

Jordan University of Science and Technology

On the Outage Probability in DF Relay Selection Cooperative Wireless Networks over Nakagami-m Fading Channels

Authors: Suzan Al-Zoubi, Rami Mohaisen, Mamoun F. Al-Mistarihi, **Sari M. Khatalin** and Mahmoud A. Khodeir

Abstract: This paper proposes a method for transmitting data through a best relay selection technique in a cooperative network over Nakagami-m fading channels. The selection of the best relay among multiple Decode and Forward (DF) relays is based on the minimum outage probability (P_{out}) criterion. Therefore, only the relay with the lowest P_{out} will transfer the data to the destination. A closed-form expression is derived for the P_{out} of the best relay selection with the DF technique. Numerical examples are presented here for demonstration.