

HONG KONG'S **LEADING EVENT ON DESIGN-LED** TECHNOLOGY **FOR SOCIAL GOOD**













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MESSAGE FROM EVENT CHAIR

Fast evolving contemporary lifestyles see a demand for design and technology integrate-products that can seamlessly integrate into everyday life to enhance well-being. Innovations emerge from the bridging of design and technology creating a symbiotic relationship between creatives and engineers. Designing for the future will involve working collaboratively across disciplines as life, work and well-being boundaries are blurred.

In the summer of 2019, Designing Future Techstyle (DFT) 2019 brought together the world's top design academics, cutting edge practitioners and innovative young designers to set agendas representing the designers' perspectives and foster creativity in the context of design-led technology for social good. The event includes four activities: symposium, international competition, workshops and travelling exhibitions. DFT 2019 provided a platform for active discussions, explorations and the fostering of an interdisciplinary creative atmosphere. The variety of activities creating vital opportunities for international and local communities to engage.

It had been a great pleasure curating this event. I will like to extend my heartfelt gratitude to our lead sponsor CreateHK, for their belief and trust in us to create a vibrant creative platform at the intersection of design and technology. will like to express deep appreciation for our co-organizer and sponsor, The Mills Fabrica for their endorsement and professional camaraderie. I will like to thank our academic collaborators, Royal College of Art, Tsinghua University; Strategic Partner, Parsons School of Design, our international advisory board, speakers, designers, event participants and exhibition visitors for their support and the overwhelmingly positive feedback that we have received. The project had been a great success with over 400,000 participants across all events. The DFT 2019 organizing committee and I look forward to further contributing to the global design community in the future!

Dr Jeanne Tan

Event Chair, Designing Future Techstyle 2019 Associate Professor, Institute of Textiles and Clothing, The Hong Kong Polytechnic University









QUOTES FROM OFFICIATING GUESTS

"There aren't too many universities in the world that can integrate design and technology together, except PolyU. PolyU can integrate both to upgrade the whole industry."

Hon. Felix Chung

Legislative Council Member

"Designing Future Techstyle surpasses the traditional definition of design by encompassing all aspects of technology integrated fashion, material and product design. It also focuses on the needs to work collaboratively across disciplines as technology and consumer demands evolve."

Jersey Yuen

Assistant Head of Create Hong Kong, the Government of the Hong Kong Special Administrative Region "Designing Future Techstyle is a very meaningful event with the altruistic goal to change the world by pushing technological boundaries for social good."

Dr Miranda Lou

Executive Vice President of The Hong Kong Polytechnic University "I am proud that ITC organised such a meaningful event to nurture young designers locally and internationally by offering them a platform to exchange ideas through the Techstyle for Social Good International Competition. They and their future designs will certainly bring about positive impacts to the global community."

Prof. Jintu Fan

Head and Chair Professor of The Institute of Textiles and Clothing, The Hong Kong Polytechnic University "All innovations take time, and no journey of innovation is ever singular. We hope this competition marks the start of a sustainable and collaborative journey of innovation for young talents."

Vanessa Cheuna

Founder of The Mills and Managing Director of Nan Fung Group

DESIGNING FUTURE TECHSTYLE INTERNATIONAL SYMPOSIUM

The Designing Future Techstyle International Symposium was held at The Mills Fabrica on 28 June 2019. It created awareness for multi-faceted design approaches for techstyle and highlighted the industry's needs to work collaboratively across disciplines as technology and consumer demands evolve. The symposium provided a vital platform for international and local creative communities to exchange, discuss and share new insights into design-led technology innovations for social good and sustainability.







Professor Naren Barfield

Deputy Vice Chancellor and Provost, Royal College of Art

Keynote Presentation: Useful Innovation

"Innovation design solutions are for real people, rather than for a notional standard human being, this is what we call inclusive design."





Francesca Rosella

Co-founder, Cute Circuit

Keynote Presentation:
Cute Circuit - Haute
Couture and High
Technology Merge to
Create a New Dimension
for Human Experience

"You are living in the future - dress like it."









Professor Chen Lin-Lin

Dean of Industrial Design, Chair of Design Innovation Strategy, Eindhoven University of Technology

Keynote Presentation: TU/e Wearable Senses Lab: Developing New Methods towards Smart Textile Products and Services

"It's always a combination of the designers' thoughts and the help of computers to make the production possible."





