

# Propagation characteristics of Chirped Vector Soliton in optical fibers with variable coefficients

**Siham AZIEZ, Derradji BAHLOUL**

**Abstract :** In this work we study the propagation characteristics of chirped vector solitons in optical fiber systems with variable coefficients by using the compact split step Padé scheme (CSSPS). The numerical simulations show that the chirped managed vector soliton with different perturbations maintains its characteristics during propagation along the polarization maintaining optical fiber.

**Keywords :** vector soliton, chirped soliton, optical fibers, compact split step Padé scheme, coupled higher-order nonlinear Schrodinger equations, temporal waveform.