

December 2020

IMPact@SUTD is a regular update featuring works by SUTD Faculty, Researchers, Students and Research Centres/Labs. We hope to create awareness of the Research by SUTD within the SUTD community and beyond. Share with us your SUTD works today so that we can include it in our next update.

CONGRATULATIONS!

Professor Tony Quek

(Professor, Head of Pillar ISTD, and Cheng Tsang Man Chair Professor)

For being listed as Highly Cited Researcher* in the field of Computer Science for the fifth consecutive year.

* The highly anticipated annual list identifies researchers who demonstrated significant influence in their chosen field or fields through the publication of multiple highly cited papers during the last decade. Their names are drawn from the publications that rank in the top 1% by citations for field and publication year in the Web of Science™ citation index.

Highly Cited Researcher
2020

Clarivate™



Contactless reversible 4D-printing for 3D-to-3D shape morphing
Virtual and Physical Prototyping

SUTD Author: Chua Chee Kai

"We developed a contactless shape setting mechanism to empower reversible 4D printing that is programmed by asymmetric swelling with heated ethanol and recover by dry heating. The capability of 3D-to-3D shape morphing and reversibility of our 4D-printing process promise great potential for different applications such as biomimetics and soft robotics."

--- Chua Chee Kai



Digital Asymmetries in Transnational Communication: Expectation, Autonomy and Gender Positioning in the Household
Journal of Computer-Mediated Communication

SUTD Author: Yang Wang and Sun Sun Lim

"Despite ICTs having positive benefits for maintaining long-distance intimacies, digital asymmetries characterized by gaps in routines, emotional experiences and outcomes of ICT use can emerge between transnational family members. This study provides insights into the 'expectation asymmetry' and 'autonomy asymmetry' that Chinese 'study mothers' in Singapore experience during transnational communication."

--- Yang Wang

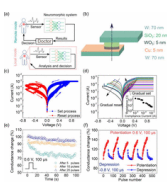


Coherent Streamflow Variability in Monsoon Asia Over the Past Eight Centuries—Links to Oceanic Drivers
Water Resources Research

SUTD Author: Nguyen Tan Thai Hung and Stefano Galelli

"Using tree ring data, this work reconstructs eight centuries of river discharge history for 16 Asian countries. The reconstructions show that megadroughts have occurred simultaneously in multiple adjacent river basins and reveal how rivers are influenced by the oceans. These results can guide inter-basin water management decisions."

--- Nguyen Tan Thai Hung



A biodegradable artificial synapse implemented by foundry-compatible materials
Applied Physics Letters

SUTD Author: Shuai Zhong, Xinglong Ji, Song Hao and Zhao Rong

IEEE Access
Multidisciplinary | Rapid Review | Open Access Journal

A Compact High-Resolution Resonance-Based Capacitive Sensor for Defects Detection on PCBAs
IEEE Access

SUTD Author: Tie Qiu and Shao Ying Huang

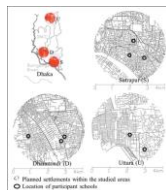


Analysts' forecasts between last consensus and earning announcement date
Journal of Financial Reporting and Accounting

SUTD Author: Weiqi Zhang

Antioxidant and Cytoprotective Effect of Quinoa (Chenopodium quinoa Willd.) with Pressurized Hot Water Extraction (PHWE)
Antioxidants

SUTD Author: Eng Shi Ong, Charlene Jia Ning Pek, Joseph Choon Wee Tan and Chen Huei Leo



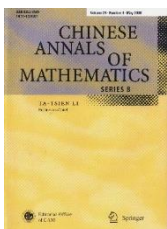
Diversity of children's independent mobility in Dhaka
Urbanisation

SUTD Author: Md Rashed Bhuyan and Ye Zhang

frontiers
in Pharmacology

Editorial: Inflammation in Cardiovascular Diseases: Role of the Endothelium and Emerging Therapeutics
Frontiers in Pharmacology

SUTD Author: Chen Huei Leo



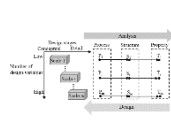
Eventual Positivity of Hermitian Algebraic Functions and Associated Integral Operators
Chinese Annals of Mathematics Series B

SUTD Author: Colin Tan



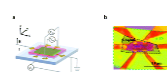
Hands, Head and Heart (3H) framework for curriculum review: emergence and nesting phenomena
Educational Studies in Mathematics

SUTD Author: Da Yang Tan



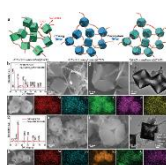
Machine learning integrated design for additive manufacturing
Journal of Intelligent Manufacturing

SUTD Author: Jingchao Jiang, Yi Xiong, Zhiyuan Zhang and David W. Rosen



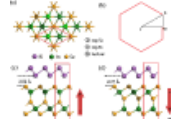
MnPS3 spin-flop transition-induced anomalous Hall effect in graphite flake via van der Waals proximity coupling
Nanoscale

SUTD Author: Wenhui Wang



Nanoframes@CNT Beads-on-a-String Structures: Toward an Advanced High-Stable Sodium-Ion Full Battery
Small

SUTD Author: Song Chen, Shuang Fan, Dongbin Xiong, Mei Er Pam and Yang Huiying
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Nonvolatile ferroelectric control of topological states in two-dimensional heterostructures
Physical Review B

SUTD Author: Weikang Wu and Shengyuan A. Yang