(Biography)
Prof. Kelvin Tsoi is an associate professor (by courtesy) of the School of Public Health and Primary Care, Institute of Ageing, and a research associate professor of the Big Data Decision Analytics Research Centre of the Chinese University Hong Kong (CUHK) since 2013. He received undergraduate training in Statistics and postgraduate Ph.D degree in Medical Sciences. He developed a strong interest in evidence-based medicine, digital epidemiology, and big-data research for healthcare application. He has more than 8 years of experience in conducting evidence-based research and service evaluation projects involving database management, cost-effectiveness appraisal and statistical modeling techniques.

Before joining the School, he worked as a research scientist with a role of statistician in Hospital Authority (HA). He led projects covering a wide range of challenging areas on chronic diseases, including service demand projection for schizophrenia and dementia, service impacts from the patients with colorectal cancer, and service evaluation on patient support programme among diabetic subjects. The experience of database management enhanced his understanding of the HA database structures and also the potential research topics.

Before 2011, he worked as an assistant professor in the division of gastroenterology and hepatology at the Department of Medicine and Therapeutics in CUHK. He had extensive research experience on gastrointestinal diseases and colorectal cancer screening. In addition to the academic position, he served as a director of Jockey Club Bowel Cancer Education Centre to educate and promote the colorectal cancer screening. He and his team worked actively to raise the public health concern on colorectal cancer. They formed volunteer groups and tailor-made different road-show components, including a 2-meter height pneumatic colon model, named Jumbo Colon, to demonstrate the interior structure of colon with polyps and cancer.

His research interests cover non-communicable diseases for ageing population, including cancer, hypertension, and cognitive impairment. He is leading an interdisciplinary research team on Big Data research for healthcare. Personal profiling on blood pressure variability, digital behaviour on dementia patients are the typical examples. He has published over 80 full scientific articles in the foremost journals. Some of his research has also published in short papers in the Engineering conferences. A recent paper to compare dementia screening was published in JAMA Internal Medical.

(Teaching Modules)
Undergraduate
BSc in Public Health
– PHPC 2019: Practical skills in literature search and academic writings
– PHPC 3014: Evidence Based Public Health and Healthcare

Taught Postgraduate
MSc Epidemiology and Biostatistics
– EPID 5003: Analysis of Epidemiological Data
– EPID 6001: Application of Epidemiology in Health Care

(Research Interests)
• Non-communicable Diseases on Ageing Population
• Digital Analytics for Behavioural Health
• Machine Learning Application for Medical Research
• Interdisciplinary research on Healthcare System

(Publications)
Publications in Medical Journals
1. **Tsoi KK**, Chan JY, Hirai HW, et al (2015). Cognitive tests to detect dementia: A systematic review and meta-analysis. *JAMA Internal Medicine*, 175(9),1450-1458.

2. **Tsoi KK**, Hirai HW, Chan JY, et al (2016). Time of Treatment Initiation in People with Alzheimer's Disease. A Meta-analysis of Randomized Controlled Trials. *Journal of the American Medical Directors Association*, 17(1), 24-30.
3. **Tsoi KK**, Chan JY, Leung NW, et al (2016). Combination therapy has no superiority over monotherapy for Alzheimer's disease: A systematic review and meta-analysis of 13 randomized trials. *Journal of the American Medical Directors Association*, 17(9),863-e1.
4. **Tsoi KK**, Hirai HW, Chan FC, et al (2017). Predicted increases in incidence of colorectal cancer in developed and developing regions, in association with ageing populations. Clinical Gastroenterology and Hepatology, 15(6),892-900.
5. **Tsoi KK**, Chan JY, Hirai HW, et al (2017). Comparison of diagnostic performance of Two-Question Screen and 15 depression screening instruments for older adults: systematic review and meta-analysis. The British Journal of Psychiatry, 210:255-60.

Publications in Engineering Conferences
1. **Tsoi KK,** Leung WY, Leung KS, et al (2015). Optical Pattern Recognition for Geometric Images in Dementia Assessment Tools. In Proceedings of IEEE Healthcom Congress.
2. **Tsoi KK.,** Chan CH , Hirai HW, et al (2017). Data Visualization on Global Trends on Cancer Incidences: An Application of IBM Watson Analytics. In Proceedings of the 50th Annual Hawaii International Conference on System Sciences.
3. **Tsoi KK,** Wong JY, Wong MP, et al (2017) Personal Wearable Devices to Measure Heart Rate Variability: A Framework of Cloud Platform for Public Health Research. In Proceedings of the 7th Digital Health Conference.
4. **Tsoi KK,** Lam MW, Chan FC, Hirai HW, et al (2017). Classification of Visit-to-Visit Blood Pressure Variability: A Machine Learning Approach for Data Clustering on Systolic Blood Pressure Intervention Trial (SPRINT). In Proceedings of the 7th Digital Health Conference.
5. **Tsoi KK**, Zhang L, Chan NB, et al (2018). Social Media as a Tool to Look for People with Dementia Who Become Lost: Factors That Matter. In Proceedings of the 51st Annual Hawaii International Conference on System Sciences.