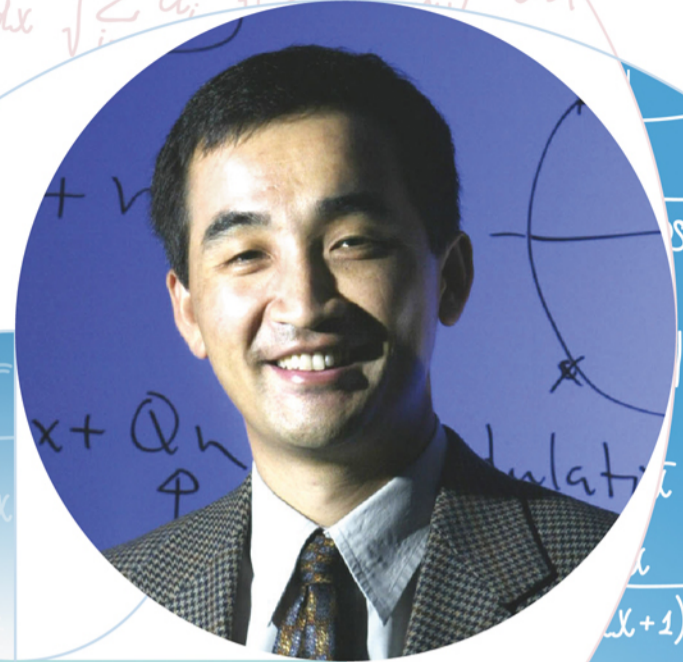


Department of Applied Mathematics
Distinguished Lecture on

Flexible ADMM for Block-Structured Convex and Nonconvex Optimization

by Professor Zhi-quan LUO



Abstract

The alternating direction method of multipliers (ADMM) is a very popular algorithm for solving large-scale optimization problems, convex or nonconvex, in many engineering fields. In this talk, we discuss a flexible primal-dual framework for ADMM type algorithms, and present a theoretical analysis of these algorithms for problems without strong convexity, including those with nonconvex objectives.

Biography

Zhi-Quan (Tom) Luo is a professor in the Chinese University of Hong Kong, Shenzhen. He received his B.Sc. degree in Applied Mathematics in 1984 from Peking University, China, and a Ph.D degree in Operations Research from MIT in 1989. From 1989 to 2003, Dr. Luo was with the Department of Electrical and Computer Engineering, McMaster University, Canada, where he later served as the department head and held a senior Canada Research Chair in Information Processing. Since 2004, Dr. Luo has been a professor at the Department of Electrical and Computer Engineering, the University of Minnesota, Twin Cities. His research interests lie in the union of optimization algorithms, data communication and signal processing.

Dr. Luo is a fellow of IEEE and SIAM. He is a recipient of the IEEE Signal Processing Society's Best Paper Award in 2004, 2009 and 2011, and the EURASIP Best Paper Award in 2011. He was awarded the 2010 Farkas Prize from the INFORMS Optimization Society. Dr. Luo chaired the IEEE Signal Processing Society's Technical Committee on Signal Processing for Communications and Networking (SPCOM) from 2010-2012. He has held editorial positions for several international journals including Journal of Optimization Theory and Applications, Mathematics of Computation, IEEE Transactions on Signal Processing, SIAM Journal on Optimization, Management Sciences and Mathematics of Operations Research. He is the current Editor-in-Chief of IEEE Transactions on Signal Processing. In 2014 he is elected to the Royal Society of Canada.

Date : 20 October 2014 (Monday)

Time : 11:00 - 12:00 noon

Venue : Room Y305, PolyU

ALL ARE WELCOME !

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