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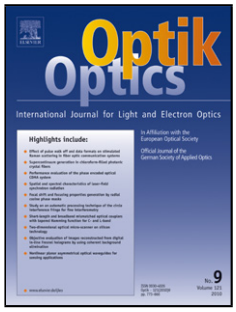

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OPTICAL SOLITON PERTURBATION WITH PARABOLIC AND DUAL-POWER LAW NONLINEARITIES BY SEMI-INVERSE VARIATIONAL PRINCIPLE

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Abstract

This paper secures bright optical soliton solutions to the nonlinear Schrödinger's equation with parabolic and dual-power law nonlinearities. This model carries Hamiltonian type perturbation terms that permits integrability. The semi-inverse variational principle is the integration criteria for this perturbed model and the soliton structure is chosen to be a different one from earlier reported works.

OCIS Codes: 060.2310; 060.4510; 060.5530; 190.3270; 190.4370
Key words: bright solitons; semi-inverse variation; parabolic law; dual-power law.

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