

September 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.



Fabrication of paper microfluidic devices using a toner laser printer
RSC Advances

SUTD Author: Ng Shizhao James and Michinao Hashimoto

"We developed a method of fabricating paper-based analytical devices(PADs) using the widely available laser printer and a hotplate. The paper-based device was cleaned with bleach to remove aldehydes due to pyrolysis of filter paper at high temperature. It eliminated the need for specialized equipment for the construction of PADs."

--- Ng Shizhao James



Design and development of a novel 3D-printed non-metallic self-locking prosthetic arm for a forequarter amputation
Prosthetics and Orthotics International

SUTD Author: Trevor Binedell, Eugene Meng and Karupppasamy Subburaj

"Often patients are treated with standard prosthetic components; however, the use of user-design, digital scanning, and 3D-printing has elevated the levels of patient-specific care to create individual designs that meet users' needs and improved patient outcomes."

--- Karupppasamy Subburaj

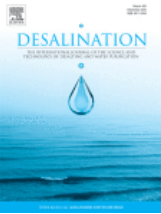


The associations between older adults' daily travel pattern and objective and perceived built environment: A study of three neighbourhoods in Singapore
Transport Policy

SUTD Author: Yuting Hou, Winston Yap and Belinda Yuen

"Provision of covered walkways and proximity to wet markets, parks and places of worship significantly encourage more daily walking trips for older adults, and their effects are not influenced by how people perceive about these environmental features. However, high perceptions of transit access and pedestrian connections increase daily transit use."

--- Yuting Hou



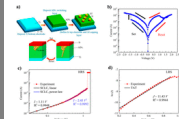
A review on free-standing electrodes for energy-effective desalination: Recent advances and perspectives in capacitive deionization
Desalination

SUTD Author: Sareh Vafakhah, Zahra Beiramzadeh and Hui Ying Yang



A Time Delay Estimation Based Adaptive Sliding Mode Strategy for Hybrid Impedance Control
IEEE Access

SUTD Author: Mohan Rayguru, Mohan Rajesh Elara, Braulio Félix Gómez and Balakrishnan Ramalingam



Analytical modeling electrical conduction in resistive-switching memory through current-limiting-friendly combination frameworks
AIP Advances

SUTD Author: Qishen Wang, Karthekeyan Periasamy, Natasa Bajalovic and Desmond K. Loke



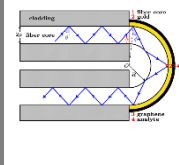
Body responses towards a morning walk in a tropical city
Landscape Research

SUTD Author: Francisco Benita, Garvit Bansal, Darshan Virupaksha, Francesco Scandola and Bige Tuncer



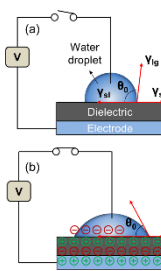
Computational screening-LCA tools for early design stages
International Journal of Architectural Computing

SUTD Author: Michael Budig, Oliver Heckmann, Markus Hudert, Amanda Qi Boon Ng, Zack Xuereb Conti and Clement Jun Hao Lork



Highly Sensitive Surface Plasmon Resonance Sensor Based on Graphene-Coated U-shaped Fiber
Plasmonics

SUTD Author: Yi Xu



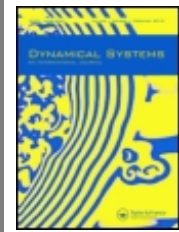
Electrowetting-on-dielectric characteristics of ZnO nanorods
Scientific Reports

SUTD Author: Boon Teoh Tan and Ping Wu



Fully asynchronous stochastic coordinate descent: a tight lower bound on the parallelism achieving linear speedup
Mathematical Programming

SUTD Author: Yun Kuen Cheung



Family of chaotic maps from game theory
Dynamical Systems-an International Journal

SUTD Author: Thiparat Chotibut and Georgios Piliouras

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