

April 2021

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.



**Investigating Performance and Usage of Input Methods for Soft Keyboard Hotkeys**  
*Mobile HCI' 20*

SUTD Author: Katherine Fennedy and Simon Tangi Perrault

"Touch-based devices, despite their mainstream availability, do not support a unified and efficient command selection mechanism, available on every platform and application. We advocate that hotkeys, conventionally used as a shortcut mechanism on desktop computers, could be generalized as a command selection mechanism for touch-based devices, even for keyboard-less applications."

--- Katherine Fennedy



**Silicone/Epoxy Hybrid Resins with Tunable Mechanical and Interfacial Properties for Additive Manufacture of Soft Robots**  
*Applied Materials Today*

SUTD Author: Vincent Sebastian Joseph, Theo Calais, Thileepan Stalin, Snehal Jain, Naresh Kumar Thanigaivel, Naresh D. Sanandiya, and Pablo Valdivia y Alvarado

"This work reports the development of a range of novel silicone-epoxy hybrids which display over five orders of magnitude of elastic modulus, the largest range reported for tunable functionally graded materials, as well as exhibit excellent interfacial toughness. Our advanced fabrication approaches facilitate robust material combinations at multiple scales and high resolutions."

--- Pablo Valdivia y Alvarado



**Preparing Workplaces for Digital Transformation: An Integrative Review and Framework of Multi-Level Factors**  
*Frontiers in Psychology*

SUTD Author: Brigid Trenergy, Samuel Chng, Yang Wang, Zainal Shah Suhaila, Sun Sun Lim, Han Yu Lu and Peng Ho Oh

"The rapid advancement of new digital technologies is fundamentally changing the nature of work and increasing concerns about the future of jobs and organizations. Our review of the literature confirms that multi-level factors are important when planning for and embarking on digital transformation, thereby providing a framework for future research and practice."

--- Brigid Trenergy

**Evaluation of Lateral and Vertical Dimensions of Micromolds Fabricated by a PolyJet (TM) Printer**  
*Micromachines*

SUTD Author: Sindhu Vijayan, Pravien Parthiban and Michinao Hashimoto

**Half-Auxeticity and Anisotropic Transport in Pd Decorated Two-Dimensional Boron Sheets**  
*Nano Letters*

SUTD Author: Weikang Wu and Shengyuan A. Yang

**Highly efficient and stable ionic liquid-based gel electrolytes dagger**  
*Nanoscale*

SUTD Author: Pin Ma and Hui Ying Yang

**Magnetic higher-order nodal lines**  
*Physical Review B*

SUTD Author: Shengyuan A. Yang

**Non-anatomical placement adversely affects the functional performance of the meniscal implant: a finite element study**  
*Biomechanics and Modeling in Mechanobiology*

SUTD Author: Duraisamy Shiram and Karupppasamy Subburaj

**Older Adults' Views of the Connections between Neighbourhood Built Environment and Health in Singapore**  
*Journal of Population Ageing*

SUTD Author: Md Rashed Bhuyan and Belinda Yuen

**Relationship between technological improvement and innovation diffusion: an empirical test**  
*Technology Analysis & Strategic Management*

SUTD Author: Christopher L. Magee

**Single-Cell Stretching in Viscoelastic Fluids with Electronically Triggered Imaging for Cellular Mechanical Phenotyping**  
*Analytical Chemistry*

SUTD Author: Minhui Liang, Dahou Yang, Yinning Zhou, Peixian Li, Jianwei Zhong and Ye Ai

**Space-charge limited current in nanodiodes: Ballistic, collisional, and dynamical effects**  
*Journal of Applied Physics*

SUTD Author: Yee Sin Ang and Ang Lay Kee, Ricky

**Templateless, Plating-Free Fabrication of Flexible Transparent Electrodes with Embedded Silver Mesh by Electric-Field-Driven Microscale 3D Printing and Hybrid Hot Embossing**  
*Advanced Materials*

SUTD Author: Yuan-Fang Zhang

**The design of flower-like C-MnO<sub>2</sub> nanosheets on carbon cloth toward high-performance flexible zinc-ion batteries dagger**  
*Journal of Materials Chemistry A*

SUTD Author: Dong Yan and Hui-Ying Yang

**Weak mixed phase in the mutator model**  
*Physical Review E*

SUTD Author: Kang Hao Cheong

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