



Distinguished Lecture Series

Sparsity And Its Applications In Imaging



30 June 2021 (Wednesday)

4:00-5:00 p.m. GMT+8 (Hong Kong Time)



Online via Zoom

(Meeting ID: 953 4149 9881)



ABSTRACT

With the advances in sensor technology, data has become ubiquitous. To make sense of data we have to solve higher and higher dimensional problems that may seem intractable. However, many high-dimensional problems have solutions that live in low-dimensional spaces. Sparsity is a way to exploit the low-dimensional structure of the solutions to obtain feasible solutions for high-dimensional problems. In this talk, we will see how sparsity can be applied to facilitate the solutions of imaging problems, including magnetic resonance imaging, single-molecule localisation microscopy, and ground-based astronomy.

Professor Raymond Honfu Chan

Chair Professor, Department of Mathematics

Vice-President (Student Affairs), Office of the Vice-President (Student Affairs)
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Raymond Chan is now the Vice-President (Student Affairs) at City University of Hong Kong (CityU) since 2021. Prior to joining CityU, he was the Head of the Mathematics Department (2012-2018) at the Chinese University of Hong Kong (CUHK) and retired from CUHK in 2019 as an Emeritus Professor to become the founding Dean of the College of Science at CityU. Chan has published 150 journal papers and authored 3 books. He was in the ISI Science Citation List of Top Highly-Cited Mathematicians in the world (2001 List) and was ranked no. 89 in the Numerical and Computational Mathematics field in the Stanford 2020 study of the world top 2% scientists. He won a Leslie Fox Prize for Numerical Analysis in 1989 at Cambridge, United Kingdom; a Feng Kang Prize of Scientific Computing in 1997 in Beijing, China; a Morningside Award in 1998 in Beijing, China; and 2011 Higher Education Outstanding Scientific Research Output Awards (First Prize) from the Ministry of Education in China. He was elected a Fellow of the US Society of Industrial and Applied Mathematicians (SIAM) in 2013 and a Fellow of American Mathematical Society (AMS) in 2021. Incidentally, Chan was the first and only one from an Asian university elected to SIAM Council since SIAM was established in 1952, and he served for two terms from 2015 to 2020. Chan has served on the editorial boards of many journals, presented over 170 invited conference talks in more than 20 countries.

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