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**Optimizing Age of Information in Random-Access Poisson Networks**  
*IEEE Internet of Things Journal*

SUTD Author: Tony Q. S. Quek

"This article focuses on the AoI minimization in random-access Poisson networks. By considering the spatiotemporal interactions amongst the transmitters, an expression of the peak AoI is derived, based on which the optimal peak AoI and the corresponding optimal packet arrival rate and channel access probability are further characterized."

--- Tony Q. S. Quek



**Conditional sparse boosting for high-dimensional instrumental variable estimation**  
*Journal of Statistical Computation and Simulation*

SUTD Author: Mu Yue

"The paper considers the structural equation models with both high-dimensional instrumental variables and observed exogenous covariates. A novel two-stage sparse boosting approach is proposed to select the optimal instruments and important exogenous variables, as well as to estimate the causal parameter of interest."

--- Mu Yue



**Multi-stage anisotropic etching of two-dimensional heterostructures**  
*Nano Research*

SUTD Author: Dechao Geng and Hui Ying Yang

"Regarding the reverse process of materials growth, etching has been widely concerned to indirectly probe the growth kinetics, offering an avenue in governing the growth of two-dimensional (2D) materials. In this work, interface-driven anisotropic etching mode is demonstrated for the first time to be generally applied to 2D heterostructures."

--- Hui Ying Yang

**Deep Transfer Learning for Automatic Prediction of Hemorrhagic Stroke on CT Images**  
*Computational and Mathematical Methods in Medicine*

SUTD Author: Kang Hao Cheong

**Educational Opportunities and Challenges in Augmented Reality: Featuring Implementations in Physics Education**  
*IEEE Access*

SUTD Author: Joel Weijia Lai and Kang Hao Cheong

**GRACGE: Graph Signal Clustering and Multiple Graph Estimation**  
*IEEE Transactions on Signal Processing*

SUTD Author: Yanli Yuan, De Wen Soh and Tony Q. S. Quek

**Integration of long- and short-term contracts in a market for capacity**  
*Production and Operations Management*

SUTD Author: Peter L. Jackson

**Modulating Pt-O-Pt atomic clusters with isolated cobalt atoms for enhanced hydrogen evolution catalysis**  
*Nature Communications*

SUTD Author: Hui Ying Yang

**Optimal design for the artificial-noise-aided IRS-MIMO-OFDM secure communications**  
*IET Communications*

SUTD Author: Yanli Yuan

**Out-of-plane dipole-modulated photogenerated carrier separation and recombination at Janus-MoS<sub>2</sub>/MoS<sub>2</sub> van der Waals heterostructure interfaces: an ab initio time-domain study**  
*Physical Chemistry Chemical Physics*

SUTD Author: Xiangyue Liu and Shengyuan A. Yang

**Progress on 3D-Printed Metal-Organic Frameworks with Hierarchical Structures**  
*Advanced Materials Technologies*

SUTD Author: Wei Ying Lieu, Daliang Fang, Kay Jin Tay, Xue Liang Li, Wei Che Chu, Yee Sin Ang, Lay-Keo Ang, and Hui Ying Yang

**Satellite observations reveal 13 years of reservoir filling strategies, operating rules, and hydrological alterations in the Upper Mekong River basin**  
*Hydrology and Earth System Sciences*

SUTD Author: Dung Trung Vu, Thanh Duc Dang and Stefano Galelli

**Slow-Varying Dynamics-Assisted Temporal Capsule Network for Machinery Remaining Useful Life Estimation**  
*IEEE Transactions on Cybernetics*

SUTD Author: Yan Qin and Chau Yuen

**Symmetry-enforced nodal chain phonons**  
*NPJ Quantum Materials*

SUTD Author: Jiaojiao Zhu, Weikang Wu, Jianzhou Zhao and Shengyuan A. Yang

**Unfolding the relationship between seasonal forecast skill and value in hydropower production: a global analysis**  
*Hydrology and Earth System Sciences*

SUTD Author: Jia Yi Ng and Stefano Galelli

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