

Weekly Discovery

We SHARE to inspire and ignite ideas!

25 February 2019 - 1 March 2019

The Library publishes **9 alerts** focusing on Topics relevant to **growth and research areas** to SUTD.

Stay up to date by **subscribing** to any of these **9 Topical Reports** - [CLICK HERE TO SUBSCRIBE NOW](#)

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

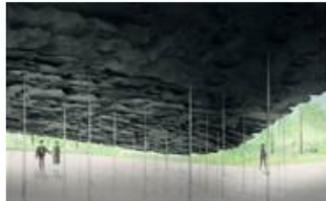
AI IN HEALTHCARE How Will AI Impact Healthcare?



"Would you trust a digital doctor? Would actual doctors trust one? When we try to understand what's been holding back artificial intelligence (AI) in healthcare, it's usually questions like these that arise, not concerns about the effectiveness of the technology itself."

Source: [Forbes](#) (11 February 2019)

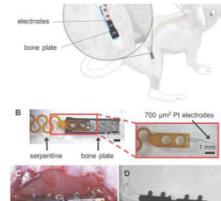
ARCHITECTURE This Year's Serpentine Pavilion Obscures the Line Between Architecture and Nature



"Ishigami plans to create a roof of thin sheets of slate, sheltering a cave-like space and suggesting a new geologic formation."

Source: [Architectural Digest](#) (21 February 2019)

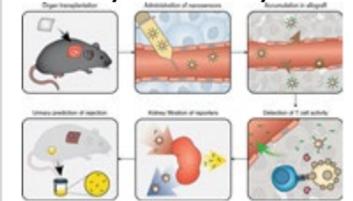
BIOENGINEERING Smart Bone Plates Can Monitor Fracture Healing



"These implants were able to monitor post-operative fracture healing with high sensitivity using electrical impedance spectroscopy (EIS) integrated to track the the healing tissue."

Source : [Medical Xpress](#) (25 February 2019)

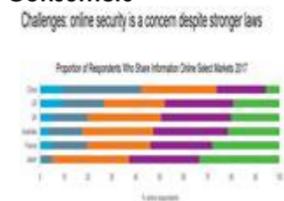
BIOMEDICAL ENGINEERING Non-Invasive Early Detection of Acute Transplant Rejection via Nanosensors of Granzyme B Activity



"The early detection of the onset of transplant rejection is critical for the long-term survival of patients ... Here, we show that nanoparticles conjugated with a peptide substrate specific for the serine protease granzyme B, which is produced by recipient T cells during the onset of acute cellular rejection, can serve as a non-invasive biomarker of early rejection."

Source: [Nature Biomedical Engineering](#) (18 February 2019)

CONSUMERS 2018 Digital Connectivity Index: Tomorrow's Most Connected Consumers



"While mobile networks have helped emerging markets enhance digital penetration, several of these nations are implementing projects to increase fixed broadband connectivity as well."

Source: [Euromonitor](#) (21 February 2019)

DESIGN & FABRICATION How VR, 3D Modeling, and Craftsmanship Help Ducati Design Alluring Motorcycles



"The firm's small, tightly-knit team of stylists skillfully blend craftsmanship and technology to create some of the hottest, most alluring motorcycles ever to carve a corner ... Digital Trends got a rare opportunity to sneak behind the scenes and learn how a Ducati goes from a sketch to a roaring, race-winning production model."

Source: [Digital Trends](#) (23 February 2019)

FINTECH How Mastercard's FinTech and Data Science Increase Opportunities for Women and Cities



"Digitizing payments reduces corruption, too, since 'criminals still prefer cash.' You'll recall seeing piles of cash that law enforcement seized during a drug heist, for example."

Source: [Forbes](#) (25 February 2019)

FUEL CELL High-Powered Fuel Cell Boosts Electric-Powered Submersibles, Drones



"Engineers have developed a high-powered fuel cell that operates at double the voltage of today's commercial fuel cells. It could power underwater vehicles, drones and eventually electric aircraft at a significantly lower cost."

Source: [Science Daily](#) (25 February 2019)

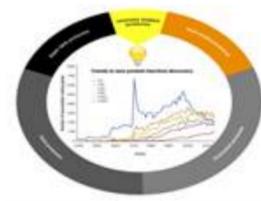
FUTURE WORKFORCE Competitive Advantage with a Human Dimension: From Lifelong Learning to Lifelong Employability



"As AI-enabled automation advances, organizations should embrace "lifelong employability," which stretches traditional notions of learning and development and can inspire workers to adapt, more routinely, to the evolving economy."

Source: [McKinsey & Company](#) (February 2019)

GENETICS A Decline in Gene Discoveries



"The appearance of a new gene name in the literature means that there is a new opening and people seriously start thinking what this gene might mean in terms of physiology and biomedical application."

Source: [A*STAR Research](#) (22 February 2019)

HEALTHCARE Breakthrough 'Lab-on-a-Chip' Detects Cancer Faster, Cheaper and Less Invasively



"A new ultrasensitive diagnostic device that allow doctors to detect cancer quickly from a droplet of blood or plasma. Lab-on-a-chip for liquid biopsy analysis detects exosomes tiny parcels of biological information tumor cells produce to stimulate tumor growth or metastasize."

Source: [University of Kansas](#) (25 February 2019)

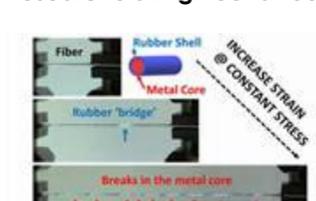
INNOVATION The World's 50 Most Innovative Companies 2019



"Our 2019 ranking of the businesses making the most profound impact on both industry and culture showcases a variety of ways to thrive in today's volatile world. Read on to learn how these 50 companies are creating the future today, plus see our top-10 lists of the Most Innovative Companies by sector, from advertising to wellness."

Source: [Fast Company](#) (February 2019)

MATERIALS SCIENCE Researchers Engineer a Tougher Fiber



"North Carolina State University researchers have developed a fiber that combines the elasticity of rubber with the strength of a metal, resulting in a tougher material that could be incorporated into soft robotics, packaging materials or next-generation textiles."

Source: [Phys.org](#) (22 February 2019)

NEW MATERIALS Porous Carbon Fibers Have More Power



"These porous carbon fibers can achieve high energy density and high electron/ion charging rates, which are typically mutually exclusive in electrochemical energy storage devices."

Source: [Materials Today](#) (25 February 2019)

QUANTUM COMPUTING Faster Method to Read Quantum Memory



"Scientists from Aalto University have developed a faster way to read information out of qubits, the basic building blocks of a quantum computer."

Source: [Science Daily](#) (25 February 2019)

TECHNOLOGIES 10 Breakthrough Technologies 2018



"Dueling neural networks. Artificial embryos. AI in the cloud. Welcome to our annual list of the 10 technology advances we think will shape the way we work and live now and for years to come."

Source: [MIT Technology Review](#) (21 February 2019)