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Computer Science at the University of Ioannina, Greece. His research interests are in the general area of multimedia communications and signal processing, including image and video compression and transmission over wireless channels and the Internet, super-resolution of video sequences and shape coding. Dr Kondi is an Associate Editor of the EURASIP Journal of Advances in Signal Processing and an Associate Editor of IEEE Signal Processing Letters . Ajay Luthra received his B.E. (Hons) from BITS, Pilani, India in 1975, M.Tech. in Communications Engineering from IIT Delhi in 1977 and Ph.D. from Moore School of Electrical Engineering, University of Pennsylvania in 1981. From 1981 to 1984 he was a Senior Engineer at Interspec Inc., where he was involved in digital signal and image processing for bio-medical applications. From 1984 to 1995 he was at Tektronix Inc., where from 1985 to 1990 he was manager of the Digital Signal and Picture Processing Group and from 1990 to 1995 Director of the Communications/Video Systems Research Lab. He is currently a Senior Director in the Advanced Technology Group at Connected Home Solutions, Motorola Inc., where he is involved in advanced development work in the areas of digital video compression and processing, streaming video, interactive TV, cable head-end system design, advanced set top box architectures and IPTV. Dr Luthra has been an active member of the MPEG Committee for more than twelve years where he has chaired several technical sub-groups and pioneered the MPEG-2 extensions for studio applications. He is currently an associate rapporteur/co-chair of the Joint Video Team (JVT) consisting of ISO/MPEG and ITU-T/VCEG experts working on developing the next generation of video coding standard known as MPEG-4 Part 10 AVC/H.264. He is also the USA's Head of Delegates (HoD) to MPEG. He was an Associate Editor of IEEE Transactions on Circuits and Systems for Video Technology (2000-2002) and a Guest Editor for its Special Issues on the H.264/AVC Video Coding Standard, July 2003 and Streaming Video, March 2001. He holds 30 patents, has published more than 30 papers and has been a guest speaker at numerous conferences. Song Ci is an Assistant Professor of computer and electronics engineering at the University of Nebraska-Lincoln. He received his B.S. from Shandong University, Jinan, China, in 1992, M.S. from the Chinese Academy of Sciences, Beijing, China, in 1998, and a Ph.D. from the University of Nebraska-Lincoln in 2002, all in Electrical Engineering. He also worked with China Telecom (Shandong) as a telecommunications engineer from 1992 to 1995, and with the Wireless Connectivity Division of 3COM Cooperation, Santa Clara, CA, as a R&D Engineer in 2001. Prior to joining the University of Nebraska Lincoln, he was an Assistant Professor of computer science at the University of Massachusetts Boston and the University of Michigan-Flint. He is the founding director of the Intelligent Ubiquitous Computing Laboratory (iUbiComp Lab) at the Peter Kiewit Institute of the University of Nebraska. His research interests include cross-layer design for multimedia wireless communications, intelligent network management, resource allocation and scheduling in various wireless networks and power-aware multimedia embedded networked sensing system design and development. He has published

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A comprehensive presentation of the video communication techniques and systems, this book examines 4G wireless systems which are set to revolutionise ubiquitous multimedia communication. 4G Wireless Video Communications covers the fundamental theory and looks at systems' descriptions with a focus on digital video. It addresses the key topics associated with multimedia communication on 4G networks, including advanced video coding standards, error resilience and error concealment techniques, as well as advanced content-analysis and adaptation techniques for video communications, cross-layer design and optimization frameworks and methods. It also provides a high-level overview of the digital video compression standard MPEG-4 AVC/H.264 that is expected to play a key role in 4G networks. Material is presented logically allowing readers to turn directly to specific points of interest. The first half of the book covers fundamental theory and systems, while the second half moves onto advanced techniques and applications. This book is a timely reflection of the latest advances in video communications for 4G wireless systems. One of the first books to study the latest video communications developments for emerging 4G wireless systems Considers challenges and techniques in video delivery over 4G wireless systems Examines system architecture, key techniques and related standards of advanced wireless multimedia applications Written from both the perspective of industry and academia

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