November 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.



Professor Lim Sun Sun

Head, Humanities, Arts and Social Sciences

CONGRATULATIONS!

Professor Lim Sun Sun on being named to the inaugural Singapore 100 Women in Tech (SG100WIT) List *.

* The inaugural Singapore 100 Women in Tech (SG100WIT) List recognises the contributions of women in the tech sector. Nominees are celebrated for their ability to influence, inspire and impact on community and industry.





CONGRATULATIONS!

For their paper "Imaging nodal knots in momentum space through topolectrical circuits"* being featured as an "Editor Focus" article in Nature Communications.

*In this paper, the SUTD team came up with a machine-learningenhanced design of electrical circuit, which provide a concrete proof on the physics theory developed by NUS team.



Professor Ang Lay Kee, Ricky (Head, Science, Mathematics And Technology, And Ng Teng Fong Chair Professor For SUTD-ZJUIDEA)



Assistant Professor Ang Yee Sin (Science, Math and Technology)



Amanda Sutrisno
(Alumni, Engineering Product
Development)



Dr Nazry Bahrawi

Senior Lecturer Humanities, Arts and Social Sciences

CONGRATULATIONS!

Dr Nazry Bahrawi for being awarded the Advance Higher Education -Fellowship*

*The Advance Higher Education Fellowship recognizes personal and institutional commitment to excellence in learning and teaching in global higher education and offers professional recognition in the categories of Associate Fellow, Fellow, Senior Fellow and Principal Fellow. Fellowship recognizes effective, substantive and high-quality teaching that support student learning and demonstrates a broad understanding of effective teaching and learning approaches which contribute to significant student learning and excellence in teaching.



Leveraging Digital
Technology to
overcome barriers in
the Prosthetic and
Orthotic Industry: an
evaluation of its
applicability and use
during the COVID-19
pandemic

JMIR Rehabilitation and Assistive Technologies

SUTD Author: Trevor Binedell, Karupppasamy Subburgi and Lucienne T M Blessing

"3D scanning & imaging lead the way, primarily for footwear, AFOs, and prosthetic sockets to offer better outcomes. Singaporeans are less sure that 'future is digital'. Virtual-Care is useful, but only to a certain extent. Digital technologies change the future of healthcare and must be implemented thoughtfully due to adoption barriers."

--- Karupppasamy Subburaj



Helicoidally Arranged
Polyacrylonitrile
Fiber-Reinforced
Strong and ImpactResistant Thin
Polyvinyl Alcohol Film
Enabled by
ElectrospinningBased Additive
Manufacturing
Process-StructureProperties in Polymer

Additive Manufacturing

SUTD Author: Rahul Sahay, Komal Agarwal, Anbazhagan Subramani, and Nagarajan Raghavan

"Fabrication of tough and impactresistant 3D electrospun helicoidally aligned sub-micron sized fiber-reinforced thin-film polymer composites."



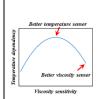
Virulent ZonesDuke University Press

SUTD Author: Lyle Fearnley

"Virulent Zones is an ethnography of the global plans to stop an influenza pandemic at its hypothetical source in rural China. Observing virologists and veterinarians as they track lethal viruses in the field, the book documents how science outside of the laboratory is displaced by unexpected encounters with the farming cultures of the pandemic epicenter."

--- Komal Agarwal

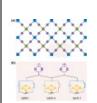
--- Lyle Fearnley



A Systematic Study on the Relationship Between Viscosity Sensitivity and Temperature Dependency of BODIPY Rotors

Bulletin of the Korean Chemical Society

SUTD Author: Weijie Chi and Xiaogang Liu



Dephasing-Protected Scalable Holonomic Quantum Computation on a Rabi Lattice Physical Review Applied

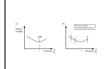
SUTD Author: Chunfeng Wu



Design of a Ka-Band U-Shaped Bandpass Filter with 20-GHz Bandwidth in 0.13mu m BiCMOS Technology

SUTD Author: Kai Men, Hang Liu and Kiat Sena Yeo

Electronics



Learning agents in **Black-Scholes** financial markets

Royal Society Open Science

SUTD Author: Tushar Vaidya and Georgios Piliouras



Molecular Origins of Heteroatom **Engineering on the Emission Wavelength** Tuning, Quantum Yield Variations and Fluorogenicity of NBDlike SCOTfluors

Chemistry-an Asian Journal

SUTD Author: Ying Gao, Chao Wang, Weijie Chi a<u>nd Xiaogang Liu</u>



Photoexcited charge carrier dynamics in Sb2Se3(100)

Physical Review Materials

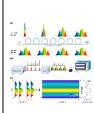
SUTD Author: Jianzhou Zhao



Prosumer site power interruption attacks: exploiting the reactive power control feature in smart inverters

IET Generation Transmission & Distribution

SUTD Author: Nandha Kumar Kandasamy



Recent advances in real-time spectrum measurement of soliton dynamics by dispersive Fourier transformation

Reports on Progress in Physics

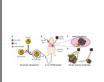
SUTD Author: Yunzheng Wang



Safeguarding unmanned aerial systems: an approach for identifying malicious aerial nodes

IET Communications

SUTD Author: Vishal Sharma



Shortwave Infrared-**Emitting** Theranostics for **Breast Cancer** Therapy Response Monitoring

Frontiers in Molecular **Biosciences**

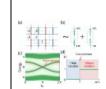
SUTD Author: Xinyu Zhao and Mei Chee Tan



Spatiotemporal Trend Analysis of Precipitation Extremes in Ho Chi Minh City, Vietnam During 1980-2017

International Journal of Disaster Risk Science

SUTD Author: Thanh Duc Dang



Z(2)-projective translational symmetry protected topological phases Physical Review B

SUTD Author: Yue-Xin Huang and Shengyuan A. Yang

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