

Weekly Discovery

We SHARE to inspire and ignite ideas!

22 April 2019 – 26 April 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

3D SCANNING TECHNOLOGY Analysis Of Foot Morphology In Habitually Barefoot Group



"This study adopted 3D easy-foot-scan method to obtain the detail information of habitually barefoot and shod populations. The significant differences between habitually barefoot and shod population are main in forefoot area."

Source: [Scientific.Net](#) (Apr 2019)

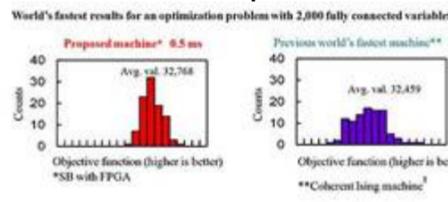
ACADEMIC WRITING Can science writing be automated?



"A team of scientists at MIT and elsewhere has developed a neural network, a form of artificial intelligence (AI), that can read scientific papers and render a plain-English summary in a sentence or two."

Source: [MIT News](#) (17 April 2019)

ALGORITHM Toshiba's breakthrough algorithm realizes world's fastest, largest-scale combinatorial optimization



"Toshiba Corporation has realized a major breakthrough in combinatorial optimization—...with the development of an algorithm that delivers the world's fastest and largest-scale performance, and an approximately 10-fold improvement over current methods."

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

ARCHITECTURE By the People, For the People: What is Public Architecture, According to our Readers



"Last week, we asked our social media followers, "What does public architecture mean to you?" These thoughts are intrinsic to the architectural debate and come into play in various types of projects, especially in those related to the planning of common-use spaces in cities."

Source: [Archdaily](#) (19 March 2019)

ARCHITECTURE On Earth Day 2019, AIA Names COTE Top Ten Winners



"On Earth Day 2019, the AIA's Committee on the Environment (COTE) announced the winners of the COTE Top Ten Awards. The annual program, established in 1997, recognizes projects that integrate design excellence and sustainable performance."

Source: [Architectural Record](#) (22 April 2019)

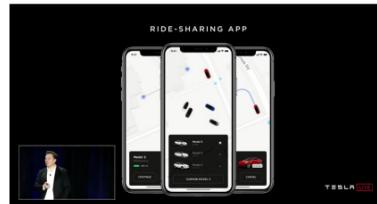
AUTONOMOUS VEHICLE Forecasting the Impact of Connected and Automated Vehicles on Energy Use: A Microeconomic Study of Induced Travel and Energy Rebound



"Connected and automated vehicles (CAVs) are expected to yield significant improvements in safety, energy efficiency, and time utilization. Higher fuel economy reduces the energy required per mile of travel, but it also reduces the fuel cost of travel, incentivizing more travel and causing an energy "rebound effect."

Source: [Science Direct](#) (August 2019)

AUTONOMOUS VEHICLE Tesla plans to launch a robotaxi network in 2020



"All new Tesla vehicles are now produced with its custom full self-driving computer chip, a detail that Musk revealed during the event Monday. That chip fulfills the hardware requirements for full self-driving, according to Musk, who boasted that it was the best in the world."

Source: [Techcrunch](#) (Apr 23 2019)

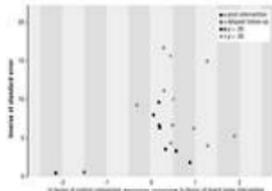
EDUCATION 5 Ladies Leading Change In Education & Talent Technology



"In this article, five ladies in leadership share their work that has served to create more enriching, equitable and just educational and talent possibilities for a variety of learners of all ages at all stages."

Source: [Forbes](#) (22 April 2019)

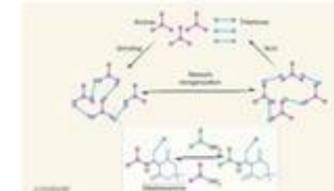
HEALTH EDUCATION Board Games For Health: A Systematic Literature Review And Meta-Analysis



"The findings contribute to the literature on games and gamified approaches in healthcare."

Source: [Games for Health Journal](#) (Apr 2019)

MATERIALS Dynamic Polymer Network Points The Way To Truly Recyclable Plastics



"...work such as this from Christensen et al. takes us considerably closer to the synthesis of plastics that have minimal environmental impact."

Source: [Nature](#) (22 Apr 2019)

NEW MATERIAL Working out makes hydrogels perform more like muscle



"A new study by MIT researchers has found one way to give synthetic hydrogels this total package of characteristics: putting them through a vigorous workout."

Source: [Phys.Org](#) (22 Apr 2019)

PHYSICS Thermodynamic magic enables cooling without energy consumption



"Physicists have developed an amazingly simple device that allows heat to flow temporarily from a cold to a warm object without an external power supply. Intriguingly, the process initially appears to contradict the fundamental laws of physics."

Source: [Science Daily](#) (19 Apr 2019)

PRINTING Printing energy storage at the touch of a button



"They found they could print lines of constant thickness and the ink's ability to conduct current varied with its thickness. All the printouts maintained electric conductivity greater than inks containing carbon nanotubes and graphene."

Source: [The Engineer](#) (Apr 18 2019)

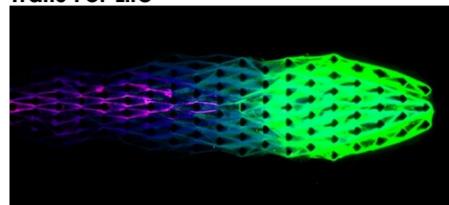
ROBOTICS Snake-inspired robot slithers even better than predecessor



"Researchers from the [Harvard John A. Paulson School of Engineering and Applied Sciences](#) (SEAS) have developed a new and improved snake-inspired soft robot that is faster and more precise than its predecessor."

Source: [SEAS.Havard](#) (18 Apr 2019)

SOFT ROBOTICS Cornell Engineers Create a Robotic Material That Displays 3 of The Key Traits For Life



"The new material can crawl forward like a slime mould, growing new strands from the front as the old ones at the back decay and fall away. The scientists have even set up races between competing material samples in the lab."

Source: [Science alert](#) (21 April 2019)

WATER TECHNOLOGY Water-stressed Singapore bets on new technology to secure supply



"A host of start-ups discover alternative ways to purify water."

Source: [Asian Review](#) (22 April 2019)