Keynote Presentation: THEUNSEEN: Seeing What the World cannot See for Itself

"When you think of the world and the material, and the material is a translation language piece, then the world opens in a different way."









Moderator: Alexander Chan

Co-director, The Mills Fabrica



Grace Jun

Assistant Professor of Fashion, Parsons School of Design

"Identify the social good rather than tech and design."



Dr Amy Winters

Visiting Lecturer, Royal College of Art; Founder, Rainbow Winters

"I think there is going to be an opportunity in the future where the process about developing your idea for social good actually can be transferred into industry."



Dean of Fashion & Textile Design Department, Academy of Arts & Design, Tsinghua University

"As an educator, it's a big challenge for us today how to educate our next generation to balance technology and art."



IEKNA HONAL STMP





Burak Cakmak

Dean of Fashion, Parsons School of Design

Keynote Presentation: Redefining the Fashion System in the 21st Century

"As we are using technology to bring change, we need to understand the impact on society and how does it change in a responsible manner.







Christianna Wincek

Flyknit Innovation Material Design Director, Nike

Keynote Presentation: Nike Flyknit: The Role of Design in Performance Fabrics

"...We design with the tool, the machine and mind."





Christine Goulay

Sustainable Innovation Senior Manager, Kering Group

Keynote Presentation: Sustainable Innovation at Kering

"When you are looking at these innovations, you have to be careful what is the impact."





TECHSTYLE FOR SOCIAL GOOD INTERNATIONAL COMPETITION

The Techstyle for Social Good International Competition held its grand finals on 28 June 2019 at The Mills Fabrica. The competition aimed to seek young designers that blur the boundaries of design and technology to create innovations with social impact. It attracted international and local entries from Australia. Hong Kong (HK), the Mainland, Singapore, United Kingdom (UK) and the United States of America (USA). Twelve design entries were selected to showcase their designs at the exhibition and compete for the five awards via a pitch presentation.

The ten distinguished speakers of the symposium formed the competition's panel of judges.

The judges were impressed by the participants' creative ideas and their sensitivity to social issues. The finalists were encouraged to continue exploring and seek innovative techstyle solutions for the benefit of society.

The winners of the awards were:

- Techstyle Grand Prize -Cair Collective by Amy Yu Chen and Claudia Poh (Parsons School of Design, USA)
- Sustainability Grand Prize -Heritage Craft Innovation by Christine Lew and Florian Wegenast (Central St. Martins, UK)
- Techstyle Special Prize -The Hands Free Mouse by Hunmin Koh (Massachusettes intitute of Technology, USA)

- Sustainability Special Prize -Seam Unseam by Naila Al-Thani (Central St. Martins, UK)
- Hong Kong Best Design Award -Aesthesis - Partial hand accessories for amputees by Wendy Wing-Yan Law (The Hong Kong Polytechnic University, HK)



FINALISTS

01



Naila Al-Thani MA Material Futures, Year 2, Central Saint Martins, University of the Arts London, UK

Seam Unseam

In response to today's fashion that quickly transforms into tomorrow's waste in the fast-paced, short-lived linear cycle of consumption, SEAM UNSEAM is a design project that investigates garment longevity and sustainability through the use of alternative construction methods.



02



Dominic Co BA Architecture Studies, Year 4, The University of Hong Kong, Hong Kong



Wenbin Zhu PhD Student, Textile Technology, Donghua University, Mainland



Ge Lan
PhD Student,
Institute of Textiles
& Clothing, The
Hong Kong
Polytechnic
University,
Hong Kong

Mintissue: Dirt-activated Color Changing Tissue

This innovative solution is devoted to helping users battle against the many different sources of skin pollutants so that they have healthier and cleaner skin. The product increases the awareness of users by not only allowing them to visualize a clean face, but ensuring that they wipe their face with clean and skin friendly tissues that reduce the occurrence of skin infections. With "MINTISSUE", skincare users will experience an improved quality of life and healthier lifestyle.



03



Amy Yu Chen BA Fashion Design, Graduate of 2018, Parsons School of Design, USA



Claudia Poh BA Fashion Design, Graduate of 2018, Parsons School of Design, USA

Cair Collective

The Cair Collective dressing system provides an automatic dressing experience that goes beyond a single user. The process of designing universally allows us to cater to those who have been marginalized by the industry. The innovativeness and convenience can also contribute to new ways of dressing for everyone. Cair Collective believes in a fashion future that is human-centric, in which health elements are incorporated into design processes.



