

**Name**

Xi-Ren Cao

**Affiliation**

Shanghai Jiao Tong University

**Title**

Even-Based Optimization and Applications

**Biography**

**Xi-Ren Cao** received the M.S. and Ph.D. degrees from Harvard University, in 1981 and 1984, respectively, where he was a research fellow from 1984 to 1986. He then worked as a consultant engineer/engineering manager at Digital Equipment Corporation, Massachusetts, U.S.A, until October 1993. Then he joined the Hong Kong University of Science and Technology (HKUST), where he was chair professor, director of the Research Center for Networking. He held visiting positions at Harvard University, University of Massachusetts at Amherst, AT&T Labs, University of Maryland at College Park, University of Notre Dame, Tsinghua University, University of Science and Technology of China, and other universities. In 2010, he joined Shanghai Jiao Tong University, China, as a chair professor.

Dr. Cao owns three patents in data- and tele- communications and published three books in the area of stochastic learning and optimization and discrete event dynamic systems: "Stochastic Learning and Optimization - A Sensitivity-Based Approach," Springer, 2007, "Realization Probabilities - the Dynamics of Queuing Systems," Springer Verlag, 1994, and "Perturbation Analysis of Discrete-Event Dynamic Systems," Kluwer Academic Publishers, 1991 (co-authored with Y. C. Ho).

He received the Outstanding Transactions Paper Award from the IEEE Control System Society in 1987, the Outstanding Publication Award from the Institution of Management Science in 1990, the Outstanding Service Award from IFAC in 2008, and the Natural Science Award (2<sup>nd</sup> class) from China State Council in 2009. He was elected as a Fellow of IEEE in 1995, and a Fellow of IFAC in 2008. He is Editor-in-Chief of *Discrete Event Dynamic Systems: Theory and Applications*, and he served as Associate Editor at Large of *IEEE Transactions of Automatic Control*, and the Chairman of IEEE Fellow Evaluation Committee of IEEE Control System Society (2005-2007), and he was a member on the Board of Governors of IEEE Control Systems Society, and the chairman of IFAC Coordinating Committee on Systems and Signals (2006-2011) and a member of the Technical Board of IFAC, and a member of the standing

committee of Chinese Association of Automation. He is/was associate editor of a number of international journals and chairman of a few technical committees of international professional societies. His current research areas include discrete event dynamic systems, stochastic learning and optimisation, performance analysis of communication systems, signal processing, and financial engineering.