Srikant, R. and Lei Ying. *Communication Networks: An Optimization, Control, and Stochastic Networks Perspective*. New York, NY: Cambridge University Press, 2014, 352 pp. $80.00 (Hardbound).

Communication Networks blends control, optimization, and stochastic network theories with features that support student learning to provide graduate students with an accessible, modern approach to the design of communication networks.

- Covers a broad range of performance analysis tools, including important advanced topics that are made accessible to graduate students for the first time.
- Taking a top-down approach to network protocol design, the authors begin with the deterministic model and progress to more sophisticated models.
- Network algorithms and protocols are tied closely to the theory, engaging students and helping them understand the practical engineering implications of what they have learnt.
- The background behind the mathematical analyses is given before the formal proofs and is supported by worked examples, enabling students to understand the big picture before going into the detailed theory.
- End-of-chapter exercises cover a range of difficulties; complex problems are broken down into several parts, many with hints to guide students. Full solutions are available to instructors.

R. Srikant is the Fredric G. and Elizabeth H. Nearing Endowed Professor of Electrical and Computer Engineering, and a Professor in the Coordinated Science Laboratory, at the University of Illinois at Urbana-Champaign, and is frequently named in the university's list of teachers ranked as excellent. His research interests include communication networks, stochastic processes, queueing theory, control theory, and game theory. He has been a Distinguished Lecturer of the IEEE Communications Society, is a Fellow of the IEEE, and is currently the Editor-in-Chief of the *IEEE/ACM Transactions on Networking*.

Lei Ying is an Associate Professor in the School of Electrical, Computer and Energy Engineering at Arizona State University, and former Northrop Grumman Assistant Professor at Iowa State University. He is a winner of the NSF CAREER Award and the DTRA Young Investigator Award. His research interests are broadly in the area of stochastic networks, including wireless networks, P2P networks, cloud computing, and social networks.