ACM/Springer Mobile Networks and Applications (MONET) Special Issue on "Recent Advances in IEEE 802.11 WLANs: Protocols, Solutions and Future Directions "

With the rapid growth in popularity of wireless data services and the increasing demand for wireless connectivity, Wireless Local Area Networks (WLANs) have become more widespread and are making their way into commercial and public areas being almost everywhere including business, office and home deployments. WLANs based on the IEEE 802.11 standards enjoy an exceptionally high popularity owing to their simplicity of setup, increased deployment flexibility, unlicensed frequency band, low cost and connectivity with minimal infrastructure changes. Lately, the need for Real Time (RT) multimedia services over WLANs is dramatically increased, including Voice over IP (VoIP), audio/video (AV) streaming, Internet videoconferencing, IPTV, distance learning, entertainment and gaming, and so forth.

Despite recent advances in wireless technology and the significant amount of attention from academia, industry and standard organizations, many research issues such as bandwidth, power consumption, compatibility with legacy networks and error resiliency still need to be addressed. Furthermore, the dynamically-varying conditions and the error-prone nature of the wireless medium pose further challenges in providing efficient channel access mechanisms and Quality of Service (QoS) support over WLANs.

The goal of this special issue is to publish both state-of-the-art and prospective papers that present advances towards the performance enhancement of IEEE 802.11 WLANs. In this context, papers will discuss all aspects that have an impact on the performance as depicted in research activities from professionals, academics and researchers. This Special Issue will serve as a venue for both academia and industry individuals working in this fast-growing research area to share their experiences and state-of-the-art work with the readers. Topics of interest include, but are not limited to, the following list:

- Medium access and end-to-end flow/error/congestion control for WLANs
- QoS support for multimedia applications and services in WLANs (e.g., IEEE 802.11a/b/g/e/n, etc.)
- VoWLAN network architecture and deployment, coexistence with other WLAN applications
- Cross-layer design and approaches for multimedia communications over WLANs
- Energy-efficient WLANs and power consumption issues
- Effects of hardware limits or malicious protocol implementations on WLAN QoS
- Performance evaluation and improvement of WLANs in traditional or emerging large-scale architectures
- Recent standardization activities for wireless communications (IEEE 802.11 and its varieties)

***Note that submissions covering security issues are out-of-the-scope of this special issue.

Manuscript submission:
Only original and unpublished work will be considered. Only original research papers will be considered. Submission should be limited to 25 double space pages. Prospective authors should submit, via email, their manuscript as a PDF file to **Periklis Chatzimisios** (pchatzimisios@ieee.org) according to the publication schedule.

Publication Schedule:

Manuscript submission deadline: **June 15, 2008**

Notification of acceptance: **September 15, 2008**

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Publication: **early 2009**

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