Guest Editorial: Next Generation Wireless Computing Systems

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An important aspect of the Next Generation Wireless Computing Systems to ensure a high computing performance is the quality of service (QoS). Wireless communications hold specific characteristics such as frequent disconnections, channel variation, modest available resources, limited energy sources, inefficient security, and fluctuating quality of service. This Special Issue presents state-of-the art QoS solutions for future generations of wireless networks for improved use of various computing systems.

Design, development, analysis, and optimization of communication protocols and some perspective solutions for improved performance of Next Generation Wireless Computing Systems in terms of QoS and energy efficiency are the subject of papers included in this Special Issue. The three papers selected here broadly cover specific areas among the above topics with the consideration of providing high-quality research and practical initiatives in the field.

In the first article, entitled "On Achieving Asynchronous Energy-Efficient Neighbor Discovery for Mobile Sensor Networks" by Honglong Chen *et al*., the authors propose a practical model named enhanced power consumption model that considers the power consumption and time duration of the transient state.

In the second article, entitled "Hardware-Software Codesign of Wireless Transceivers on Zynq Heterogeneous Systems" by Benjamin Drozdenko *et al*., the authors present a method for modeling a generic orthogonal frequency division multiplexing (OFDM) wireless transceiver on the Zynq system-on-chip by decomposing the standard specifications into a set of functional blocks used in multiple protocols.

Finally, the last article entitled "On Minimizing Energy Consumption in FiWi Enhanced LTE-A HetNets" by Hongzhi Guo, *et al*., studies the problem of minimizing energy consumption with user equipment connection constraint in fiber-wireless (FiWi) enhanced LTE-A HetNet, and presents a formulation for this constrained optimization problem after analyzing the total energy consumption and user equipment connection.

The Guest Editorial team would like to thank all authors who have submitted their work to this special issue. The Guest Editors would also like to thank the Editor-in-Chief of the *IEEE Transactions on Emerging Topics in Computing* for accommodating the Special Issue and the publication staff for their great work in putting together the final edition of the issue. We hope you enjoy reading the articles.

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