



IMPact@SUTD

Impossible Made Possible by architects, catalysts and technologists

March 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!

Assistant Professor Nuno Ribeiro
(Engineering Systems and Design Pillar)

For being awarded with the Best Dissertation Prize from the Aviation Applications Section of INFORMS 2019 for the thesis "Airport Capacity Management Towards a Slot Allocation Modelling Approach Compliant with IATA Rules".



CONGRATULATIONS!

Assistant Professor Georgios Piliouras &
(Engineering Systems and Design Pillar)
Assistant Professor Ioannis Panageas
(Information Systems Technology and Design Pillar)

For being awarded a joint *NRF-ANR grant.

*This is a bilateral grant between the National Research Foundation (NRF), Prime Minister's Office, Singapore and Agence Nationale de la Recherche (ANR), France. It is a national level collaboration between Singapore and France for French-Singapore collaborative research projects. More info can be located at: <https://www.nrf.gov.sg/funding-grants/international-grant-calls/joint-bilateral-grant-call-with-agence-nationale-de-la-recherche>



NATIONAL RESEARCH FOUNDATION



A Sociological Review of China's Social Credit Systems and Guanxi Opportunities for Social Mobility
Sociology Compass

SUTD Author: Nilanjan Raghunath

"This paper proposes a novel understanding of social mobility in China by exploring the literature on social credit systems. I propose that social credit systems, which include credit rating systems and factors of social governance, can affect occupational attainment, as they may influence or function in tandem with guanxi networks."

--- Nilanjan Raghunath



De novo strategy with engineering anti-Kasha/Kasha fluorophores enables reliable ratiometric quantification of biomolecules
Nature Communications

SUTD Author: Weijie Chi and Xiaogang Liu

"We reported a generalizable engineering strategy for dual-emission anti-Kasha-active fluorophores, which enabled the quantification of various biomolecules in live cells."

--- Xiaogang Liu

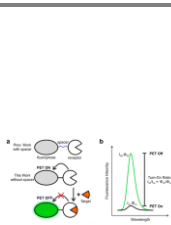


The Prospect of Community-Led Place-Keeping as Urban Commons in Public Residential Estates in Singapore
Built Environment

SUTD Author: Srilalitha Gopalakrishnan and Chong Keng Hua

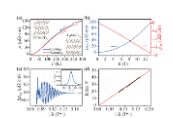
"This paper discusses the prospect of long-term place-keeping of Singapore's neighbourhood green spaces as a shared practice, actively engaging the citizens towards shared responsibilities and collective efforts in transitioning a 'public' space into a 'common' space. The case studies reveal the need for an innovative participatory governance approach with a conscious balance in 'autonomy' and 'authority' as the key to long-term place-keeping."

--- Chong Keng Hua



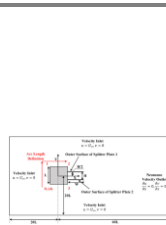
A general descriptor ΔE enables the quantitative development of luminescent materials based on photoinduced electron transfer
Journal of American Chemical Society

SUTD Authors: Weijie Chi, Chao Wang, Tee Meng Tan, Keegan Kang and Xiaogang Liu



Bandgap opening in MoTe2 thin flakes induced by surface oxidation
Frontiers of Physics

SUTD Author: Si Li and Shengyuan A. Yang



A numerical study on the enhanced drag reduction and wake regime control of a square cylinder using dual splitter plates
Computers & Fluids

SUTD Author: Sunil Manohar Dash and Pablo Valdivia Y. Alvarado



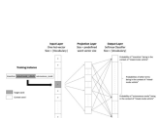
Grid Influenced Peer-to-Peer Energy Trading
IEEE Transactions on Smart Grid

SUTD Author: Chau Yuen



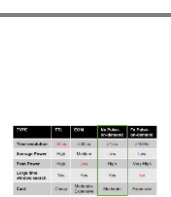
A scalable Bluetooth Low Energy approach to identify occupancy patterns and profiles in office spaces
Building and Environment

SUTD Author: Zeynep Duygu Tekler, Raymond Low and Lucienne Blessing



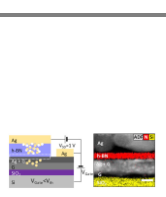
TechNet: Technology semantic network based on patent data
Expert Systems with Applications

SUTD Author: Serhad Sarica, Jianxi Luo and Kristin L. Wood



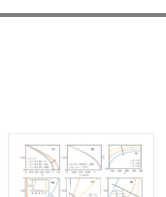
TR-DLS analysis on analog circuit
Microelectronics Reliability

SUTD Author: Venkat Krishnan Ravikumar



Ultralow switching voltage slope based on two-dimensional materials for integrated memory and neuromorphic applications
Nano Energy

SUTD Author: Yishu Zhang and Rong Zhao



Viscoelastic laminar drag bounds in pipe flow
Physics of Fluids

SUTD Author: M. Malik and Roland Bouffanais

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