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CARES Visiting Scientist Seminar Series:

Urban Systems Design: An approach to designing smart city living lab for carbon neutrality

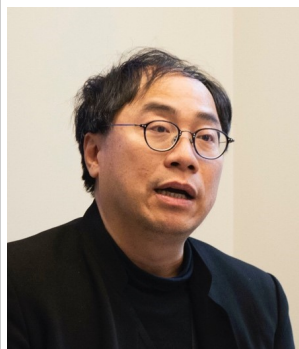
Prof Perry Yang; Professor and Director, Eco Urban Lab,
Georgia Institute of Technology

Monday 7 August 2023, CREATE Seminar Room L2



Cambridge Centre for
Carbon Reduction in
Chemical Technology

Abstract: Future cities development is becoming data-driven in the context of data science, pervasive computing, internet of things (IoT) and urban automation. Emerging technologies are changing models of future urban living in the post-cyber space era and new ideas for designing zero carbon smart cities are urgently needed. They consist of smart homes, creative working environment, interactive public spaces and critical infrastructure systems that have to be more adaptable and resilient for future changes. The talk introduces urban systems design and emerging models of smart cities development, including Tokyo's smart cities living lab and Atlanta's airport city digital twin. It explores future urban living in the face of global climate change, radical urban changes and impacts of emerging technologies to cities. Asian and global primate cities are facing these challenges and are experimenting new models of smart cities living laboratory to reduce urban carbon emission to zero before 2050. Novel methods are to be developed to integrate city information system, creative design, systems engineering, policy and technological applications to offer solutions and strategies for addressing the above global challenges.



Biography: Prof Perry Yang's expertise lies in incorporating data analytics into urban design to enhance city ecological and energy performance. He has published extensively, including co-editing and co-authoring chapters of the book "Urban Systems Design: Creating Sustainable Smart Cities in the Internet of Things Era." He has won over ten international awards for his urban design work and has been involved in significant projects in Asia. He served as an endowed Bayer Chair Professor and is affiliated with the Brook Byers Institute for Sustainable Systems.

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