

Robust multi-user detection based on hybrid grey wolf optimization

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ABSTRACT

The search for an effective nature-inspired optimization technique has certainly continued for decades. In this paper, a novel hybrid Grey wolf optimization and differential evolution algorithm robust multi-user detection algorithm is proposed to overcome the problem of high bit error rate (BER) in multi-user detection under impulse noise environment. The simulation results show that the iteration times of the multi-user detector based on the proposed algorithm is less than that of genetic algorithm, differential evolution algorithm and Grey wolf optimization algorithm, and has the lower BER.

KEYWORDS

Grey wolf optimization algorithm; Differential evolution algorithm; Hybrid optimization; Multi-user detection; Impulse noise

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