.com

3. *Illumine (2014) Chelsea Bateman, Sarah Capon and Benjamin Donnelly*

With backgrounds spanning art, product and industrial design, emerging artists and designers Bateman, Capon and Donnelly first collaborated during the Cloud Workshop in 2014. The Cloud Workshop was developed by Flanagan, Gomez and Davis and hosted by the Academy of Visual Arts, Hong Kong Baptist University, Queensland University of Technology and Queensland College of Art, Griffith University in June 2014. The Cloud Workshop is cross-cultural and interdisciplinary; the inaugural 2014 program challenged a selection of emerging artists and designers from the Asia-Pacific region to envision the future of wearable technology for the well-being of users. Working in collaboration with their team members in Hong Kong (Rubens Ma and Gabriel Wu), the Australian trio developed *Illumine* as their contribution to the

cross-cultural cloud based program. Illumine was first exhibited in 2014 and has since evolved through the continued collaboration of Capon, Donnelly and Bateman. Illumine, as displayed in **Wear Next_** is the second iteration of this artwork.

Chelsea Bateman is currently completing her final year in a Bachelor of Design degree, majoring in Product Design at Queensland College of Art, Griffith University, Brisbane. She has always had a strong passion for creative pursuits, drawing or getting hands on, making and building with materials she finds around herself. Bateman has a particular interest in the hand-crafted, in the unique and up-cycling. She views product design as a chance to re-design both the good and bad in the existing, approaching the process with a sustainable view. It continues to excite her knowing that repurposing materials provides opportunities for multiple purposes, extending the qualities of the medium.

Sarah Capon is currently a student at Queensland College of Art, Griffith University, studying a Bachelor of Design majoring in Product Design. She describes herself as a creative person, observing the world through drawing and photography from a young age. Her fascination with product design combines her love for observing the world through art with problem solving to create useful and visually pleasing things. She is an ambitious, motivated creative who loves her work and enjoys challenging herself to design exciting creative solutions.

www.eyepicturedthis.tumblr.com

Benjamin Donnelly is an industrial designer majoring also in architecture at the Queensland University of Technology in Brisbane. He has a strong passion for design, art, animation, film-making and any - all mediums for storytelling. He believes design is an extremely important language that supplies the means to solve a cross-disciplinary array of problems and provide innovative, sustainable and user-beneficial solutions. Donnelly is drawn to visualisation as a communication process within design. He is passionate about his work and strives to inspire others as much as they have inspired his practice.

www.benjamindonnelly.tumblr.com

4. *limbU (2014), Troy Baverstock*

Troy Baverstock has been a problem solver and tinkerer from an early age and in 2009 he received his Bachelor of Science in Psychology from The University of Queensland. Undertaking additional study in the areas of health science and engineering prompted Baverstock to shift into the study of design, which he is currently undertaking at Griffith University, Brisbane. Baverstock is fascinated by human nature, technology

and the future and strives to create thoughtful products that awaken the imagination.

www.troybaverstock.com

5. *Emotional (2015), Steve Buhagiar, Anna Kalma, Lauren Richardson, Liv Tsim, Ryan Ustinoff and Kosa Law Wing Yi*

With backgrounds spanning games design, fashion, art, product and industrial design, emerging artists and designers Buhagiar, Kalma, Richardson, Tsim, Ustinoff and Yi first collaborated during the Cloud Workshop 2015. The Cloud Workshop was developed in 2014 by Flanagan, Gomez and Davis and hosted by the Academy of Visual Arts, Hong Kong Baptist University, Queensland University of Technology and Queensland College of Art, Griffith University. The Cloud Workshop is cross-cultural and interdisciplinary; the second iteration of the program in 2015 challenged a selection of emerging artists and designers from the Asia-Pacific region to envision future scenarios for wearables that harness the power of cloud computing to transcend boundaries and enrich human interactions. During the workshop, the Hong Kong and Australian collaborative developed Emotional as their contribution to the cross-cultural cloud based program. Emotional was first developed in 2015 and the display at **Wear Next_** is the first iteration of this artwork.

