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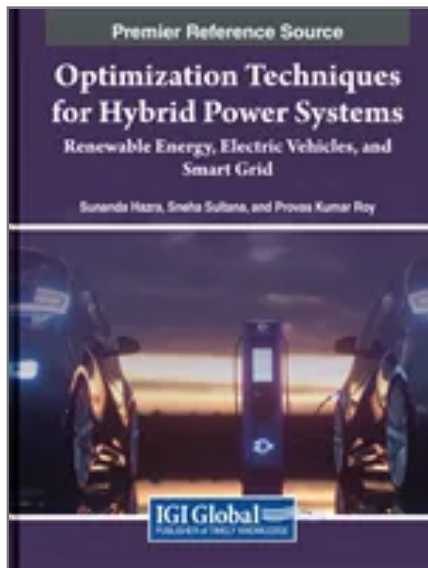
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Abstract

This chapter presents the comparison of five optimal fractional-order low pass filter transfer functions (FOTFs) to model the characteristics of the $(1+\alpha)$, where $\alpha \in (0, 1)$, order frequency filters. The FOTF models are optimally designed using an efficient bio-inspired metaheuristic optimizer such as the flower pollination algorithm (FPA). A comparative study between the designed models and also with the literature is conducted which reveals promising results.