

Weekly Discovery

We SHARE to inspire and ignite ideas!

8 APRIL 2019 - 12 APRIL 2019

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Artificial Intelligence & Data Science	Aviation	Cities
HealthCare	Robotics & Automation	Design & Innovation
Cybersecurity	Digital Design & Fabrication	Advanced Manufacturing

ARCHITECTURE
This 3D-Printed Tower Might Be the Future of Architecture on Mars



"Made from Martian regolith - the dust, rock, and soil layered on the planet's surface - and featuring living quarters and research labs inside, the design looks more like the slick sets of Star Trek or High Life - and this might be the future home for astronauts on Mars."

Source: [Curbed](#) (5 April 2019)

ARTIFICIAL INTELLIGENCE
AI Could Monitor Farms from Space to Look for Illegal Pollution



"Artificial intelligence is using satellite images to observe farms. The technique is being tested in the US to detect farms that may be illegally polluting the waterways, and has been trialled across Europe to monitor and inspect farmland."

Source: [New Scientist](#) (8 April 2019)

ARTIFICIAL INTELLIGENCE
Robots to Autocomplete Soldier Tasks, New Study Suggests



"Recent collaborative work between ARL and the University at Buffalo is looking at ways the dynamics and architecture of the human brain may be coordinated to predict such behaviors and consequently optimize team performance."

Source: [Army Research Laboratory](#) (4 April 2019)

BIOLOGY
Slug Glue Reveals Clues for Making Better Medical Adhesives



"The analysis revealed that some of the proteins tend to bind to themselves or with other proteins to form a three-dimensional network. These findings suggest that this oligomerization may be required for some of the proteins to be most functional."

Source: [EurekAlert!](#) (8 April 2019)

CITIES
Bjarke Ingels Unveils an Ambitious Plan for Floating Cities at the U.N.



"The Danish architect unveiled Oceanix City, an interconnected network of buoyant, hexagonal "islands." These modules can be linked together and scaled up in fractal-like configurations to form city blocks, neighborhoods, or entire cities."

Source: [Architectural Digest](#) (4 April 2019)

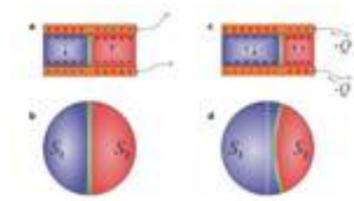
COMPUTER VISION
Two Rival AI Approaches Combine to Let Machines Learn About the World Like a Child



"A new paper from MIT, IBM, and DeepMind shows the power of combining the two approaches ... created a computer program called a neuro-symbolic concept learner (NS-CL) that learns about the world (albeit a simplified version) just as a child might—by looking around and talking."

Source: [MIT Technology Review](#) (8 April 2019)

COMPUTING
Newly Devised Static Negative Capacitor Could Improve Computing



"With a little physics ingenuity, scientists have designed a way to redistribute electricity on a small scale, potentially opening new avenues of research into more energy-efficient computing."

Source: [Science Daily](#) (8 April 2019)

CYBERSECURITY
Photons Trained for Optical Fibre Obstacle Course Will Deliver Stronger Cyber Security



"Transmitted over fibre networks, it uses signals sent in particles of light known as photons. Detection of individual photons creates encryption keys for secure communication. Data encrypted with such keys is resistant to all computational hacks."

Source: [Phys.org](#) (5 April 2019)

FINTECH STARTUPS
This Year's Crop of FinTech Innovation Lab Startups Focused on AI, Insurtech, Compliance



"Financial services companies are using technology to solve an array of problems, some of which aren't being built in-house. That's prompting them to seek partnerships with fintech startups as they embrace everything from artificial intelligence to cryptography."

Source: [Forbes](#) (3 April 2019)

INNOVATION
World Changing Ideas 2019: 17 Winning Solutions That Could Save the Planet



"Read about the winners in 17 different categories. There's a promising technology to turn wood into fabric and a simple way to convert gasoline-powered trucks to run on electricity. And much more."

Source: [Fast Company](#) (8 April 2019)

INTERNET OF THINGS
Frost Radar in the Global Internet of Things (IoT) Platforms Market, 2019



"... released the Internet of Things (IoT) Platforms Frost Radar, a robust analytical tool that benchmarks companies' innovation focus and growth performance in the IoT platforms market."

Source: [Frost & Sullivan](#) (2 April 2019)

MACHINE LEARNING
The Future of Agriculture Is Computerized



"Media Lab's Open Agriculture Initiative [reported](#) that machine learning can reveal optimal growing conditions to maximize taste and other features."

Source: [MIT News](#) (3 April 2019)

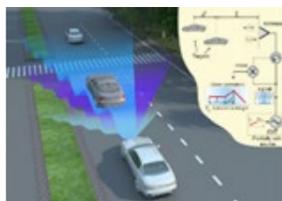
NEW MATERIAL
In New Material, Color and Thermal Properties Can Be Tuned Separately



"Researchers optically engineered a polymer material to allow its color and thermal properties to be tailored independently of each other."

Source: [Photonics](#) (4 April 2019)

RADAR TECHNOLOGY
Low-Bandwidth Radar Technology Provides Improved Detection of Objects



"A new Tel Aviv University study finds that an approach inspired by optical coherence tomography (OCT) requires little to no bandwidth to accurately create a high-resolution map of a radar's surrounding environment."

Source: [Tel Aviv University](#) (2 April 2019)

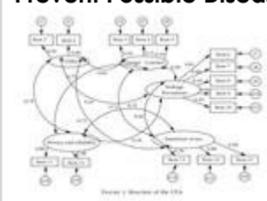
TRANSPORTATION
A Jetsons Future? Assessing the Role of Flying Cars in Sustainable Mobility



"... findings can help guide the sustainable deployment of an emerging mobility system prior to its commercialization."

Source: [EurekAlert!](#) (9 April 2019)

WEARABLE DEVICES
Empirical Study Based on the Perceptions of Patients and Relatives About the Acceptance of Wearable Devices to Improve Their Health and Prevent Possible Diseases



"... purpose of this study is to analyse the perceptions of the subjects involved in the research regarding the acceptance of wearable devices, taking into account variables, such as age and gender."

Source: [Mobile Information Systems](#) (April 2019)