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## Dark compactons in nonlinear schrödinger lattices with strong nonlinearity management (Article)

Abdul Hadi, M.S.<sup>a</sup>, Umarov, B.<sup>a</sup>, Abdullaev, F.<sup>a</sup>, Salemo, M.<sup>b</sup>

<sup>a</sup> Department of Physics, Kuliyah of Science, International Islamic University Malaysia, Kuantan, Pahang, Malaysia

<sup>b</sup> Dipartimento di Fisica, E.R. Caianiello, CNISM and INFN - Gruppo Collegato di Salerno, Università di Salerno, Via Giovanni Paolo II, Fisciano (SA), Italy

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### Abstract

The existence of dark compacton solution of discrete nonlinear Schrödinger (DNLS) equation with strong nonlinearity management (SNLM) is investigated. The stability analysis was carry out using standard linearization stability procedure. Even though the stability regime is not so wide but evidently some stable dark compactons can exist in the SNLM DNLS system. Surprisingly, even within the confirmed stability regime from the analysis, the time evolution of the dark compacton solution exhibits small bounded ripples.

### Author keywords

Dark compactons; Discrete nonlinear schrödinger equation; Strong nonlinearity management

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