

Weekly Discovery

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13 MAY 2019 - 17 MAY 2019

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

ARCHITECTURE Home of the Future Will Withstand Whatever Wild Weather Comes



"As weather gets wilder and less predictable, firms that design, construct or improve housing with storm safety and resiliency in mind are increasingly in demand."

Source: [Bloomberg](#) (13 May 2019)

ARCHITECTURE AWARDS A' Design Award Announces 2019 Winners



"A' Design Award & Competition, the world's largest and most diffuse international design awards, has announced results of their 2018-2019 design awards, 2437 winners from 106 countries in 98 different design disciplines."

Source: [Archdaily](#) (13 May 2019)

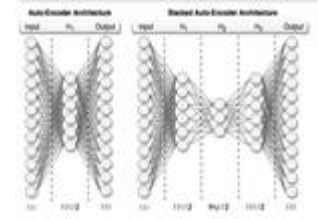
ARTIFICIAL INTELLIGENCE How AI Could Save Lives Without Spilling Medical Secrets



"The first big test for a platform that lets AI algorithms learn from private patient data is under way at Stanford Medical School."

Source: [MIT Technology Review](#) (14 May 2019)

BIG DATA Anomaly Detection and Repair for Accurate Predictions in Geo-Distributed Big Data



"This paper proposes a framework which supports predictive modeling tasks from streaming data coming from multiple geo-referenced sensors."

Source: [Big Data Research](#) (July 2019)

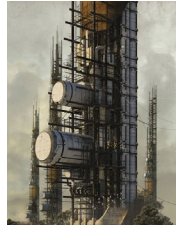
BIOENGINEERING Princeton Scientists Bioengineer a Cellular Speedometer



"The bacterium with the built-in speedometer, *Pseudomonas aeruginosa*, is a ubiquitous pathogen, found in and on bodies, in streams of water, in soil, and throughout hospitals."

Source: [Princeton University](#) (13 May 2019)

CONCEPTUAL ARCHITECTURE Vertical Waste Processor Wins Conceptual Skyscraper Contest



"Waste would be delivered to the skyscraper and sorted as at a standard recycling centre. The organic matter, including wood and paper, would be placed in modular containers and craned into position on the skyscraper's concrete core."

Source: [Dezeen](#) (14 May 2019)

CYBERSECURITY Your Most Sensitive Data Is Likely Exposed Online. These People Try to Find It.



"Paine is part of an informal army of web researchers who indulge an obscure passion: scouring the internet for unsecured databases. The databases -- unencrypted and in plain sight -- can contain all sorts of sensitive information.. In the wrong hands, the data could be exploited for fraud, identity theft or blackmail."

Source: [CNET](#) (11 May 2019)

LIDAR Auto Lidar: Optical Choices and Challenges



"Lidar, particularly for the autonomous-vehicle revolution, is one of the hottest of hot topics today in optics and photonics. But what kind of lidar? The technology's deceptively simple five-letter name packs in a complex array of choices, from spinning car-top sensors to tiny solid-state lidar scanners largely still on the drawing boards."

Source: [Optics & Photonics News](#) (10 May 2019)

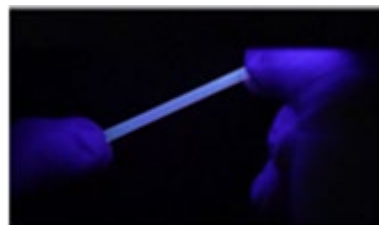
MANUFACTURING Top 100 Global Manufacturing Companies



"The Top 100 manufacturing companies make up a combined revenue of USD6.7 trillion...The briefing provides an overview of the top 100 global manufacturing companies from 2010 to 2017 and covers the entirety of manufacturing industries, company performance analysis and future trends."

Source: [Euromonitor](#) (May 2019)

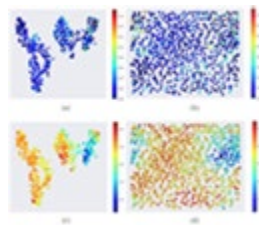
MATERIALS SCIENCE A Bright Way to Detect Mechanical Stress



"Molecules that fluoresce under mechanical stress may one day be used to assess the structural integrity of materials, according to research by an international team of scientists."

Source: [Asian Scientist](#) (10 May 2019)

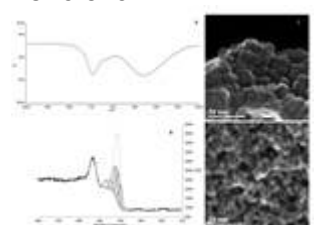
NANOMATERIALS Machine Learning Puts Nanomaterials in the Picture



"'Nanoinformatics' (the use of data science and machine learning to explore the complex structure / property relationships in nanoscale materials) is just starting to emerge ... foresees it claiming increasing prominence in nanomaterials studies to tackle their complexity."

Source: [Physics World](#) (13 May 2019)

NEW MATERIAL New Material Could Unlock Potential for Hydrogen Powered Vehicle Revolution



"Scientists have discovered a new material that could hold the key to unlocking the potential of hydrogen powered vehicles."

Source: [EurekAlert!](#) (14 May 2019)

ROBOTICS Trial of New Generation of Surgical Robots Claims Success



"Doctors at the Deenanath Mangeshkar Hospital in Pune, India used CMR Surgical's Versius robotic assistants to operate on 70 patients who required keyhole or minimal access surgery for a variety of gynaecological and gastrointestinal problems, some minor and some major."

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Source: [Financial Times](#) (13 May 2019)

SENSORS A New Sensor for Light, Heat and Touch



"Inspired by the behaviour of natural skin, researchers at the Laboratory of Organic Electronics have developed a sensor that will be suitable for use with electronic skin. It can measure changes in body temperature, and react to both sunlight and warm touch."

Source: [Linköping University](#) (14 May 2019)

SMART HOSPITALS Korea's New 5G Futuristic Hospital



"When Yonsei University Health System opens its newest hospital next year, in Yongin, about 25 miles outside of Seoul, it will be decked out with some of tech's hottest gadgets."

Source: [IEEE Spectrum](#) (3 May 2019)

TRANSPORTATION Europe: New Product Innovation Award - Fleet & Leasing Industry



"This breakthrough app enables an employer to offer its employees a flexible and environmentally-friendly mobility solution. The app positions the user to digitally purchase tickets from his/her smartphone, and the accessibility is so exhaustive that bookings can be done for all public transport companies...which includes train, tram, bus, subway, parking, and electric vehicle (EV) charging services."

Source: [Frost & Sullivan](#) (9 May 2019)