

A General Expression For The Capacity Of Slotted ALOHA Under Nakagami Fading

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Summary

A general expression for the channel throughput of slotted ALOHA under Nakagami fading is obtained assuming different fading statistics and unequal average power levels for the desired and the interfering packets. The expression provides a better alternative to the previously reported expressions derived under similar conditions. With this general expression the effect of the use of modulation on the system performance is then studied. It is observed that the inclusion of the deleterious effects like white noise, bit error rate and the packet length reduces the throughput over the one observed under idealized conditions

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