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Channel Capacity of the Generalized Alpha-Mu Multipath Fading Model Under Different Adaptive Transmission Protocols

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Abstract: In this paper, we consider a relatively new small scale multipath fading model, namely; the alpha-mu fading distribution. We derive expressions for the average channel capacity under different channel policies , namely; optimal power and adaptation rate (OPRA) and channel inversion with fixed rate (CIFR) considering this fading model and show the generalized attribute of it. The obtained expressions for the channel capacity under these policies can reduce to other expressions for other channel models as special cases. Numerical results for the obtained expressions are provided and some conclusions are also drawn.