




IMPact@SUTD

Impossible Made Possible by architects, catalysts and technologists

May 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

YOW WEI QUIN

Associate Professor & Associate Head of HASS (Research)

For having her paper, 'Active Bilingualism in Aging: Balanced Bilingualism Usage and Less Frequent Language Switching Relates to Better Conflict Monitoring and Goal Maintenance Ability' published in **Journals of Gerontology Series B: Psychological Sciences and Social Sciences***

*Journals of Gerontology Series B: Psychological Sciences and Social Sciences - Q1 Journal and ranked 5th in Gerontology in Incites Journal Citation Report.




CONGRATULATIONS

Thijs Willems, Research Fellow

For being one of the winners to the Praemium Erasmianum Foundation Research Prize* 2020 for his dissertation, "**Monsters' and 'Mess' on the Railways. Coping with Complexity in Infrastructure Breakdowns.**"

*The Praemium Erasmianum Foundation Research Prize is awarded to young academic researchers who have written a PhD dissertation of outstanding quality in the fields of humanities, social sciences, and law.








CONGRATULATIONS!

Dr. Lynette Cheah and Dr. Giacomo Dalla Chiara (former ESD PhD Student)

for publishing their paper, 'A Policy-Sensitive Model of Parking Choice for Commercial Vehicles in Urban Areas' in Transportation Science*

*Transportation Science is one of the top journals in the transportation field, listed as Q1 journal in Incites JIF.






Active Bilingualism in Aging: Balanced Bilingualism Usage and Less Frequent Language Switching Relates to Better Conflict Monitoring and Goal Maintenance Ability

The Journals of Gerontology: Series B

SUTD Author: Yow Wei Quin

“Experience-related neuroplasticity suggests that adults who actively manage their two languages develop more efficient neural brain organization related to executive control. Our study found that, after controlling for age, processing speed, and fluid intelligence, active dual-language use provide benefits to executive control abilities in older adults against natural age-related declines.”

--- Yow Wei Quin




Single-Layer Aberration-Compensated Flat Lens for Robust Wide-Angle Imaging

Laser & Photonics Reviews

SUTD Author: Joel Yang and Ruan Qifeng

“In this work, we design and 3D print a planar wavelength-thick single-layer aberration-compensated flat lens. The lens has a thickness of 1 μm and a full field of view of 32° that enables aberration-compensated imaging along the focal plane and monochromatic microscopic imaging with resolution better than 2.2 μm.”

--- Ruan Qifeng



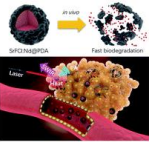
A Policy-Sensitive Model of Parking Choice for Commercial Vehicles in Urban Areas

Transportation Science

SUTD Author: Lynette Cheah and Giacomo Dalla Chiara (Former ESD PhD student)

“Large urban freight traffic generators are buildings that generate most of the commercial vehicles traffic in urban areas. In this work we collected data on trucks delivering at two shopping malls in Singapore and developed a simulation framework to test different policies that can speed up freight deliveries and reduce traffic.”


--- Giacomo Dalla Chiara



Biodegradable rare earth fluorochloride nanocrystals for phototheranostics

Rsc Advances

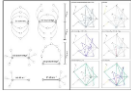
SUTD Author: Zhao Xinyu, Yu Qi and Tan Mei Chee



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

Transport Reviews


SUTD Author: Samuel Chng



Distinguishing Arc Types to Understand Complex Network Strength Structures and Hierarchical Connectivity Patterns

IEEE Access

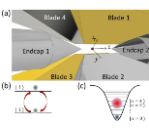
SUTD Author: Chin Wei Chien Benny



Politics of Housing: Prospects for right to the city in Jakarta

LKYCIC Research Paper Series


SUTD Author: Irna Nurlina Masron



Single-atom energy-conversion device with a quantum load

Npj Quantum Information

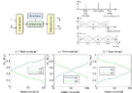
SUTD Author: Dario Poletti



The Imagination of Singapore's Smart Nation as Digital Infrastructure: Rendering (Digital) Work Invisible

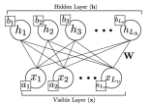
East Asian Science Technology and Society an International Journal

SUTD Author: Thijs Willems



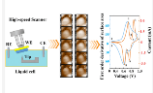
Tradeoff Between Area Coverage and Energy Usage of a Self-Reconfigurable Floor Cleaning Robot Based on User Preference
Ieee Access

SUTD Author: M. A. Viraj J. Muthugala, S. M. Bhagya P. Samarakoon and Mohan Rajesh Elara



Transfer learning for scalability of neural-network quantum states
Physical Review E

SUTD Author: Ryan Tan and Dario Poletti



Visualization of Electrochemical Cycling-Induced Dimension Change in LiMn2O4 Nanoparticles by High-Speed Atomic Force Microscopy
Langmuir

SUTD Author: Yang Shang

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