Steve Buhagiar is currently studying industrial design at the Queensland University of Technology, with a minor in advertising. Buhagiar has always wanted to pursue a creative career and industrial design appealed to him for its balance between artistic and functional elements. He enjoys designing and prototyping products that enhance the human experience – both in a digital and physical sense. This desire to create user-centered products drew Buhagiar to participate in Cloud Workshop 2015, to discover new ways in which wearable technology can enhance the everyday.

Anna Kalma is studying a Bachelor of Creative Industries (Animation) and Bachelor of Information Technology at the Queensland University of Technology, Brisbane, and is in her final year of study. Kalma has always been interested in making things and combining her creativity with her IT skills. She has found that wearable technology is the perfect combination of these two areas. She hopes in the future to pursue her masters and eventually a PhD in this area. In her spare time, she enjoys drawing, crochet and reading and wants to one day travel the world.

Lauren Richardson is currently studying at the Queensland University of Technology, Brisbane, in Fine Art (Fashion) and Business. She has a diverse background in costume design, wearable technology, fine arts, fashion and textile design. She is a passionate designer who creates unique and highly conceptual garments. Paying close attention to detail is one of her strengths and she believes each element of a garment must align with the concept. She is always finding innovative ways to push and challenge the fashion landscape. She aims to involve herself in all areas of design locally and internationally, in order to gain new knowledge, skills and experience. Richardson enjoys collaborating with artists and designers across

disciplines and is interested in future collaborations.

Liv Tsim is studying at the Academy of Visual Arts in Hong Kong Baptist University, Tsim's artwork focuses on interactive installation, photography and video. Her works have been exhibited in Hong Kong, Shenzhen (China), Australia and Germany. Tsim's practice is concerned with questions among society and human relationships by means of the accumulated sensation. Her recent work centres on research and experimental electronic creations surrounding the theme of Solitude.

Ryan Ustinoff is currently studying Design Futures at Griffith University, majoring in Product Design. Up until 2014 Ustinoff was working as a qualified Carpenter, building homes from the ground up. When he isn't busy with study, he enjoys drawing ideas of his dream home, going on outdoor adventures and catching the next design trend before it becomes mainstream.

Kosa Law Wing Yi graduated from the Academy of Visual Arts at Hong Kong Baptist University. She is interested in the possibilities of different materials and explores this through the creation of her artworks. She is also interested in public interactive art. The Haptic Interface Cloud Workshop has inspired her to combine technology into future work. Technology has allowed her artwork to evolve as a means to improve the lives of people, and Law looks forward to furthering her collaborative projects with Australian artists and designers in the future.

6. *Instinct [in-stingkt]* (2015), David Chapman, Stella Franks, Holly Hutson, Chan Hong Wing and Siu Ying Lam

With backgrounds spanning art, product, interior design, industrial design, IT and game design, emerging artists and designers Chapman, Franks, Hutson, Wing and Lam first collaborated during the Cloud Workshop 2015. The Cloud Workshop was developed in 2014 by Flanagan, Gomez and Davis and hosted by the Academy of Visual Arts, Hong Kong Baptist University, Queensland University of Technology and Queensland College of Art, Griffith University. The Cloud Workshop is cross-cultural and inter-disciplinary; the second iteration of the program in 2015 challenged a selection of emerging artists and designers from the Asia-Pacific region to envision future scenarios for wearables that harness the power of cloud computing to transcend boundaries and enrich human interactions. During the workshop, the Hong Kong and Australian collaboration developed *Instinct [in-stingkt]* as their contribution to the cross-cultural cloud based program. *Instinct [in-stingkt]* was first developed in 2015 and **Wear Next_** is the first display of this work.

