PS abstracts

PS2 A Study on Differential Evolution Using BetaCOBL, B³R, and TPBO

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New parameters are defined to use a beta distribution without limitation and two beta utilizations to control the search magnitude of thstacte algorithm are proposed: one for adding randomness to OBL (BetaCOBL) and the other for individual distribution-oriented reproduction (B^3R). BetaCOBL and B^3R are developed into DE embedding BetaCOBL (BetaCODE) and two-phase B^3R optimization (TPBO) respectively. The proposed algorithms are tested on various test functions and two real world applications and compared with other algorithms with respect to the performance criteria. The results indicate that the proposed algorithms outperform or perform comparatively to the comparison group especially in terms of solution accuracy and reliability.