

# Weekly Discovery

We SHARE to inspire and ignite ideas!

12 February 2018 - 16 February 2018

## ALGORITHMIC ACCOUNTABILITY

### Facial Recognition Is Accurate, if You're a White Guy



A new [study](#) found that the existing facial recognition algorithms work most accurately on white men and least on black women. Read on and learn about the initiative which fights the bias embedded in digital technology.

Source: [The New York Times](#) (9 February 2018)

## BIOMECHANICS

### Morphology, Muscle Capacity, Skill, and Maneuvering Ability in Hummingbirds

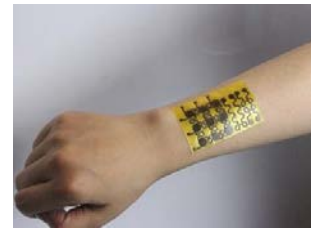


200 hummingbirds over 25 species were filmed and analysed to understand how different physical characteristics, such as wing shape and muscle mass affect flight.

Source: [Science](#) (9 February 2018)

## BIOMEDICAL ENGINEERING

### New Malleable 'Electronic Skin' Self-Healable, Recyclable



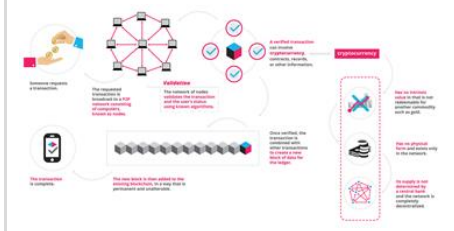
An "electronic skin" that has applications ranging from robotics and prosthetic development to better biomedical devices.

Also read more at [Science](#).

Source: [FurekAlert!](#) (9 February 2018)

## BLOCKCHAIN & CLOUD COMPUTING

### Blockchain Technology for Cloud Storage: This Looks Like the New Future



We are always looking for new ways for data storage. Will blockchain be the way to go in the near future? Read on and gain insights into how today's startups are leveraging blockchain for cloud storage.

Source: [TechGenix](#) (8 February 2018)

## COMPUTER VISION

### The Unique 3D Vision of the Praying Mantis Could Help Robots Learn to See



Despite the smaller and less complex brains, praying mantis is able to see the world in 3D. Scientists envision computers with less processing power to achieve similar 3D visions. Read also at [Current Biology](#).

Source: [Popular Mechanics](#) (10 February 2018)

## CYBERSECURITY

### Technologies Impacting the Future of Cybersecurity



A 45-page report from Frost & Sullivan detailing the technologies, trends, actual applications and key market players that would impact the cybersecurity landscape.

Source: [Frost & Sullivan](#) (27 December 2017)

## FINTECH

### The Future of Money



Modern financial systems have received increasing critics due to their complexity. Check out how we can make use of new technologies to fix flaws and increase participation in the economy.

Source: [Scientific American](#) (January 2018)  
Available @ SUTD Library (Call Number Q1 SCI)

## FUTURE TECHNOLOGIES

### Artist Envisioned the Future of Work and the Results Are Pure Fantasy



Job shifts are inevitable with the emerging and evolving technologies. How will these technologies shape the future of our jobs, such as blockchain banking engineer and superstructure printer?

Source: [MIT Technology Review](#) (9 February 2018)

## FUTURE WORKFORCE & ECONOMY

### Labor 2030: The Collision of Demographics, Automation and Inequality

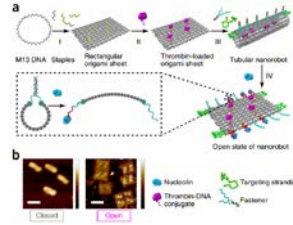


An insight into the effects of automation on jobs on industries and economies. Also the effects of an ageing population on labour supply and the rising importance of automation, productivity and skills to fill the gaps of a shrinking workforce.

Source: [Bain & Company](#) (7 February 2018)

## HEALTHCARE - NANO ROBOTICS

### A DNA Nanorobot Functions as a Cancer Therapeutic in Response to a Molecular Trigger *in vivo*

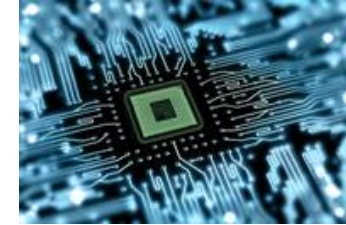


These programmable nanorobots can block the blood supply for tumour cells, resulting in the death of tumour tissues and in the meanwhile leaving the good cells unaffected.

Source: [Nature Biotechnology](#) (12 February 2018)

## PHOTONICS JOBS

### European Photonics to Create 1 Million New Jobs by 2030



Have you imagined a future where major diseases could be instantly diagnosed and autonomous cars could avoid accidents themselves? This [report](#) shares with you more benefits that photonics could deliver by 2030.

Source: [Photonics21](#) (7 February 2018)

## QUANTUM COMPUTERS

### The Co-Inventor of BlackBerry Is Building Canada's Quantum Brain Trust



Security software that can block quantum hacks and quantum sensors used for developing drugs are some of the innovative initiatives the former BlackBerry co-chief executive officer Lazaridis is looking into.

Source: [Bloomberg Businessweek](#) (9 February 2018)

## ROBOT ERGONOMICS

### Designs Within Robotic Reach: The Droid-Optimized Home



Instead of enabling the robots to handle the environment, a better approach is to design spaces to make them more robo-fitting. This calls for a universal design, which is friendly to the elderly people as well.

Source: [Wired](#) (January 2018)  
Available @ SUTD Library (Call Number TK5105.5 WIR)

## WATER MANAGEMENT

### Rain and the City: Pathways to Mainstreaming Rainwater Harvesting in Berlin

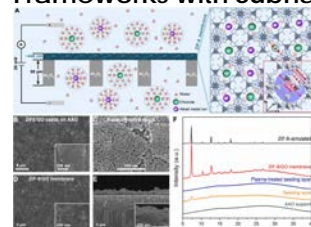


This article analyses the complex and dynamic relationship between rainwater management and city politics. Berlin, a pioneer in developing rainwater systems, is used as an example to question the relationship between rainwater technologies and urban contexts.

Source: [Geoforum](#) (February 2018)

## WATER MANAGEMENT

### Ultrafast Selective Transport of Alkali Metal Ions in Metal Organic Frameworks with Subnanometer Pores



Metallic Organic Frameworks (MOFs), the next generation materials, are being employed in extracting lithium ions from seawater during the process of water purification.

Source: [Science Advances](#) (9 February 2018)

## WEARABLES - ENERGY

### Wearable and Robust Triboelectric Nanogenerator Based on Crumpled Gold Films



Why not harness energy from our body to produce our own mobile electricity? Read about how a small metallic tab, when attached to the body, is capable of generating electricity from bending a finger and other simple body movements.

Source: [Nano Energy](#) (April 2018)

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