04



Heeyoung Kim
PhD Student, Institute
of Textiles & Clothing,
The Hong Kong
Polytechnic University,
Hong Kong



Joungmin Yoo MA in Service Design, Graduate of 2016, Royal College of Art, UK

Sensory Book

Sensory focused and cognitive training activities for people who suffer from dementia are accessible through care facilities in Hong Kong. Through this Sensory Book, family members and informal caregivers will be motivated to continue interactive activities with their loved ones or patients with dementia. This project was collaborated with Hong Kong Sheng Kung Hui Lok Man Alice Integrated Service Centre.



FINALISTS



Hunmin Koh MSc in Architecture Studies - Design Computation, Graduate of 2018. Massachusetts Institute of Technology, USA

Hands-free Mouse

The Hands-free Mouse is a wireless mouse designed for pedal input. People who have an arm disability are challenged with the majority of computer interfaces that have been developed with hand dexterity in mind. The new design supports the entire foot to reduce the traction forces and withstand the pressure of the leg in its relaxed state at the same time. With a relatively simple modification to an existing wireless mouse, the Hands-free Mouse is a straightforward and affordable type of assistive computer hardware.



06



Jamela Law BA (Hons) Fashion Design and Textiles, Graduate of 2017, LASALLE College of the Arts, Singapore

Beeing Human

Beeing Human is a tribute to nature's wonders. Different 3D printing technologies are incorporated into the fabrication process of Beeing Human. Three-dimensional printing could be a sustainable alternative to conventional sweatshop practices and large-scale industrial wastage. The resultant modular dresses can also be mended by simply replacing one tile at a time, thus minimizing wastage. The design conveys an environmentally related message and educate the audience by encouraging them to rethink about their relationship with nature and 'putting the pieces together'.



07



Wendy Wing Yan Law BA (Hons) Scheme in Design - Product Design, Graduate of 2019, The Hong Kong Polytechnic University, Hong Kong

Aesthesis - Partial hand accessories for amputees

Aesthesis is a 3D-printed functional aesthetic device on the hand for "people who have lost their thumbs". The ultimate goal of Aesthesis is to allow thumb amputees to regain autonomy over life, be it self-care ability or their social and family lives, as well as empower them to have self-confidence and self-appreciation. Project Aesthesis also aims to create a barrier-free environment.



08



Florian Wegenast MA Industrial Design, Graduate of 2017, Central Saint Martins, University of the Arts London, UK



Christine Lew MA Material Futures, Graduate of 2017, Central Saint Martins, University of the Arts London, UK

Heritage Craft Innovation

By exploring the materiality of waste, Studio Florian and Christine would like to introduce these new upcycled materials to local craftspeople and extend the conversation of upcycling to more creative practitioners. The studio's belief is that their continuation of waste material research and collaboration in the crafts will help to address the city's waste issue, while supporting and bringing awareness to dying crafts that are native to Hong Kong.



FINALISTS

09



Li Shao MA In Fashion and Textile Design, Graduate of 2018, The Hong Kong Polytechnic University, Hong Kong



Dr Vera Bai

Phd, Institute of Textiles &
Clothing, Graduate of 2014,
The Hong Kong Polytechnic
University, Hong Kona

ThermoCare Blanket

The ThermoCare Blanket combines photonic textile and a temperature sensor, that can provide continuous monitoring of the body temperature. The blanket can act as a subjective measurement of the body temperature of a baby, and gives real-time feedback to the parents and/or other carers. With this product, parents can enjoy a peace of mind. The product can also reduce the risk of the baby from harm. The photonic fabric is comfortable and safe to wear, since all of the electronic parts are seamlessly embedded into the textile surface.



<u>10</u>



Tiffany So BBA Global Business, Year 1, The Hong Kong University of Science and Technology, Hong Kong



Cherry Yip BBA Global Business, Year 1, The Hong Kong University of Science and Technology, Hong Kong

Sew.eazy

Sew.eazy is a seamless tailoring experience for home, which allows consumers to be environmentally and socially responsible. The system is accessible, convenient and affordable. Wasteful consumption and the unlikelihood of wearing upcycled clothing in Hong Kong aggravate the fashion waste and pollution problem. Sew.eazy alleviates the solid waste problem by prolonging the life cycle of clothing by encouraging upcycling; social inclusiveness is also promoted through our concept of personalised upcycling to design well-fitting clothing for all body types and sizes.



