WILDFIRE
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WILD FIRE

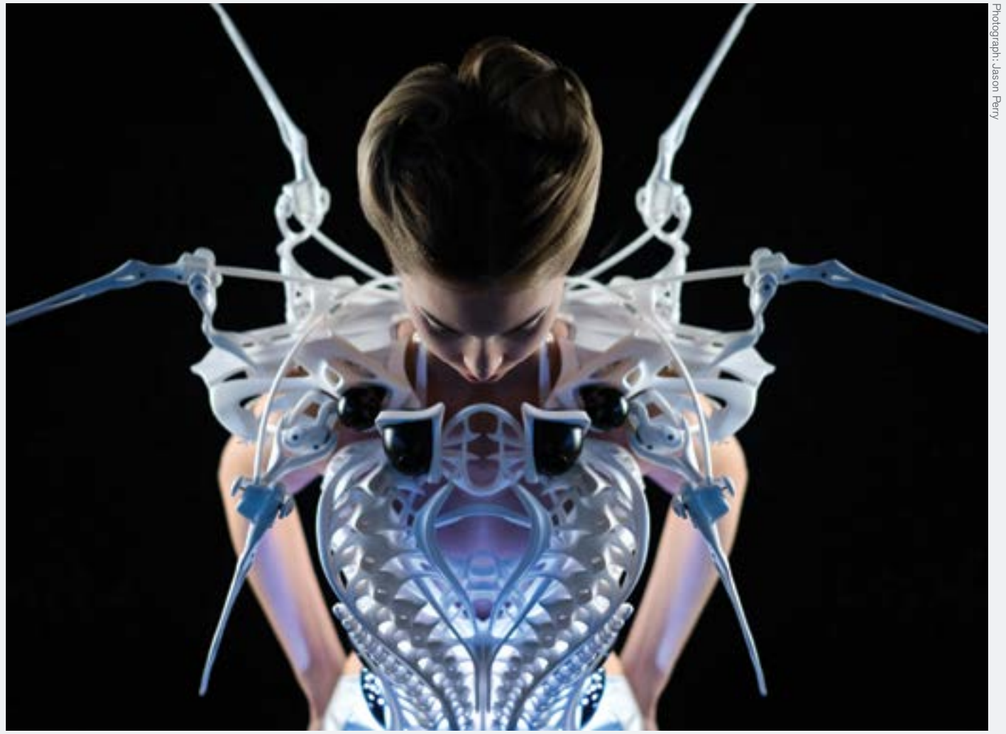
Innovation and inspiration: the best in design, technology and virtue this quarter

Mercedes-Benz / F015 Luxury in Motion
Mercedes is not the only brand experimenting with self-driving cars, but its F015 Luxury in Motion driverless vehicle is definitely the most stylish. The concept car, which debuted at CES, allows passengers to face each other in a 'living space' and control their ride with gesture-recognition technology. The vehicle can also communicate with its surroundings, using LED lights to give pedestrians a heads-up when it's safe to cross.
tiny.cc/mercedesf015

Nico Sell / Wickr
Security-focused ephemeral messaging app Wickr is adding a purrrfect new tool. The Wickr Timed Feed – or WTF – allows users to share time-limited pictures on the service and via Facebook. The cat-ch? Only 151 friends can see the real picture and everyone else will be served a cute kitten snap instead.
www.wickr.com

University of Maryland Institute for Advanced Computer Studies / Robotic cooking
Ever fancied having a robot poach your eggs? Researchers at the University of Maryland are using YouTube cooking tutorials to help robots teach themselves the complicated gestures required to become master chefs. By watching videos of cooks manipulating objects and performing tasks, a robot can teach itself to do the same. The researchers believe that this type of machine learning will contribute to the new industrial revolution in which robots and humans work side by side (maybe even in the kitchen).
www.umiacs.umd.edu

DESIGN



Photograph: Jason Perry

Intel Edison based Robotic Spider Dress / Anouk Wipprecht
Fashion just got ferocious. Dutch artist Anouk Wipprecht has created a 3D-printed, motion-detecting dress that leaps to the wearer's defence when it senses a predator. Six roboticised spider legs are powered by Intel's Edison computer chip and are connected to both proximity and respiratory sensors. If the wearer's breath quickens and a threatening presence is detected, the legs are poised to attack, but if she is calm the legs encourage the subject to come closer.
www.anoukwipprecht.nl

Shortbite / Digital Bridge
Fancy redecorating but scared of picking the wrong shade? UK startup Shortbite's new tool can help. Digital Bridge allows you to instantly make over your house by snapping a photo. The tech then uses a deep analysis of the still images, allowing you to digitally edit the wallpaper, flooring and furniture of a room.
www.shortbite.com

DJ QBert and Novalia / Extraterrestria
Turntablist and composer DJ QBert transformed the cover of his *Extraterrestria* album into an interactive set of decks. The slip cover features conductive ink and a computer chip. Amateur DJs can download the Algoriddim DvJAY app and place their phone onto the cover, turning it into decks. Users can then scratch, mix and cross-fade their own tracks. DJ QBert worked with startup Novalia, in Cambridge, UK.
tiny.cc/Novalia

