Wireless Communications and Mobile Computing

Call for Papers:
Special Issue on Video Communications for 4G Wireless Systems

In recent years, there has been a rapidly increasing demand for the development of advanced interactive multimedia applications, such as video telephony, video games and TV broadcasting. However, these applications are always stringently constrained by current wireless system architectures because the request of high data rate for video transmission. To better serve this need, 4G broadband mobile systems are in planning and are expected to increase the mobile data transmission rates and bring higher spectral efficiency, lower cost per transmitted bit, and increased flexibility of mobile terminals and networks. The new technology strives to eliminate the distinction between video over wireless and video over wireline networks. In the meantime, great opportunities are provided for proposing novel wireless video protocols and applications, and developing advanced video coding and communications systems and algorithms for the next-generation video applications that can take maximum advantage of the 4G wireless systems.

The papers in this issue will focus on state-of-the-art research on all aspects of the video communications for 4G wireless systems, from video coding, resource allocation to transportation systems. We solicit papers covering a variety of topics including but not limited to the following topics:

- Advanced video coding algorithms
- Advanced video error resilient and concealment algorithms for wireless systems
- Video quality assessment for wireless communications
- Rate control for wireless video
- Scalable and multiple description video coding and video transmission
- Joint source-channel coding for wireless video
- Optimal resource allocation for energy-efficient wireless video
- Cross-layer wireless video communication system design and optimization
- Wireless video traffic modeling
- Wireless video streaming and synchronization
- Video processing for wireless sensor networks
- New multimedia wireless protocols and standards
- New video applications over 4G wireless systems
- Packetization schemes for wireless video transmission
- Efficient transport protocols for wireless networks
- QoS issues for video over wireless, especially for low-delay communication
- The merging of various wireless systems: cellular, metropolitan, and local area networks
- Proxy-based systems for video transcoding and content distribution
- Lightweight video encoding methods based on distributed and multi-user coding

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Submission Procedure:

Papers not exceeding 25 double-spaced pages may be submitted electronically (in PDF files) to Prof. Lisimachos P. Kondi (lkondi@eng.buffalo.edu) or Dr. Haohong Wang (haohongw@qualcomm.com). Authors are also requested to submit a separate cover letter via email, which contains the paper title, the authors' names and affiliations, and a 200 word abstract. Detailed instructions to authors can be found in http://www3.interscience.wiley.com/cgi-bin/jabout/76507157/ForAuthors.html.