Weekly Discovery

We SHARE to inspire and ignite ideas!

7 November 2016 – 11 November 2016

ARCHITECTURE

Trimble's SketchUp Viewer Allows You To Manipulate Hologram Models in the Real World

This is a virtual and mixed reality app that fabricates holograms of architectural designs using the Microsoft HoloLens. This could aid architects in estimating how their designs will behave in the presence of an external environment.

Source: ArchDaily (7 November 2016)

ARTIFICIAL INTELLIGENCE

Deep Neural Network Learns to Judge Books by Their Covers

Discover an artificial intelligence algorithm that is capable of determining what category a book's content is in merely through observing its cover. It could potentially be employed to enable the fabrication of book covers.

Source: MIT Technology Review (7 November 2016)

AUTOMOBILE TECHNOLOGY

Uber Plans for the Arrival of Flying Cars

Elevate, a project proposed by Uber, aims at developing a flying vehicle system in the next 10 years that will replace a 2-hour road trip with a 15-minute flight and save the cost of travelling in the long run. Also read the full 97-page white paper.

Source: The Economist (5 November 2016)

CYBER ATTACK PREVENTION

Carnegie Mellon Researchers Create Data Visualization Tool to Identify Cyber Attacks

Source: CyLab Site

A new tool that studies network traffic to pinpoint the source of cyber-attacks makes avoiding and mitigating attacks less complicated. You can go to CyLab Site and to Visual Intelligence Studio to learn more.

Source: Campus Technology (7 November 2016)

ETHICS

Adobe Voco 'Photoshop-for-voice' causes concern

Adobe's Voco project is a software that enables the content of an individual's voice recording to be altered but still sound like the original persons voice. Ethical and security issues were raised. Adobe is now working to resolve those issues.

Source: BBC.com (7 November 2016)

HIGHER EDUCATION

The Past and Future of Higher Education

View opinions by individuals involved in education regarding past issues and potential future trends in higher education. They include views on most important changes, mistaken beliefs, positive changes and more over the past 50 years.

Source: The Chronicle of Higher Education (3 November 2016)

INNOVATION

Teresa van Dongen uses living organisms to power LED light

Discover an innovative night light that does not require batteries. It also does not have to be plugged into a power supply to function. It functions by employing bacteria which emit electrical currents to produce light.

Source: Dezeen (2 November 2016)

MANUFACTURING

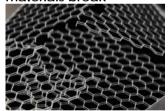### The Changing Face of Direct Materials

Contract manufacturing, a current trend in the supply chain, helps companies by cutting costs. However, it faces certain challenges that can affect a business and its operations. Learn about a connected, digital source-to-pay operation to overcome these challenges.

Source: Industry Week (7 November 2016)

MATERIAL SCIENCE

Physicists gain insights into why materials break

Current research suggests that the manner by which breakage occurs is different at high and low amounts of rigidity. A clearer insight into material breakage could be found by attempting to manipulate material rigidity. Find out more about this research at PNAS.

Source: University of Chicago News (4 November 2016)

NANOTECHNOLOGY

Engineers develop new magnetic ink to print self-healing devices that heal in record time

This ink consists of very tiny particles that possess a particular arrangement using a magnetic field. Unlike traditional self-healing materials, this ink does not need an external stimulus for the self-healing process to commence. Find out more at Science Advances and by watching this video at The New York Times.

Source: Phys.org (2 November 2016)

SENSORS

Preventing infant deaths in hot cars

Chirp is a sensor that is designed to alert caregivers to prevent children from being left in sweltering cars. It can be installed under a car seat and the sensor is linked to the caregiver's mobile phone using a bluetooth connection.

Source: Phys.org (4 November 2016)

TECHNOLOGY TRENDS

10 Breakthrough Technologies 2016

Presenting the 10 groundbreaking technological advances of 2016. They include conversational interfaces, robots that can teach one another and reusable rockets.

Source: MIT Technology Review (2016)