

**Zhao, H. Vicky, W. Sabrina Lin and K. J. Ray Liu. *Behavior Dynamics in Media-Sharing Social Networks*. New York, NY: Cambridge University Press, 2011, 337 pp. \$125.00 (Hardbound).**

In large-scale media-sharing social networks, where millions of users create, share, link, and reuse media content, there are clear challenges in protecting content security and intellectual property, and in designing scalable and reliable networks capable of handling high levels of traffic.

This comprehensive resource demonstrates how game theory can be used to model user dynamics and optimize design of media-sharing networks. It reviews the fundamental methodologies used to model and analyze human behavior, using examples from real-world multimedia social networks. With a thorough investigation of the impact of human factors on multimedia system design, this accessible book shows how an understanding of human behavior can be used to improve system performance.

Bringing together mathematical tools and engineering concepts with ideas from sociology and human behavior analysis, this one-stop guide will enable researchers to explore this emerging field further and ultimately design media-sharing systems with more efficient, secure, and personalized services.

**H. Vicky Zhao** is an Assistant Professor in the Department of Electrical and Computer Engineering at the University of Alberta. The recipient of the IEEE Signal Processing Society Young Author Best Paper Award 2008, she is an Associate Editor for the *IEEE Signal Processing Letters* and the *Journal of Visual Communication and Image Representation*.

**W. Sabrina Lin** is a Research Associate in the Department of Electrical and Computer Engineering at the University of Maryland. She received the University of Maryland Future Faculty Fellowship in 2007.

**K. J. Ray Liu** is a Distinguished Scholar-Teacher of the University of Maryland, where he is Christine Kim Eminent Professor in Information Technology. He received the IEEE Signal Processing Society Technical Achievement Award in 2009, and was Editor-in-Chief of the *IEEE Signal Processing Magazine* and the founding Editor-in-Chief of the *EURASIP Journal on Advances in Signal Processing*.