

September 2019

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!

**Dr. Stefanos Leonardos, Dr. Daniel Reijnsbergen and Assistant Prof Georgios Piliouras, ESD**

For being awarded the best paper award at IEEE - International Conference on Blockchain and Cryptocurrency (ICBC), 2019 for the paper "Weighted Voting on the Blockchain: Improving Consensus in Proof of Stake Protocols" .



## CONGRATULATIONS!

**Associate Professor Joel Yang**

**For being elected The Optical Society (OSA) Fellow\*.**

*\*The OSA Fellow is a membership designation of The Optical Society (OSA) that denotes distinguished scientific accomplishment. The bylaws of this society only allow 10% of its membership to be designated as an OSA Fellow. The OSA Fellow requires peer group nomination.*



**Peer-to-Peer Product Sharing: Implications for Ownership, Usage, and Social Welfare in the Sharing Economy**  
*Management Science*

SUTD Author: Costas Courcoubetis

"The sharing economy, and in particular peer-to-peer product sharing, has the potential of increasing access while reducing investments in resources and infrastructure. But is this always the case? Using game theory, we show that contrary to the popular belief that sharing is always beneficial, it may result in higher asset ownership and usage e.g., road congestion."

--- Costas Courcoubetis



**Thoughts on Design for Intelligent Manufacturing**  
*Engineering*

SUTD Author: David William Rosen

"As manufacturing systems become more intelligent and more capable, designers can become more ambitious regarding the intelligent products they develop. This paper provides insights into the design methods that will be needed for intelligent products and product-service-systems that will be produced by future intelligent manufacturing systems."

--- David William Rosen



**Selective laser sintering responses of keratin-based bio-polymer composites**  
*Materials & Design*

SUTD Author: Rajkumar Velu

"Keratin material have unique biological and mechanical attributes due to the protein's molecular structure and organisation into tough, flexible and water-interactive appendages of the human biology. The current study evaluates the consolidation of keratin by selective laser sintering process, a key enabler of additive manufacturing."

--- Rajkumar Velu

**A Convex Optimization Approach for Computing Correlated Choice Probabilities with Many Alternatives**  
*IEEE Transactions on Automatic Control*

SUTD Author: Selin Damla Ahipasaoglu and Karthik Natarajan

**A Generic Future Mobility Sensing (FMS) System for Travel Data Collection, Management, Fusion and Visualization**  
*IEEE Transactions on Intelligent Transportation Systems*

SUTD Author: Lynette Cheah

**Accountable Outsourcing Location-Based Services With Privacy Preservation**  
*IEEE Access*

SUTD Author: Junming Ke

**BTEL: A Binary Tree Encoding Approach for Visual Localization**  
*IEEE Robotics and Automation Letters*

SUTD Author: Tuan Hoang

**Commuting and wellbeing: a critical overview of the literature with implications for policy and future research**  
*Transport Reviews*

SUTD Author: Samuel Chng

**Design of metal contacts for monolayer Fe<sub>3</sub>GeTe<sub>2</sub> based devices**  
*Applied Physics Letters*

SUTD Author: Qingyun Wu, Yee Sin Ang, Liemao Cao, and Lay Kee Ang

**Form-Finding of the Metal 3D-Printed Node with Complex Geometry**  
*LAP LAMBERT Academic Publishing*

SUTD Author: Vahid Hassani

**Jamming-assisted eavesdropping over parallel fading channels**  
*IEEE Transactions on Information Forensics And Security*

SUTD Author: Yitao Han and Lingjie Duan

**Localization of Moving Objects Based on RFID Tag Array and Laser Ranging Information**  
*Electronics*

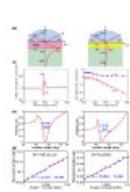
SUTD Author: Ran Liu



### Miniature Pneumatic Actuators for Soft Robots by High-Resolution Multimaterial 3D Printing

*Advanced Materials Technologies*

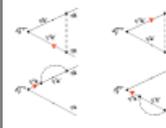
SUTD Author: Yuan Fang Zhang, Colin Ju Xiang Ng, Wang Zhang, Sahil Panjwani, Kavin Kowsari, Hui Ying Yang, and Qi Ge



### Surface Exciton Polaritons: A Promising Mechanism for Refractive-Index Sensing

*Physical Review Applied*

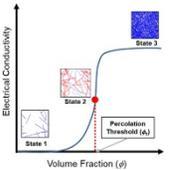
SUTD Author: Yi Xu and Ang Lay Kee Ricky



### Temperature dependence of the side-jump spin Hall conductivity

*Physical Review B*

SUTD Author: Shengyuan A. Yang



### The effect of carbon nanotube chirality on the electrical conductivity of polymer nanocomposites considering tunneling resistance

*Nanotechnology*

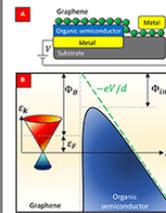
SUTD Author: Jaehyeok Doh and Nagarajan Raghavan



### The role of socialization agents in adolescents' responses to app-based mobile advertising

*International Journal of Advertising*

SUTD Author: Andrew Z. H. Yee



### Theory of Thermionic Carrier Injection in Graphene/Organic Schottky Interface

*Frontiers in Materials*

SUTD Author: Yee Sin Ang and Ang Lay Kee Ricky

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