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ANALYSIS OF FUNDAMENTAL AND HIGHER ORDER SOLITONIC PROPAGATION IN OPTICAL FIBER

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ABSTRACT

The objective of this paper is to study the basic analytical propagation of fundamental and higher order solitons in the optical fiber. The characteristic feature of soliton formation occurs due to the balance between Self-Phase Modulation (SPM) and Group Velocity Dispersion (GVD). We simulate the fundamental and higher order soliton in time and frequency domain to investigate the propagation of solitonic pulses in nonlinear optical fibers.

KEYWORDS: Solitons, Optical Fibers, Numerical Analysis