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## **Special Issue on Improving the Energy Efficiency of Cellular Communications**

With 4 billion mobile phone subscribers already in the world today and the projected rapid increase in wireless data consumption, the energy efficiency of cellular networks has now become an urgent issue – in particular for base stations, which can account for more than half of a network's energy consumption. While much research is already under way, the energy efficiency of cellular networks still poses significant challenges at all levels: from fundamental limits and trade-offs to traffic patterns and user behaviours, and from circuit design and baseband processing to network deployment and management. The ultimate improvement of energy efficiency in cellular networks is likely to require an integrated approach and inter-level joint optimisation.

We invite original and unpublished research papers on all aspects of energy efficiency in cellular networks. The topics of relevance include, but are not limited to:

- Metrics, fundamental limits, and trade-offs involving energy efficiency;
- Energy aware network management, coverage, and re-configuration;
- Energy efficiency of different network deployment strategies (e.g. heterogeneous networks) and interference coordination;
- Collaborative multipoint transmission, fixed relaying, and user relaying;
- Energy efficient circuit and system design (e.g. power amplification and management);
- Energy decomposition in deployment and operation of cellular systems;
- Energy efficient transmission and baseband processing;
- Discontinuous transmission and sleep modes;
- Backhauling and distributed resource allocation and power control schemes.

Prospective authors should follow the author guidelines of Journal of Communications which can be found at <http://www.academypublisher.com/jcm/forauthors.html>. For further enquiries, please contact the corresponding editor (Fu-Chun Zheng, [fzheng@ieee.org](mailto:fzheng@ieee.org))

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