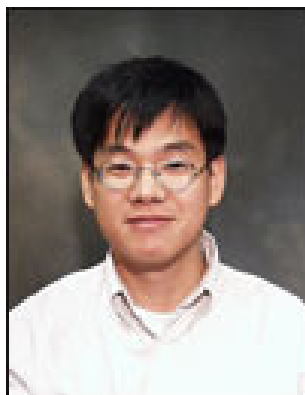


Presents

LATTICE REDUCTION BASED MIMO DETECTION AND ITS APPLICATION TO MULTIUSER SYSTEMS



SPEAKER: Dr. Jinho Choi

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School of Engineering
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DAY/TIME: Friday June 12, 2009, 2 pm

LOCATION: Queen's University, Walter Light Hall 302

Abstract: Lattice reduction (LR) based multiple input multiple output (MIMO) detection algorithms can provide near maximum likelihood (ML) performance with a polynomial-time complexity. Therefore, LR based MIMO detection would play a key role in achieving MIMO capacity with reasonably low complexity in MIMO systems. In this talk, we first review LR based MIMO detection algorithms and show the performance. Then, we discuss the use of LR based MIMO detection algorithms in multiuser MIMO systems. In particular, we consider MIMO multiple access channel (MAC) as an example.

Biography: Jinho Choi (Senior Member of IEEE) was born in Seoul, Korea. He received B.E. (magna cum laude) degree in electronics engineering in 1989 from Sogang University, Seoul, and the M.S.E. and Ph.D. degrees in electrical engineering from Korea Advanced Institute of Science and Technology (KAIST), Daejeon, in 1991 and 1994, respectively. He is now with School of Engineering, Swansea University, Swansea, United Kingdom, as a Professor/Chair of Wireless. His research interests include wireless communications and array/statistical signal processing. He authored a book entitled Adaptive and Iterative Signal Processing in Communications (Cambridge University Press, 2006). Prof. Choi received the 1999 Best Paper Award for Signal Processing from EURASIP and a Senior Member of IEEE. Currently, he is an Editor of Journal of Communications and Networks (JCN) since 2005 and served an Associate Editor of IEEE Transactions on Vehicular Technology from 2005 to 2007. Since 2009, he joined the Editorial Board of International Journal of Vehicular Technology.

Host: Dr. Il-Min Kim (ilmin.kim@queensu.ca), Elec. and Comp. Eng. Dept., Queen's University

Seminar is open to the public. Free admission. Refreshments will be served.