



# IMPact@SUTD

Impossible Made Possible by architects, catalysts and technologists

April 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!

**PhD student Nguyen Tan Thai Hung**  
(Engineering Systems and Design Pillar)

For winning the prestigious \*Lamont-Doherty Earth Observatory (LDEO) Postdoctoral Fellowship, which will support a 2-year Post-Doctorate programme at LDEO, Columbia University.

\*To be awarded this fellowship, Hung's application went through a rigorous review process and emerged as one of the top three candidates from a pool of 82 applicants worldwide. Hung will commence his fellowship in spring 2021 at one of the world's leading institutions on earth sciences.





## CONGRATULATIONS!

**Assistant Professor Georgios Piliouras & Dr Stefanos Leonardos**  
(Engineering Systems and Design Pillar)

For receiving the best paper award on a project on blockchains at Decentralized 2019. This for a joint paper with **Constandina Koki** (Athens University of Economics and Business).







## CONGRATULATIONS

Professor Lim Sun Sun for publishing the book 'The Oxford Handbook of Mobile Communication and Society' with Oxford University Press.

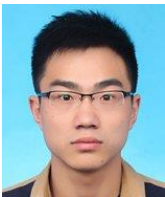
“ This handbook updates the current scholarship surrounding mobile media and communication. The 43 chapters examine mobile communication and its evolving impact on individuals, institutions, groups, societies, and businesses. Contributors examine the communal benefits, social consequences, theoretical perspectives, organizational potential, and future consequences of mobile communication. ”






**Do design storms yield robust drainage systems? How rainfall duration, intensity, and profile can affect drainage performance**  
*Journal of Water Resources Planning and Management*

SUTD Author: Jia Yi Ng and Stefano Galelli



**Strategic Learning Approach for Deploying UAV-provided Wireless Services**  
*IEEE Transactions on Mobile Computing*

SUTD Author: Xu Xinping and Duan Lingjie



**Massively multiplexed sub-micron particle patterning in acoustically driven oscillating nanocavities**  
*Small*

SUTD Author: Mahnoush Tayebi, Richard O'Rorke, Him Cheng Wong, Hong Yee Low and Ye Ai

“In this work, we developed a mathematical modelling approach to evaluate the robustness of urban drainage systems, that is, how well they perform under a broad range of rainfall conditions. Knowing how rainfall duration and intensity control drainage performance can help us protect cities from floods.”


--- Stefano Galelli

“UAV has emerged as a technique to provide wireless services to mobile users simultaneously. Using algorithmic game theory, the UAV's location is determined in the 3D space, by ensuring all selfish users' truthfulness in reporting their locations. In UAV placement games, we design various strategyproof mechanisms with the approximation ratios.”

--- Xu Xinping

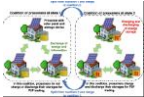
“In this work, we demonstrate the generation of robust nanoscale force gradients from interactions between MHz acoustic waves and nanocavities, which enables massively multiplexed sub-micron particle trapping within these nanocavities at the single-particle level..”

--- Ye Ai



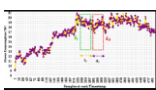
**A characterization method for mechanical properties of metal powder bed fusion parts**  
*International Journal of Advanced Manufacturing Technology*

SUTD Author: Nandhini Raju, Samyeon Kim, David W. Rosen




**A coalition formation game framework for peer-to-peer energy trading**  
*Applied Energy*

SUTD Author: Chau Yuen




**A hybrid model for building energy consumption forecasting using long short term memory network**  
*Applied Energy*

SUTD Author: Gauthama Raman M R



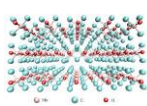
**A software package for the representation and optimization of water reservoir operations in the VIC hydrologic model**  
*Environmental Modelling & Software*

SUTD Author: Thanh Duc Dang, Dung TrungVu, A.F.M. Kamal Chowdhury, Stefano Galelli



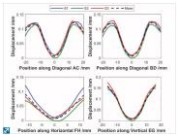
**Do Cryptocurrency Prices Camouflage Latent Economic Effects? A Bayesian Hidden Markov Approach**  
*Future Internet*

SUTD Author: Stefanos Leonardos, Georgios Piliouras



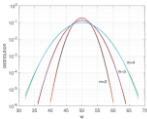
**Fermi liquid behavior and colossal magnetoresistance in layered MoOCl2**  
*Physical Review Materials*

SUTD Author: Zhao Jianzhou



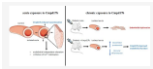
**Learning Localized Spatial Material Properties of Substrates in Ultra-Thin Packages Using Markov Chain Monte Carlo and Finite Element Analysis**  
*IEEE Access*

SUTD Author: Cheryl Selvanayagam, Pham Luu Trung Duong, Nagarajan Raghavan



**Properties and Constructions of Constrained Codes for DNA-Based Data Storage**  
*IEEE Access*

SUTD Author: Cai Kui



**The Novel Small-molecule Annexin-A1 Mimetic, Compound 17b, Elicits Vasoprotective Actions in Streptozotocin-induced Diabetic Mice**  
*International Journal of Molecular Sciences*

SUTD Author: Chen Huei Leo

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