David Chapman has been passionate about product design since a very young age. As a child he loved to tinker and tear things apart in a constant euphoria of learning. In recent years he has been completing an honours degree in Industrial design at QUT. Chapman also participated in the inaugural installment of Auxiliary Design School. He viewed the Cloud Workshop as an opportunity to expand his knowledge around technology through a collaborative workspace. The workshop was challenging and beneficial in moving forward with

ideas and study. He feels it has helped him realise the potential of available technology.

Stella Franks is a residential drafter and holds a Diploma of Interior Design and Technology. She is currently studying Design at Queensland College of Art, Griffith University - majoring in Interior Environments. Inter-disciplinary design has been a concept that has resonated with Franks throughout her studies - the notion of the Cloud Workshop was alluring. Franks considers herself a technophobe; Wearable Technology was ideal for her to express creativity in a medium that she thought was not possible. Interacting with team members based in Hong Kong added an additional dimension to the project for her, introducing innovative ideas and new perceptions.

Holly Hutson has always been interested in combining the technical and the artistic, and creating new ways for people to interact with their world. As a programmer and interaction designer she has focused on the fields of human-computer interaction, tangible media and web design and development. The Cloud Wearables Workshop offered Huston an opportunity to collaborate across cultures and disciplines, allowing exploration into the ways technology and art could work together to cross boundaries and improve people's lives.

7. *Political lace* (2015), Melissa Coleman

Melissa Coleman is a media artist, creative technologist and curator in the field of electronic textiles. Her works include critical explorations of technology's relation to the body, nature and culture. Coleman has written for *Fashioning Technology*, she is currently based in London and has taught art and design in cultural institutes worldwide. Currently, she teaches with Codasign and writes code for *Made by Many's* Hackaball, a connectedball that teaches children coding through play. In 2010 she co-founded the V2_ E-Textile Workspace, a bi-monthly expert meeting for artists and designers working with textiles and electronics. In 2015 she co-founded a London-based wearables meetup with **Wear Next_** artist Camille Baker. Coleman's travelling e-textiles exhibition, *Pretty Smart Textiles*, has been shown in The Netherlands, Denmark, Vienna and Belgium. Her most recent exhibition on fashion and biotechnology, *Hybrid Skins*, looked at the utopias and dystopias presented by fashion designers when looking at the future intersections of body, technology, ethics and aesthetics.

www.melissacoleman.nl

8. *Collide*, Natalia Scigulla, Thomas Duffy, Yannie Hiu Yan Hung, Rainbow Kwok, Laurence Fairbairn, Trang Le

10. *BODYecology* (2015), Tricia Flanagan

Dr Tricia Flanagan: See Curator Biographies, inside back cover.

9. enLight (2015), Raune Frankjaer

With a background in architecture and photography, **Raune Frankjaer** was a self-employed artisan for several years before becoming involved in new media. She holds a Master of Arts in Intermedia Design from Trier University of Applied Sciences, Germany. Frankjaer's work investigates the application of a digital wearable interface that acts as a technological mediator between physical and social environments. Deeply invested in the pursuit of a more sustainable and liveable world for all, she sees the role of design and designers as creating new and better solutions to the products and processes presently available. Currently she teaches Spatial Media and Digital Artefacts at Trier University of Applied Sciences while spending her spare time exploring new ways of applying technology to expand the boundaries of human perception and connectivity.

www.frankjaer.de

10. Lightening Bug (2014), Raune Frankjaer

Electroloom was founded by Aaron Rowley, Marcus Foley, and Joseph White—three engineering undergraduate and graduate students from California Polytechnic State University at San Luis Obispo in the United States. After working with various 3D printers in an industry environment, the three set out to develop a technology that was capable of additively manufacturing truly fibrous material. Their backgrounds range from mechanical, biomedical, and software engineering.

11. VIBRANTe 2.0 (2015), Rafael Gomez and Erica Mealy

Dr Rafael Gomez: See Curator Biographies, inside back cover.

