Solusi dua dimensi dari discrete optical cavities = Two dimensional solution of discrete optical cavities

Bayu Aji Saputra, author

Abstrak

Discrete optical cavities adalah sebuah studi mengenai sistem benda optik identik yang dijajarkan dalam suatu larik periodik dengan jarak yang sama lalu ditembak oleh suatu sumber cahaya sehingga cahaya berosilasi di dalam benda optik dan memenuhi sistem persamaan nonlinear. Penempatan optik dipandang layaknya sebuah garis, figur satu dimensi. Solusi sistem persamaan nonlinear berupa soliton seperti penjelasan Yulin dan Champneys dalam paper mereka pada tahun 2010. Metode yang digunakan untuk menyelesaikan sistem persamaan nonlinear ini adalah metode Pseudo-Archlength Continuation. Discrete optical cavities dapat dikembangkan sedemikian sehingga membentuk figur dua dimensi. Sistem persamaan nonlinear dimodifikasi sedemikian sehingga berlaku bagi discrete optical cavities dua dimensi.
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Discrete optical cavities is a study about identic optical objects that arranged in a periodic array with same distance between them and it shots by a light source so that the light oscillates inside the optical objects and suffices nonlinear systems of equation. The placement of the optical objects considered as a line, in one-dimensional figure. Solution of nonlinear system of equations is soliton as described by Yulin and Champney at their paper in 2010. Method used to solve the nonlinear systems of equation is Pseudo-Arclength Continuation. Discrete optical cavities can be developed into two-dimensional figure. The nonlinear system of equations is modified so that it suffices two-dimensional system of discrete optical cavities problem.