



July 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!

Associate Professor Roland Bouffanais
Engineering Product Development Pillar



Professor Lim Sun Sun
Head of Humanities, Arts and Social Sciences






Scan to read

For publishing their Comment

“Cities — try to predict superspreading hotspots for COVID-19”*
in Nature

“Commentary pieces are agenda-setting, authoritative, informed and often provocative expert pieces calling for action on topical issues pertaining to scientific research and its political, ethical and social ramifications. They road-map a proposed solution in detail; they do not simply snapshot a problem.” Nature.com




CONGRATULATIONS!

Associate Professor Joel Yang
(Engineering Product Development Pillar)

On receiving the **NRF Investigatorship Award*** for his research on “3D Nanostructured Optics with Designer Elements (NODE) to Shape and Control Light”**.

**An initiative run by the National Research Foundation, the NRF Investigatorship provides opportunities for established, innovative and active scientists and researchers, in their mid-career, to pursue ground-breaking, high-risk research. It is designed to support a small number of excellent Principal Investigators who have a track record of research achievements that identify them as leaders in their respective field(s) of research.*

***This is SUTD’s first ever research project winning NRF Investigatorship Award.*



CONGRATULATIONS!

Professor Tony Quek, Dr Dr Thanh Quang Dinh (PhD Alumni),
Dr Jianhua Tang and **Dr Quang Duy La** (Former Postdoctoral Fellows)
(Information Systems Technology and Design Pillar)

For being awarded **The IEEE Communications Society Stephen O. Rice Prize*** for their paper “Offloading in Mobile Edge Computing: Task Allocation and Computational Frequency Scaling”.

** The IEEE Communications Society Paper Awards honors the contributions of members and individuals who advance communications technology through published papers in ComSoc sponsored or co-sponsored publications.*



CONGRATULATIONS!

Professor Tony Quek & Dr Chen Zheng (Former Visiting PhD student),
(Information Systems Technology and Design Pillar)

For being awarded **The IEEE Communications Society Young Author Best Paper Award*** for their joint work “Cooperative Caching and Transmission Design in Cluster-Centric Small Cell Networks”.

**The Young Author Best Paper Award honors the author(s) of an especially meritorious paper dealing with a subject related to the Society’s technical scope and who, upon the date of submission of the paper, is less than 30 years of age.*



CONGRATULATIONS!

YEOW LIH WEI (former ESD MEng Student)

For winning the 2019 Graedel Prize best paper by a junior first author* for the paper, “**Using spatially explicit commodity flow and truck activity data to map urban material flows**”
published in Journal of Industrial Ecology.



**This award recognize and promote high quality scholarship in industrial ecology.*



Neighbourhood Built Environment, Physical Activity, and Physical Health among Older Adults in Singapore: A Simultaneous Equations Approach
Journal of Transport and Health

SUTD Author: Winston Yap, Yuting Hou, and Belinda Yuen

“We found that sheltered walkways and proximity to MRT/LRT stations significantly increase older adults' engagement in transport physical activity, which has a bi-directional relationship with the number of "three-High" chronic diseases. We also found that proximity to parks encourage more



Tough and Strong: Cross-Lamella Design Imparts Multifunctionality to Biomimetic Nacre
ACS Nano

SUTD Author: Hemant Kumar Raut, Rupambika Das, and Javier G. Fernandez

“Mother-of-pearl, the shells housing the adorable pearls, are amongst nature's strongest materials. Here we mimic their composite structure by using constituents similar to that of the shell. The resultant composite offers high strength and stiffness along with biocompatibility, paving way for new and enhanced



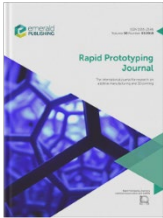
Understanding Autonomous Road Public Transport Acceptance: A Study of Singapore
Sustainability

SUTD Author: Samuel Chng and Lynette Cheah

“The study found the Singapore public acceptance of the planned implementation of public transport autonomous vehicles. Concerns surrounding technical-related issues and legal liability exist, with respondents sharing the desire for human operators to play an active

recreational physical activity, which reciprocally influences older adults' functional capacity."

--- Yuting Hou and Belinda Yuen



3D printing in tissue engineering: a state of the art review of technologies and biomaterials
Rapid Prototyping Journal

SUTD Author: Rahul Sahay

sustainable materials for potential biomedical applications."

--- Hemant Kumar Raut

IEEE TRANSACTIONS ON
IMAGE
PROCESSING

A New Polarization Image Demosaicking Algorithm by Exploiting Inter-Channel Correlations With Guided Filtering
IEEE Transactions on Image Processing

SUTD Author: Shumin Liu

role and for the government to lead the testing and clarification of legal liability."

--- Samuel Chng and Lynette Cheah



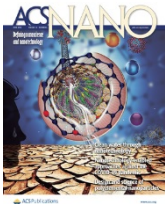
Affect Recognition for Multimodal Natural Language Processing
Cognitive Computation

SUTD Author: Soujanya Poria



Battle of Postdisaster Response and Restoration
Journal of Water Resources Planning and Management

SUTD Author: Stefano Galelli



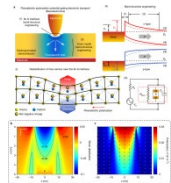
Bio-inspired Photonic Masquerade with Perturbative Metasurfaces
ACS Nano

SUTD Author: Joel K. W. Yang



Commuting and Wellbeing: A Critical Overview of the Literature with Implications for Policy and Future Research
Transport Reviews

SUTD Author: Samuel Chng



Flexoelectronics of centrosymmetric semiconductors
Nature Nanotechnology

SUTD Author: Xiaolong Feng



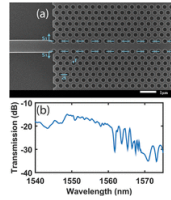
Hierarchical main path analysis to identify decompositional multi-knowledge trajectories
Journal of Knowledge Management

SUTD Author: Nagarajan Raghavan and Dongwook Hwang



Leveraging Machine Learning Techniques and Engineering of Multi-Nature Features for National Daily Regional Ambulance Demand Prediction
International Journal of Environmental Research and Public Health

SUTD Author: Kang Hao Cheong



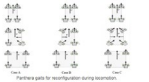
Optical parametric gain in CMOS-compatible sub-100 nm photonic crystal waveguides
APL Photonics

SUTD Author: Ezgi Sahin and Dawn T. H. Tan



Promoting Healthier Eating via Parental Communication: Development and Validation of the Active and Restrictive Parental Guidance Questionnaire (PARQ)
Health Communication

SUTD Author: Andrew Z. H. Yee



Reconfiguration During Locomotion by Pavement Sweeping Robot With Feedback Control From Vision System
IEEE Access

SUTD Author: Lim Yi, Anh Vu Le, Abdullah Aamir Hayat, Charan Satya Chandra Sairam Borusu, Rajesh Elara Mohan, and Prathap Kandasamy



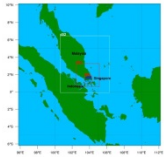
Risk concentration under second order regular variation
Extremes

SUTD Author: Bikramjit Das



Social Media Marketing and Financial Forecasting
Information Processing & Management

SUTD Author: Soujanya Poria



Willingness-to-Pay for Urban Heat Island Effect Mitigation in Tropical Countries: A case study of Singapore
Climate

SUTD Author: Samuel Chng

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