Winter School 2010

The Chinese University of Hong Kong

January 24-30, 2010

Room 1009, 10/F., William M.W. Mong Engineering Bldg., CUHK

Algorithmic Problems in Computer and Network Power Management

By

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Abstract:

Power management has become an important issue in the design of information systems. Computer industry struggles to cope with the energy and cooling costs for servers. The wireless ad hoc network community has to invent clever schemes to conserve the limited power available to individual small radio devices. The algorithmic challenges in studying these problems involve both proper mathematical modeling and solving the resulted optimization problems. In this talk, we will look at some sample problems of power management in computers and wireless networks, discussing their mathematical modeling and efficient algorithms. It will be seen that graph theory and computational geometry can often play a role in providing effective solutions.

Biography:

Frances Yao is Chair Professor and Head of the Computer Science Department at the City University of Hong Kong. Prior to joining CityU, she was a Principal Scientist at Xerox Palo Alto Research Centre, and held faculty positions at University of Illinois, Brown University and Stanford University.