11



Juncheng Wen
MSc & MA, Global Innovation Design,
Year 1, Imperial College & Royal College
of Art, UK

MeetWater: Soluble paper towel for hand drying and caring

MeetWater will contribute to health and wellbeing while reducing environmental impacts. First, compared to conventional paper towels, MeetWater will eliminate the energy used to transport and dispose waste. Secondly, MeetWater will eliminate the need for a separate hand lotion, which will reduce the plastic waste from hand lotion containers. Thirdly, utilizing tofu dregs as the main material promotes the upcycling of food waste.



12



Dr Miu WongPhD, Institute of Textiles & Clothing,
Graduate of 2018, The Hong Kong
Polytechnic University, Hong Kong

Interactive Polymeric Optical Fibre (POF) Textile for Footwear Design

POF footwear is designed for the community-dwelling elderly and acts as a source of low-level illumination to enable the elderly to gain more visibility in dim and dark environments. The footwear lights up when it detects movement from the elderly as they are getting out of bed. This increases the luminance of the environment, which helps the elderly to avoid tripping over objects at home when it is dark. In addition to preventing falls, the colour-adaptive feature can also allow the elderly to customise the lighting colour of their footwear with a mobile interface. The POF footwear aims to provide living assistance and improve the quality of life of the elderly.



DESIGNING FUTURE TECHSTYLE - CREATIVE TECHSTYLE WORKSHOPS

Three creativity techstyle workshops were conducted by the designers-in-residence with local students. The designers-in-residence are Dr Jeanne Tan of The Institute of Textiles & Clothing, The Hong Kong Polytechnic University, Amy Winters of School of Design of Royal College of Art and Grace Jun of Parsons School of Design. Using a design-led STEM approach, the workshops introduced novel materials, wearable technology, interdisciplinary design processes and innovative approaches to the participants. The three design residents possess design practice and academic backgrounds in the subject matter and in-depth experience with conducting workshops. The aim of the workshop is to foster participants' interests in design innovations and potential careers with contribution to the design industry.



Workshop 1:

DESIGNING WITH INTERACTIVE **TEXTILES FOR FASHION**

Designer-in-Residence: Dr Jeanne Tan.

Associate Professor, The Institute of Textiles and Clothing, The Hong Kong Polytechnic University

Contemporary lifestyles that are fluid and transient have broken down the traditional perceptions of fashion design. There is a need for textiles that can adapt to the fast evolving needs of the users. In contrast to conventional materials that remain inert, interactive textiles can be customized via changes in color, structure and function. Such materials provide opportunities for fashion to serve not only as a form of protection from the elements but also as an alternative communication platform among users, viewers and the environment.

This practice-based workshop led the participants to play, experiment and co-create design innovations with interactive textiles.

The workshop content includes: Interdisciplinary approaches for design and technology integrated products.

- Physical and functional properties of interactive textiles.
- Design considerations when working with unconventional materials.
- Understanding how design led technology can contribute to society.





Workshop 2: BUILDING A SOFT MACHINE, **EXPLORING** INTERACTIVE **SOFT ROBOTS** FOR TEXTILES AND WEARABLE TECHNOLOGY

Designer-in-residence: Dr Amy Winters, Lecturer, School of Design, Royal College of Art

Soft Robotics is an exciting new field for design inspired by the flexible nature of creatures such as octopuses and caterpillars - these squishy and stretchy machines are ideal for textiles and fashion.

This workshop offered a hands-on approach for participants to explore responsive soft surfaces which change colour, shape and pattern through visual and tactile experiments. Inspired by natural systems such as blooming flowers that transform under clouds, sunlight and rain can we imagine our clothing shifting in shape and colour?

The first stage of the workshop focused on the basics of soft

robotics, materials and sensors, and we will observe fabrication methods like laser cutting and casting. Live experiments offered participants the opportunity to design and create their own 'soft robot' which interacts with environmental changes such as temperature and humidity, light or even air quality.

