LEE KUAN YEW CENTRE FOR INNOVATIVE CITIES

PRESENTS

LKYCIC Seminar Series

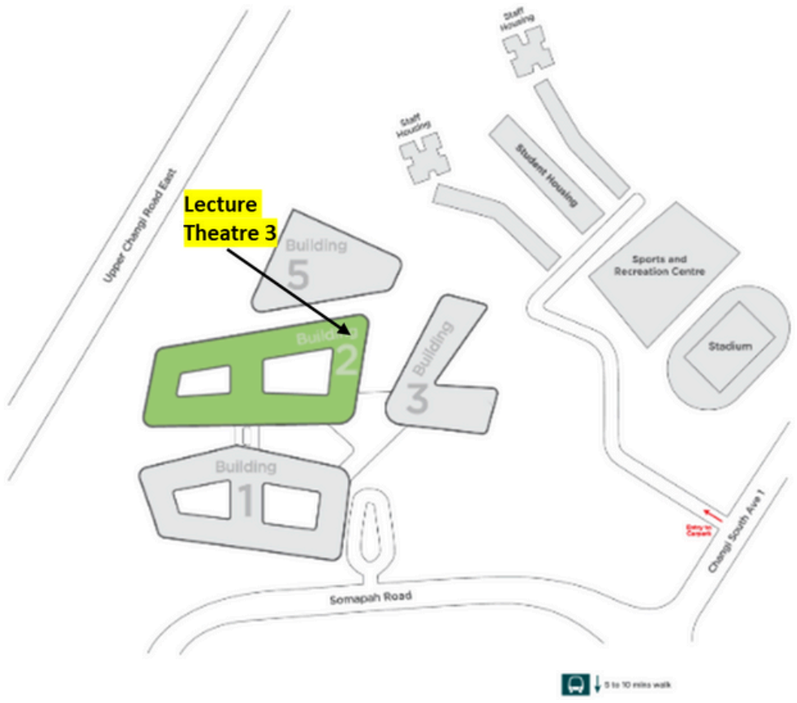
Light field modelling and applications in complex urban scenarios

DATE AND TIME	DR RUI ZHU	VENUE
25 February 2024, 1 - 2 pm	Senior Scientist, Institute of High Performance Computing, A*STAR	Lecture Theatre 3 Building 2, Level 4 (2.403)

SYNOPSIS - Growing concerns on climate change are driving emerging exploration of renewable energy transition, and it has been acknowledged that effectively penetrating renewable energy into urban systems plays a key role in facilitating this transition process. However, the uncertainty in renewable energy supply and the flexibility in energy demand at fine spatiotemporal resolutions significantly hinders a dynamic balance between the two, which has drawn great attention from science and engineering. To address this challenge, in this talk, I will introduce an advanced model to estimate global solar radiation distribution on 3D urban surfaces, present spatiotemporal analytic methods for planning PV modules in urban areas to meet real electricity demand, and design adaptive and scalable solar PV charging solutions for electric vehicles and scooters. Future studies regarding night light-field modelling will be discussed.

DR RUI ZHU
Senior Scientist,
Institute of High Performance Computing,
A*STAR

DR ZHU is a Senior Scientist at the Institute of High Performance Computing, A*STAR, Singapore. Zhu was a Research Assistant Professor at The Hong Kong Polytechnic University and a Postdoctoral Associate at MIT Senseable City Lab. Zhu's study focused on GIScience, Urban Informatics, and Solar Energy with more than 70 SCI papers published in journals such as IJGIS, TGIS, The Innovation, Science Bulletin, and Applied Energy. Zhu is an Associate Editor of Springer Nature Computer Science, Editor of Big Earth Data, Energy 360, and Young Editor of The Innovation and Advances in Applied Energy. He is also the PI/Co-I for several research grants, and Board of Director member of CPGIS. Zhu was the awardee of Geospatial World 50 Rising Stars 2024, and his study has been reported by Singapore TV, Lianhe Zaobao, and MIT News. https://felix-rz.github.io/



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