Dr Erica Mealy is a computer/human interaction and software engineering lecturer and researcher. She holds a PhD in user-centered design of software and has 13 years of industry experience developing software in areas as diverse as sports analysis, transportation, compiler technology and embedded computing systems. Recently her focus has turned to electronics, wearable technology and the 'Internet of Things'. Mealy is also a passionate outreach campaigner, receiving Google and Digital Careers Australia grants to run wearable technology workshops for high school students and teachers to attract the next generation of software and technology innovators.

12. Without fear - The Umbrella Movement (2014), Chan Stacey Lok Heng, Kwok Tsz Lam Lamothly and Li Tak Yung Doris

With backgrounds in visual art and fashion, emerging

artists Chan, Li and Kwok met while studying at the Academy of Visual Arts, Hong Kong Baptist University. Their work *Without fear - The Umbrella Movement*, is a collective piece, inspired by the strength and character of the Hongkongnese during their struggle against China's proposed reforms to the electoral system. With many of their friends and family taking up the non-violent protest, Chan, Li and Kwok felt compelled to connect and consider the future of wearables for protest and activism. The resulting *Without fear - The Umbrella Movement* work was first developed in 2014, during the political demonstrations and has been exhibited at the Koo Ming Kown Exhibition Gallery, Hong Kong. The display in *Wear Next_* is the first iteration of this artwork.

Chan Stacey Lok Heng is an artist based in Hong Kong and currently majoring in Visual Arts at the Academy of Visual Arts, Hong Kong Baptist University. She has a strong passion for craft and design with a focus on the art of wearables, glass, jewellery and ceramics. She believes that craft goes beyond the design of a functional objects, it must also include emotions and expression. Chan's recent work seeks to explore this interaction between art, emotion, function and design. She is drawn to her creative expression, through art and making, and seeks to express social issues that awaken society.

Kwok Tsz Lam Lamothly is a Hong Kong-based artist, majoring in Visual Arts at the Academy of Visual Arts, Hong Kong Baptist University. He enjoys exploring different art forms and working with a variety of materials and mediums. He maintains a fascination for drawing and interactive art. Through his artwork, Kwok likes to depict simple subjects that reflect current issues and subtle human emotions. For Kwok, art is the expression of the creative everyday.

Li Tak Yung Doris is studying Visual Arts at the Academy of Visual Arts, Hong Kong Baptist University. For Li, art is the passionate expression of ideas and qualities beyond utilitarian purposes. During the Umbrella Revolution in Hong Kong in 2014, Li believed that she could encourage people to support the cause both spiritually and through art. With this in mind, she collaborated with Chan and Kwok to create the transformational dress *Without Fear - the Umbrella Movement*. Through this piece, Li was able to provide a representation of art as an expression of beauty, activism, safety and democracy. Li continues to explore art as a method of creative and political expression.

13. Breezing light leaves (2015), Erina Kashiara

Erina Kashiara is a renowned Japanese wearable technology artist who has been creating light accessories and garments since 1985. Her work revolves around social conventions and the reflection of human emotion through illumination and light. Kashiara has exhibited across Japan, Europe, Canada, China and the United States, including recent exhibitions at Shenzhen Maker Faire (China), LUMINARE (Germany), Make: Fashion (Canada), BURST (Canada), Glass Art Foundation Show (USA), and Original Body jewellery design for Asian beauty Expo (Tokyo).

14. popn-blue and popn pink (2015), Erina Kashiwara

Erina Kashiwara: See previous biography.

15. Embodiment, Tobias Klein Studio Tobias Klein is an office operating across the fields of architecture, art, experimental design and interactivity. Trained as an architect, Klein maintains a fascination with the construct of space and questioning modern understandings. Through his work he seeks to instigate a re-positioning between embodiment, perception and projection. To achieve this Klein's work constantly evolves between static and dynamic models, shifting from objects to installations and design seeking new visual territories in the field of narrated, embodied space.

www.kleintobias.com

www.facebook.com/studiotobiasklein

CURATOR BIOGRAPHIES

Wear Next_ Hong Kong was curated by **Tricia Flanagan**. **Wear Next_ Brisbane** was curated by **Beck Davis** and **Rafael Gomez** for **Artisan Gallery**, **Brisbane**.

