

# Call for Papers

IEEE Journal on Selected Areas in Communications

## Broadband Access Networks: Architectures and Protocols

With the explosive growth of the Internet and ever-increasing users' demands for broadband services, today's subscriber access networks are becoming a potential bottleneck for providing broadband services. To address this problem, FTTx technologies have been long envisioned as a preferred solution, and passive optical networks (PONs) have been widely considered as a promising technology for implementing various FTTx solutions. Meanwhile, recent advances in wireless communication technology have led to significant innovations that enable wireless access networks (e.g., WiMAX) in providing more bandwidth with convenient and inexpensive deployment and mobility. Most recently, there has been a tremendous interest in integrated optical and wireless access networks with the motivation to exploit the high bandwidth capacity of fiber-optic technology and the low cost and mobility support of wireless technology. Regardless of the technology used, promising broadband access networks must not only be able to provide reliable and high-quality broadband services, but also be implemented cost-effectively. This presents many challenges in the design of network architectures and protocols, which have motivated a significant amount of research activities in the area. The aim of this special issue is to present a collection of high-quality research papers that report the latest research advances in broadband access networks, focused on network architectures and protocols. We are soliciting original contributions that have not been published and are not currently under consideration by any other journal. Topics of interests include the following subject categories:

- Passive optical access networks
- WiMAX access networks
- Integrated optical and wireless access networks
- Network architecture design
- Medium access control
- Bandwidth and resources allocation
- Scheduling and admission control
- Multicasting and broadcasting
- Quality of service provisioning
- Network reliability and survivability
- Network modeling and performance analysis
- Support for multi-provider access networks

*Note that the first three topics describe the types of networks considered, and the other topics describe the network architectural and protocol issues considered in the context of the three types of networks.*

Prospective authors should prepare their manuscript in accordance with the IEEE J-SAC format described at <http://www.jsac.ucsd.edu/Guidelines/info.html>. Authors should submit a PDF version of their complete manuscript to <http://www.edas.info> according to the following timetable:

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