The workshop explored the poetic, ecological and expressive abilities of soft robotic technology and demonstrate how designers can use simple prototyping techniques in physical computing and digital fabrication to create their own 'soft machines'.

Workshop 3:

INCLUSIVE DESIGN PRACTICE FOR FUTURE WEARABLES

Designer-in-residence: Ms Grace Jun.

Assistant Professor of Fashion at Parsons School of Design; Executive Director at Open Style Lab

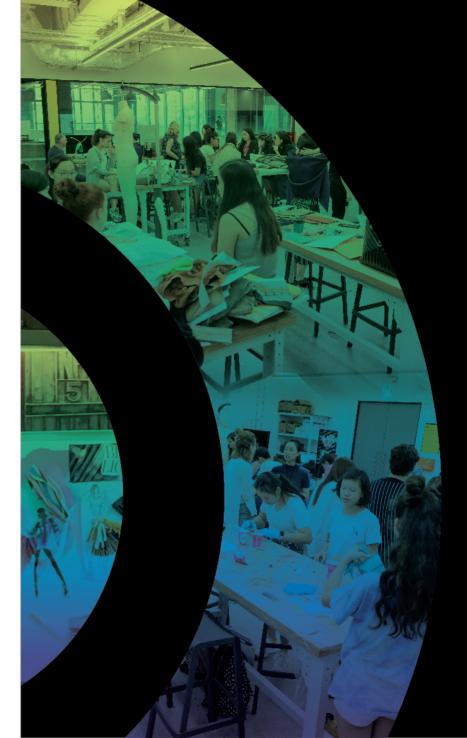
This workshop led the participants to examine design affordances in hacking, altering, and deconstructing existing clothing. Participants are asked to bring a long sleeve shirt to repurpose them into future functional clothina. Other than sustainable benefits, participants were introduced to fashion design basics (i.e. patterns, cutting and construction) and tools to create new affordances that are inclusive of disability. For many people, finding attire that fits well can be a tedious task. The clothes designed today are inaccessible for people with disabilities (i.e. wheelchair users). Based on disability case studies and examples provided, participants created their own

dressing scenarios that focus on functional and/or stylish opportunities that are inclusive of all people. Each participant hacked (alter and deconstruction) a shirt to create a visualization of his/her own interpretation of a dressing experience based on one of the following topics:

- Designs that help with quicker dressing (i.e. more stretch and different clothing closures like buttons)
- Designs that involve collaborative exchange or interactions (i.e. co-dressing)
- Designs that provide durability (i.e. tearing)
- Designs that protect against the weather







QUOTES FROM THE DESIGNERS:

Dr Jeanne Tan:

'The workshop was an exciting opportunity to play and experiment with such a diverse group of students. It was inspiring to see their curiosity for creativity and technology."

Dr Amy Winters:

"It was fascinating to observe the creative thinking of the students experimenting with soft robotics. The inventive and hands-on nature of the workshop allowed the discovery of new-found abilities."

Grace Jun:

"This workshop and panel helps continue the important conversation on how fashion and technology can impact social change by the collaborative work continued with HK PolyU, Parsons, and Open Style Lab."

TECHSTYLE FOR SOCIAL GOOD INTERNATIONAL EXHIBITION

The Designing Future Techstyle 2019 travelling exhibition was held at The Mills on 28 June - 26 August 2019 and The Fashion Gallery, The Hong Kong Polytechnic University on 27 August- 20 September 2019. The exhibition showcased cutting-edge designs from the industry, academia with the creative innovations of the twelve shortlisted finalists of the international design competition. The exhibitors from industry and academia include:

- CuteCircuit
- Christianna Winchek, Nike
- Dr Jeanne Tan, The Hong Kong Polytechnic University
- Lauren Bowker, The Unseen
- Laurentius Lab, Loe Feijs and Marina Toeters of by-wire.net
- Open Style Lab, Parsons School of Design
- The Soft Systems Research Group, Royal College of Art
- Qi Wang, Eindhoven University of Technology



DESIGNING FUTURE TECHSTYLE 2019 -

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Access

Designing Future Techstyle 2019 portfolio of deliverables are accessible on these repositories and websites:

POLYU Institutional Archive: hdl.handle.net/10397/81074

www.polyu.edu.hk/itc/dft2019/

www.drjeannetanresearch.com

Exhibition Design and Graphic Design: Number 2