Dr Beck Davis is a Lecturer in digital technologies, design methods and Convenor of the Product Design Major at the Queensland College of Art, Griffith University. She is a Queensland Chapter Council Member for the Design Institute of Australia, managing the Education and Research Portfolio. Beck holds a PhD (Industrial Design, QUT) in the analysis of gestural interactions between design teams as well as the use of metaphors and analogies during the creative process. She continues to research early stage design and is currently exploring "Mediated Interactions: How Technologies Shape Experiences and Creative Collaborations" funded by a New Researcher Grant. She recently cocurated the *Experimental Thinking / Design Practices* (2015) exhibition at Griffith University Art Gallery, Brisbane and managed the *Design in Flux* (2014) exhibition at Crane Arts, Philadelphia.

www.hellobeckdavis.com

Dr Tricia Flanagan has been exhibiting internationally since the mid 1990's and is represented in private and public collections in Australia, Ireland, Germany, Italy and China. She is the winner of four CASP funded Public Art commissions, a UGCTD Grant to develop PIPA; selected representative for Oceania at the Tournai Contemporary Textiles Biennial Belgium;

recipient of the Australian Postgraduate Scholarship Award and winner of the Max Fabre Foundation Award for Environmental Awareness. Flanagan began her career as a fashion and costume designer but quickly discovered a passion for sculpture. Since completing a Master of Arts in Public Art and New Artistic Strategies (Bauhaus University) in 2003, her practice has focused on the public sphere through the mediums of site-specific sculpture, social sculpture, sound sculpture, sculptural installation, wearables and performance installation. Awarded a PhD (Public Art) University of Newcastle. Flanagan established the Wearables Lab at the Academy of Visual Arts, Hong Kong Baptist University in 2009 where she worked as Assistant Professor until joining University of New South Wales Art and Design in 2016. Her research is published in books and journals. She is on programming committees for: HCI DUXU where she chairs an annual session on Wearable technology; IEEE ICALT Wearable Technologies in Education; and IARIA InfoWare, COLLA. Flanagan is the founder of on-going experimental arts research initiatives: the Peripatetic Institute for Praxiology and Anthropology and the Haptic InterFace project. She currently lives and works in Hong Kong and Sydney.

www.triciaflanagan.com

<http://triciaflanagan.com/haptic-interface/>

<http://pipa.triciaflanagan.com/>

Dr Rafael Gomez holds a PhD in design and emotional experience, and is a prominent researcher in the field, publishing nationally and internationally. Increasingly, his research is revealing the complex emotional relationship between products and wellbeing of individuals at the intersection of design and health. In addition, Gomez has over 15 years industry design experience in aviation, construction, medical, government and consumer electronics industries. He is design director for Propaganda Mill, a multidisciplinary design company working across various fields of design. He is a Council Member of the Design Institute of Australia Queensland Chapter, Founder and Chair of the Design and Emotion Society Australia Chapter and Committee Member for the 2015 IASDR Design Conference.

www.rafaelgomezdesign.com

www.staff.qut.edu.au/staff/gomezr

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artisan

Liana Heath, CEO
Richard Stride, Exhibitions manager
Lisa Beiby, Exhibitions
Danielle Harvey, Exhibition assistant
Jaala Alex, Exhibition assistant

AVA Gallery

Yannie Hiu Yan Hung, Exhibition coordinator
Marco Ho Ching Ma, Exhibition installation
Liv Man Hoi Yee, Exhibition graphics
Hoi Yee Man, Exhibition graphics
Louis Chun Fai Ng, Exhibition assistant

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