Seminario de Estudiantes
2018-B

Invita a la plática:

"Numerical and analytical study of propagation, interaction & collision of optical spatial solitons in Kerr medium, with split-step & Fourier scattering method by Matlab."

Presenta

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RESUMEN

One purpose of modern nonlinear optics is to accelerate transferring data in the best way to avoid losing energy of beam due to diffraction. In the case that we have sufficient energy for incident beam in medium, the issue of beam propagation comes through the third order of nonlinearity (Kerr medium) for medium polarization, and interesting phenomena such as self-focusing (for focusing beam light) or self-defocusing plays the rule.

So that with the help of equality effect of diffraction and self-focusing, the beam can make its own waveguide, that beam can be propagated without changing its width, which keeps constant transversal area of beam propagation (spatial solitons). And even more interestingly light can control and guide beam light with fundamental concept of soliton propagation in Kerr medium. Numerical solution method is employed to solve related Nonlinear Schrodinger Equation (NLSE), here split-step & Fourier scattering method is used with Matlab software assistance.

Fecha: **28 de Agosto de 2018**
Lugar: **Auditorio del IFUAP**
Horario:**16:00 hrs.**

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