

## Keynote Speaker

# Optimal Document Clustering with Feature Selection and Centroid Allocation

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**Abstract**— Effective Document clustering system aims to improve the tasks of documents analysis, grouping, and retrieval. Its performance depends on documents preparation and allocation of centroids in the clusters. Optimal document clustering is a combinatorial NP-hard optimization problem and it becomes necessary to utilize non-traditional methods to look for optimal or near optimal solutions. This research investigated supervised and unsupervised feature selection methods as well as two centroid allocation methods to improve the document clustering process.

### BIOGRAPHY



the University of Wales, Institute of Science and Technology (UWIST). Subsequently, he received his PhD degree from

Professor Emeritus Lance C.C. Fung received his technical training as a Marine Radio and Electronic Officer from the Hong Kong Polytechnic and Brunel Technical College, Bristol UK in 1972-74 and 1975-76 respectively. After serving on the high seas, he completed a Bachelor of Science Degree in Maritime Technology with First Class Honors in 1981, and a Master of Engineering in System Test Technology in the 1982 from

the University of Western Australia (UWA) in 1994 with a thesis on the Application of Artificial Intelligence to problems in Electrical Power System Engineering. Lance has lectured at the Singapore Polytechnic (1982-1988), Curtin University (1989-2003) and Murdoch University (2003-2015). He received his Emeritus Professor appointment which enables him to continue his academic engagement since retirement in 2015. In September, 2017, he received an Honorary PhD Degree in Information Technology from Walailak University, Thailand, in recognition of his contributions towards the development and advancement of the University's research and postgraduate programs. Lance has been an active IEEE volunteer for over two decades, served various positions in many committees, boards and conferences. He is the current Chair of the IEEE Conference Quality Committee (CQC) and the IEEE Technical Program Integrity Committee (TPIC); Chair-Elect of the IEEE New Initiatives Committee (NIC) and Chair of the IEEE SMC Society Chapter Coordinator Committee. Lance has published over 325 articles in academic journals, conference proceedings and book chapters. He has also supervised to completion over 30 doctoral and higher degree candidates. His research interest is in the development and applications of innovative intelligent technologies and advanced techniques to solve practical problems. His passion is to nurture postgraduate research students and he continues dedicating his time to supervise postgraduate students locally and abroad.