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Convex Optimization in Rate Control in Communication Networks

By

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Abstract:

Rate control is a fundamental problem in communication networks, which discusses effective ways for bandwidth allocation when a number of users share the same network link. A number of optimization (mathematical programming) algorithms have been proposed for rate control to achieve optimal utilization of the shared network bandwidth. In this talk, using the classical rate control problem as an example, we are going to introduce the basic concepts of convex optimization, the important theory of duality, and the efficient distributed algorithms to solve the convex optimization problems that are formulated.

Biography:

Chuan Wu received her B.Engr. and M.Engr. degrees in 2000 and 2002 from the Department of Computer Science and Technology, Tsinghua University, China, and her Ph.D. degree in 2008 from the Department of Electrical and Computer Engineering, University of Toronto, Canada. Between 2002 and 2004, She worked in the Information Technology industry in Singapore as a software designer and developer. Since September 2008, Chuan Wu has been an Assistant Professor in the Department of Computer Science at the University of Hong Kong. Her research is in the areas of peer-to-peer networks and wireless networks. She is a member of IEEE and ACM. She has served as PC members and reviewers for International conferences and journals including ACM MM, ICC, GLOBECOM, TPDS, and TMM.