

Weekly Discovery

We SHARE to inspire and ignite ideas!

17 July 2017 – 21 July 2017

1D PRINTING

Transformer Robots Can Be Printed on Demand in Just 13 Minutes



Introducing a recyclable 1D printed robot, which only requires up to 13 minutes to be fabricated, that can complete missions in small spaces or uncommon shaped corners. Learn more at [IEEE](#).

Source: [New Scientist](#) (12 July 2017)

3D PRINTING

This 3D-Printed Human Heart Can Do Everything a Real One Can



Researchers have 3D-printed an artificial heart using a soft, flexible material. The proof of concept design which enabled pumping blood-like fluid at human body-like pressures was successfully tested. Read the [full research paper](#).

Source: [Futurism](#) (17 July 2017)

ARTIFICIAL INTELLIGENCE

AI Creates Fake Obama



[Artificial intelligence](#) was utilized to recreate Obama's face, expressions and even lip movement when talking. This technology has possible applications to detecting fake videos. Also read the [paper](#).

Source: [IEEE spectrum](#) (12 July 2017)

DATA SECURITY

IBM's Plan to Encrypt Unthinkable Amounts of Sensitive Data



IBM announced that it has a method to encrypt all levels of data within a network and its new mainframe can run 12 billion encrypted transactions in a day. Marking a big leap in the race of data security.

Source: [Wired](#) (17 July 2017)

DRONE SAFETY

Pyrotechnic Parachute a Proposed Solution for Falling Commercial Drones



Drones will no longer crashed to the ground in the event of a collision or loss of power, this is made possible by a parachute that will be activated when it detects something is wrong during flight.

Source: [ZD Net](#) (17 July 2017)

DRONES

THOR Transformer Drone Hovers and Cruises With No Compromises



Researchers from SUTD have designed a prototype drone with the ability to fly vertically and horizontally.

Source: [IEEE spectrum](#) (17 July 2017)

INNOVATION

BondicEVO™ Liquid Plastic Welder



Instant plastic in seconds! This device can fix your broken products and bond materials together in a matter of seconds.

Source: [Kickstarter](#) (2017)

MATERIALS

How a Bike Helmet Protects Your Head



This innovative helmet adopts a mesh layer of polycarbonate cones and a multi-directional impact system to spread impact force to reduce injury to the cyclist's head when crashing.

Source: [Popular Mechanics](#) (14 July 2017)

ROBOTS AT WORK

Boston-Based Locus Robotics Builds Autonomous Warehouse Robots

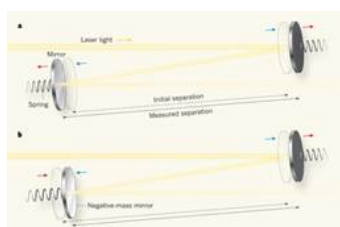


The short video shows how multiple robots can coexist and work collaboratively with humans in the warehouse by leveraging on the LRAN system (Locus Robotics Advanced Navigation).

Source: [Tech Crunch](#) (17 July 2017)

SENSORS

Precision Measurement: Sensing Past the Quantum Limit



Scientists have developed a method that could improve current sensor technology by breaking through the constraints that quantum physics have on sensors performance.

Source: [Nature](#) (12 July 2017)

SOLAR

How China Floated to the Top in Solar

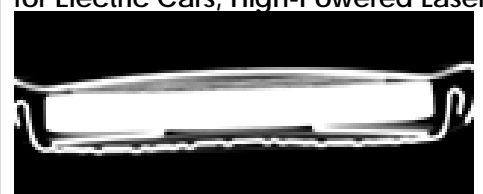


Asian superpower China is leading the world in finding green solutions and is now the largest renewable energy investor. Read on to understand the rise of its solar energy initiatives and the impacts on U.S. solar industry.

Source: [TIME](#) (18 July 2017)

SUPERCAPACITOR

Team Develops Fast, Cheap Method to Make Supercapacitor Electrodes for Electric Cars, High-Powered Lasers



Engineers have developed a faster and cheaper way of mass producing supercapacitors and are able to charge/discharge their electrical load faster as well. Find more at [Nature](#).

Source: [Phys.org](#) (17 July 2017)

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