

## **Auction-Based Data Gathering Scheme for Wireless Sensor Networks**

This letter proposes a novel data gathering scheme for wireless sensor networks (WSNs) that limits the energy expenditure, and hence, prolongs network lifetime. Data gathering is modeled as an auction where a node broadcasts its own result only if it is higher than the maximum already-broadcasted result by other nodes. For a WSN of 100 nodes, the mathematical and simulation results show that the proposed scheme can save up to 70% of the energy consumption with  $<1\%$  performance loss, compared with the conventional scheme.