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Telecommunication Systems

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Special Issue on "Wireless Sensor Networks"

Recent advances in digital electronics, embedded systems, and wireless communications have motivated a lot of research in the direction of distributed wireless sensor networks. Such networks may have a wide range of applications, including security and surveillance, control, actuation and maintenance of complex systems, and fine-grain monitoring of indoor and outdoor environments. Sensor networks differ from conventional network systems in many aspects. They usually involve a large number of spatially distributed, energy-constrained, self-configuring and self-aware nodes. The wireless sensor networks are bringing a lot of new challenges and design considerations, which go much beyond conventional network systems. Topics include, but not limited to:

□ sensor network communication architectures
☐ self-configuring, self-healing schemes in sensor networks
□ energy-saving and topology control
☐ mobility-tolerant communication protocols
☐ energy-efficient media access, error control, and traffic management
□ collaborative information processing of sensor nodes
☐ transportation protocols
☐ data dissemination, data fusion, and information processing
□ robust distributed algorithms for collaborative processing
☐ modeling, performance evaluation, and simulation tools
☐ distributed resource management
☐ systems, platforms, and tools
☐ target tracking and location-based services
□ localization services
☐ time synchronization
☐ data-centric routing, attribute-based addressing, and location management
□ collaboration and group management of sensor nodes
☐ distributed networked sensing and control
☐ embedded architectures and tools
□ programming models and languages
☐ query processing and optimization
□ security
☐ services and applications

Submission Guideline

Authors should follow the Telecommunication Systems manuscript format described at http://www.kluweronline.com/issn/1018-4864. Prospective authors should submit a PDF/PS version of complete manuscript to Guest Editor Prof. Chen at vschen@cs.ccu.edu.tw.

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