James Patterson / The Self-destructing Book
Crime writer James Patterson launched his latest novel in January in a rather explosive manner. Digital copies of *Private Vegas* were given away to 1,000 lucky readers, but winners had only 24 hours to read the 416-page thriller before it self-destructed. One copy of the book sold for $294,038 – a price-tag that included a five-course meal with the author, a two-night stay in a luxury hotel and gold-plated binoculars through which to witness the novel's explosive end.
selfdestructingbook.com

MIT / Fluid assembly: chair test
You might want to sit down for this one: MIT researchers have created a self-assembling chair. The design harnesses the energy from water currents and small magnets to create a sturdy structure. This is one experiment in a series that aims to create a construction process that requires no mechanical or human effort and burns no fossil fuels. The process could be applied to disaster relief and construction in space.
www.selfassemblylab.net

Henn-na Hotel / Actoids at your service
A new hi-tech hotel will use robots to carry out many of the day-to-day tasks usually performed by human staff. When the hotel in Japan's Huis Ten Bosch theme park opens this July, actoids (human-like robots who can have intelligent conversations) will staff the front desk. Other robots will perform more menial tasks, such as carrying luggage, serving coffee and cleaning rooms. Huis Ten Bosch president Hideo Sawada hopes the robots will eventually run 90% of the property, making it the most efficient hotel on the planet. 'In the future, we're hoping to build 1,000 similar hotels around the world,' he added.
www.h-n-h.jp

Elemental Path / CogniToys
IBM's supercomputer Watson is powering a line of connected toys that can learn and grow with children. CogniToys, created by US startup Elemental Path, use speech recognition so they can have intelligent conversations with kids. The first toy in the line is a green dinosaur that not only tells jokes and stories, but also asks educational questions that increase in difficultly the more a child learns.
www.elementalpath.com

TECHNOLOGY

Microsoft / HoloLens
Tech giant Microsoft is setting out to make augmented reality part of our everyday lives with its new wireless headset. HoloLens, the brainchild of Kinect inventor Alex Kipman, overlays high-definition holograms onto physical spaces and objects to seamlessly blend the digital and physical world. Microsoft imagines that its holographic computing technology could be used for everything from play (a demo features a virtual building block game) to home repairs (the promo video shows how the headset could be used to remotely help someone fix a broken pipe).
www.microsoft.com/microsoft-hololens

Fountain / DIY experts at the touch of an app
Sick of botched DIY attempts? San Francisco-based home improvement startup Fountain may have the answer. The handy AI-powered app connects home-owners to experts through video calls, helping to eliminate costly callout charges by diagnosing problems over the phone. Users answer a simple question: 'What are you stuck on?' before being matched with an expert from a range of independent contractors, including plumbers, gardeners and architects, for $5 per query.
www.fountain.com

Panasonic / Smart Mirror
Panasonic has developed a magic mirror that doesn't tell you how fair you are, but instead reveals your flaws. The Panasonic Smart Mirror, showcased at CES in Las Vegas, uses sensors and facial-recognition software to diagnose conditions such as enlarged pores or wrinkles and then recommends products to treat them. The prototype also allows users to experiment with different virtual looks, from make-up to hairstyles, by altering their reflection.
www.panasonic.com

Futuristic Lights / Kinetic
Gloving, dancing while wearing gloves with LED lights in them, has become a common occurrence at raves and electronic music festivals. Now a microlight called the Kinetic is making it even more fun. Kinetic dynamically changes colour and creates patterns based on your movement, so 'no two performances will ever be the same'. Designers at Futuristic Lights in Santa Cruz, the firm behind the Kinetic, warn that serious face-meltage may occur.
futuristiclights.com

Bristol Interaction and Graphics Group / 3D haptic shapes
Researchers at the University of Bristol in the UK have developed a system that allows 3D haptic shapes to be felt mid-air. The haptic technology focuses complex ultrasound patterns onto people's hands hovering above the display device, using air disturbances to reveal floating 3D shapes. The technique could help people feel objects currently off-limits, such as museum artefacts.
big.cs.bris.ac.uk

University of Washington / Human brain-to-brain interface
Researchers at The University of Washington have developed an interface that allows one person to send their thoughts to another and even remotely control their hands. The scientists claim this is the first example of non-invasive, 'direct brain-to-brain interface in humans'. The interface uses electroencephalography (EEG) to detect and record motor imagery brain signals from one participant – i.e. the signals generated by the brain to trigger a response in the muscles. Those signals are then transmitted via a computer to another person using transcranial magnetic stimulation, generating a physical response in the recipient.
tiny.cc/braintobrain

Epicentre / RFID chips for office workers
The trauma of losing our keys will soon be a thing of the past. People who work at Epicenter, a new hi-tech office block in Sweden, can have RFID chips surgically implanted into their skin to let them enter the building with just a swipe of the hand. The chips also grant access to photocopiers and will later become a means of payment in the building's café.
epicenterstockholm.com

