

# Weekly Discovery

We SHARE to inspire and ignite ideas!

5 June 2017 – 9 June 2017

## ARCHITECTURE

**A New Train Station in Cambridge Has Sparked Controversy Among Mathematicians**



The geometrical cut-out design of the aluminium panels at Cambridge North Station is interestingly based on a mathematical rule to change the building's facade from night to day.

Source: [ArchDaily](#) (3 June 2017)

## COMMUNICATION

**Automatic sign language translators turn signing into text**

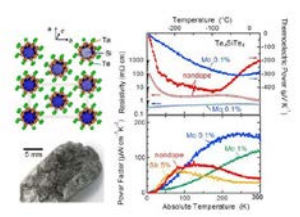


Soon a bank and government offices in the United Arab Emirates, will have the ability to enhance the user experience of the hearing impaired through sign language translators. It uses 3D cameras to capture movements and an animated avatar.

Source: [New Scientist](#) (2 June 2017)

## COOLING TECHNOLOGY

**Whisker Crystals Enable Cooling Without Coolants**



Researchers have grown one-dimensional crystals which are able to cool objects to below  $-200^{\circ}\text{C}$  using thermoelectric technology. The scalability properties allow it to cool tiny electronic devices. Read more in [Applied Physics Letters](#).

Source: [Asian Scientist](#) (1 June 2017)

## FINANCIAL TECHNOLOGY

**Startup Raises \$35 Million in 30 Seconds With Crypto-Currency Offering**



Brave is a start-up that was able to raise \$35 million due to its browser payment system. The system allows users to make micropayments to selected web publishers using crypto-currency based on the number of articles read.

Source: [Fortune](#) (2 June 2017)

## GRAPHENE

**World's first graphene paint launches in the UK**



When graphene meets lime-based paint, the new material can absorb the heat from sunlight as well as carbon dioxide in the air, so as to create a pleasant indoor environment while being eco-friendly.

Source: [Dezeen](#) (30 May 2017)

## HEALTH TECHNOLOGY

**These color changing tattoos monitor your health, no wearables needed**



MIT researchers have designed tattoo inks that respond to glucose and pH levels inside the body. This can be used to help diabetics to monitor their blood sugar.

Source: [Fastcodesign](#) (30 May 2017)

## MATERIALS

**New heat-resistant ceramic can be squished like a marshmallow**



Discover a new ceramic sponge with low density and high resistance to heat using a technique called solution blow-spinning. This sponge can be used in various ways such as firefighter uniforms and water filtration. Read more at [Science Advances](#).

Source: [Popular Science](#) (3 June 2017)

## ROBOTICS

**IEEE Members Build Robots to Help People with Disabilities Live Independently**

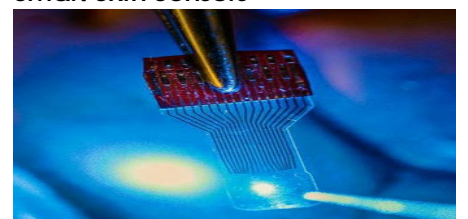


The article features three disabled-friendly robots that can assist the disabled to get their daily work done on their own. These are: cooking meals with a butler bot; eating and drinking with the help of a robotic arm; and navigating through rough terrain on a wheelchair.

Source: [The Institute](#) (1 June 2017)

## SENSORS

**Advancements in Sensor-based Drones, Graphene Sensors, Organic Conductive Plastic Sensors, and Smart Skin Sensors**



Source: [KurzweilAI.net](#)

The Frost & Sullivan TechVision Opportunity Engines (TOE) series provide a snapshot of innovations. This issue features: drones equipped with multispectral imaging; graphene sensors for detection; organic conductive plastic thin film sensors for environmental monitoring; and electronic tattoos.

Source: [Frost & Sullivan](#) (26 May 2017)

## SMART NATION

**How a Wireless Sensor System in the Busiest City Intersections Can Save Lives**



A system of cameras, sensors and algorithms is being trialed in Boston as part of a Smart Street Programme. The data collected will help to analyse the behaviours of road users in order to improve safety and reduce road fatalities.

Source: [MIT Technology Review](#) (2 June 2017)

## VOICE RECOGNITION

**Voice search: A digital space race**



It is forecasted that the market for voice search will explode in the next decade. Through infographic, the article illustrates how the major industry players, such as Google, Amazon and Microsoft, are exploiting this technology and their strategies.

Source: [Search Engine Watch](#) (1 June 2017)

## 3D PRINTING

**A 3-D-printed rocket engine just launched a new era of space exploration**



The Electron rocket, the world's first with a 3D printed engine, was launched in New Zealand. The lightweight engine is deemed to have high efficiency and performance advantages. It has set the stage for the use of 3D printing in space exploration.

Source: [Phys.org](#) (30 May 2017)

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