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5.3. Model solution
 5.4. Performance evaluation; 1.1.1. Sensor density and traffic generation; 1.1.2. Data routing; 1.1.3. Local and relay traffic rates; 1.1.4. Channel contention and data transmission; 1.1.5. Mean packet delivery delay; 1.1.6. Sensor active/sleep behavior; 1.3.1. A minimum energy routing strategy: computing $u(r|r)$; 1.3.2. Channel contention and data transmission: computing $s(r)$ and $PR(r)$; 1.3.3. Mean packet delivery delay: computing $q(r)$; 1.4.1. Model validation; 1.4.2. Model exploitation; 1.4.3. Model solution complexity and accuracy; 2.1.1. The 802.15.4 MAC protocol
 2.2.1. Single message transfer
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 5.1.2. RAT selection strategy
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 5.2.1.1. Rates derivation

Sommario/riassunto

Wireless networks represent an inexpensive and convenient way to connect to the Internet. However, despite their applications across several technologies, one challenge still remains: to understand the behavior of wireless sensor networks and assess their performance in large-scale scenarios. When a large number of network nodes need to interact, developing suitable analytical models is essential to ensure the appropriate coverage and throughput of these networks and to enhance user mobility. This is intrinsically difficult due to the size and number of different network nodes and users. This book highlights some examples which show how this problem can be overcome with the use of different techniques. An intensive parameter analysis shows the reader how to exploit analytical models for an effective development and management of different types of wireless networks.