Razer / Open-Source Virtual Reality
Move over Oculus Rift, there's a new VR player in town. Gaming brand Razer is launching what it calls the 'Android of virtual reality': an open-source platform aimed at standardising the hardware and software made for VR kits. A dozen partners – including headset makers, gesture-control creators and gaming companies – have already signed up to build for the Open-Source Virtual Reality (OSVR) system.
www.razerzone.com/osvr

VIRTUE

Éléonore Delisse / Day & Night Light
Sufferers of seasonal affective disorder (SAD) could be helped by a lamp that can rebalance sleep cycles. Created by Design Academy Eindhoven graduate Éléonore Delisse, the Day & Night Light features panes of dichroic glass that slowly rotate above a lamp to create different colours. The piece generates blue light in the mornings to provoke alertness. In the evenings, the lamp emits a warm orange glow to stimulate melatonin production and send watchers peacefully to sleep.
www.eleonoredelisse.com

Blake Uretsky / Maternity wearables
Pregnant women can now track their vital signs via connected maternity wear designed by Blake Uretsky, a Cornell University fashion student. The ten-piece clothing collection is woven with conductive silver fibres that measure temperature, heart rate, blood pressure and respiration. A small device behind a belt buckle feeds the data to the expectant mother's smartphone.
tiny.cc/maternitywearable

University of California, San Diego / Wearable glucose sensor
Diabetes sufferers' daily ritual of pricking their finger to test their glucose levels could soon be replaced by a patch. Nanoengineers at the University of California, San Diego, are testing a temporary tattoo comprising a small sensor and electrodes. The device gives a mild electrical shock to the wearer, allowing it to pull fluid from the skin to measure sugar concentration. Diabetics who avoid testing their glucose levels are at higher risk of poor health, so a non-invasive alternative is to be welcomed.
tiny.cc/wearableglucose

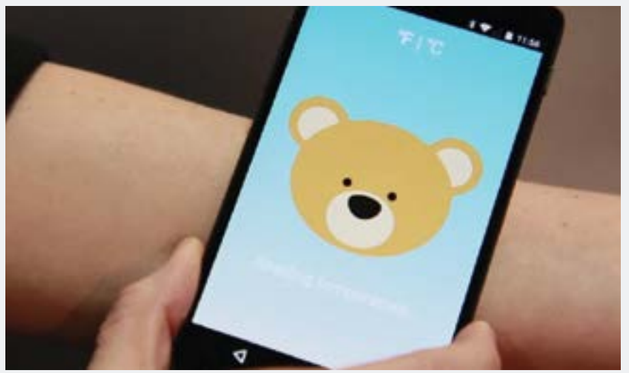
Carnegie Mellon University / Impact-a-Thon
Students at Carnegie Mellon University have designed affordable shelters to help the homeless as part of its Impact-A-Thon (a social-impact hackathon). The winning concept was Green Residence, a shelter that acts as a revenue-generating billboard in the day and a plastic tent by night.
www.cmu.edu/integrated-innovation

Lauren McCarthy, Kyle McDonald / Pplkpr
A new iOS app can help quantify the effect your friends have on you. Pplkpr calculates stress levels on a heart-rate monitor and uses the data to streamline your social life by blocking people who put you in a bad mood, for example. It has been extensively tested with the Mio wristband, but can be used with any Bluetooth device that transmits a heart rate in real time.
pplkpr.com

UCSF Medical Center / TUG Robots
San Francisco's newest hospital has recruited 25 autonomous workers to assist its staff. Developed by Pittsburgh-based Aethon, the so-called TUG robots can deliver medicine, lab specimens, food and bed linens, as well as remove waste. The robots are programmed with the hospital's floor plans and use sensors, a laser and camera to navigate obstacles and get around the 800,000sq ft UCSF Medical Center.
www.aethon.com/tug

Jinsoo An / Project Nourished
Diets just became a lot more delicious thanks to a 'gastronomical virtual reality experience' conceived by LA-based experience designer Jinsoo An. Project Nourished mimics calorie-rich foods using polymer substitutes like gum arabic and pectin, while simultaneously creating a virtual reality representation of the original meal. An Oculus Rift headset, food detection sensor and aromatic diffuser bring the food to life, convincing the brain it's eating a fat-laden meal the stomach desires. The concept, inspired by a scene from the 1991 film *Hook*, aims to reduce intake of excess calories to tackle obesity and diabetes.
www.projectnourished.com

Elon Musk / SpaceX
Tesla founder Elon Musk is proposing a network of 4,000 micro-satellites to enable internet access in the most remote parts of the world. His company, SpaceX, is partnering with Google and Fidelity Investments, which are injecting a combined $1bn for a 10% stake in the endeavour.
www.spacex.com



VivaLnk / eSkin Thermometer
Want a cuter way to take your child's temperature? The eSkin Thermometer is a bear-shaped, NFC-enabled sticker that gives you a reading in less than three seconds. VivaLnk, the Californian company behind the thermometer, claims each washable electronic patch lasts for around 15 days. It plans to launch the product in the spring.
www.vivalnk.com/eskin-thermometer