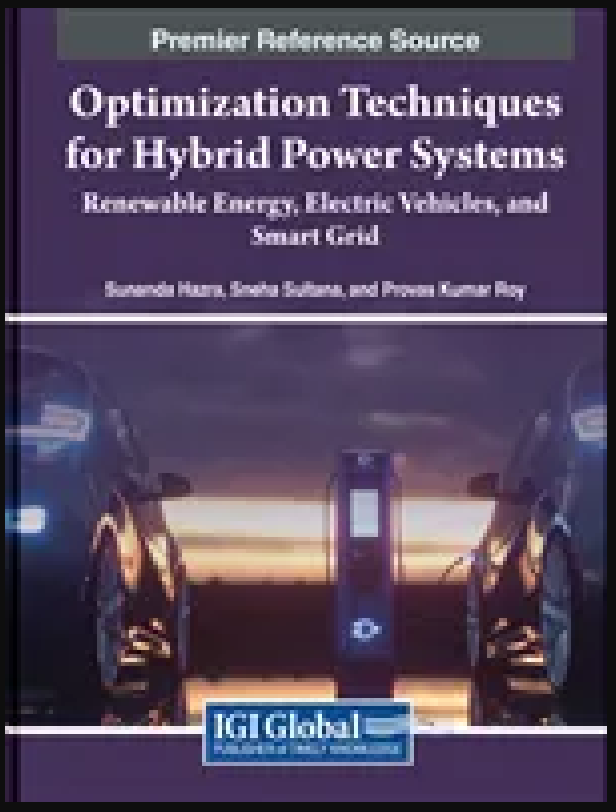
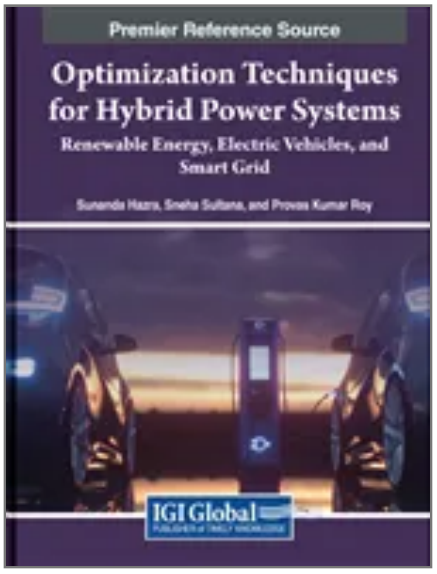

Premier Reference Source
Optimization Techniques for Hybrid Power Systems
Renewable Energy, Electric Vehicles, and Smart Grid
Sunanda Hazra, Sneha Sultana, and Provas Kumar Roy
IGI Global

Table of Contents



Comparative Study of Five Fractional-Order Low Pass Filter Transfer Functions: Optimization, Simulation, and Implementation Using CCII+

Shibendu Mahata

Source Title: Optimization Techniques for Hybrid Power Systems: Renewable Energy, Electric Vehicles, and Smart Grid (/book/optimization-techniques-hybrid-power-systems/322785)

Pages: 19

DOI: 10.4018/979-8-3693-0492-1.ch003

Abstract

This chapter presents the comparison of five optimal fractional-order low pass filter transfer functions (FOTFs) to model the characteristics of the (1+α), where α ϵ (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.