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DEPARTMENT OF  
COMPUTER SCIENCE  
計算機科學系

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# Distinguished Lecture Series

## Machine Learning for Big Spatial Data and Applications



26 January 2022 (Wednesday)  
10:00-11:00am GMT+8 (Hong Kong Time)



Zoom  
(The meeting details will only be provided to registrants)



### ABSTRACT

This talk will focus on our recent efforts in adopting machine learning techniques for big spatial data and applications. This includes going for two orthogonal, but related, directions. First, injecting the spatial awareness inside machine learning techniques and applications, which will result in a higher accuracy for such applications. Second, taking advantage of the recent advances in machine learning techniques to boost the usability, deployment, scalability, and accuracy of long lasting spatial and spatio-temporal data analysis techniques. For the first direction, we will present the Sya system as a full-fledged spatial machine learning-based probabilistic knowledge base construction system. For the second direction, we will present machine-learning-based techniques for spatial autologistic regression and map services.



### Professor Mohamed Mokbel

Professor  
Department of Computer Science and Engineering  
University of Minnesota, USA

Mohamed Mokbel (PhD, Purdue University, MS, BS, Alexandria University) is a Professor at the University of Minnesota. Prior roles while on leave/sabbatical from UMN include Chief Scientist of Qatar Computing Research Institute, Founding Technical Director of GIS Technology Innovation Center in Saudi Arabia, and multiple times Visiting Researcher at Microsoft Research, USA. His research interests include database systems, spatial data, and GIS. His research work has been recognized by the NSF CAREER Award, VLDB 10-years Best Paper Award, and four conference Best Paper Awards. Mohamed is the past elected Chair of ACM SIGSPATIAL, current Editor-in-Chief for Springer Distributed and Parallel Databases (DAPD) Journal, and on the editorial board of ACM Books, ACM TODS, VLDB Journal, ACM TSAS, and GeoInformatica journals. He has served as PC Co-Chair for ACM SIGMOD, ACM SIGSPATIAL, and IEEE MDM. Mohamed is an IEEE Fellow and ACM Distinguished Scientist. For more information, please visit: [www.cs.umn.edu/~mokbel](http://www.cs.umn.edu/~mokbel)

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