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Invited talk:

Discrete rogue waves generated by supratransmission phenomenon in nonlinear lattice

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Supratransmission [1] is a fascinating nonlinear wave phenomenon, which enables plane wave transmission through frequency band gaps. This phenomenon reveals the type of waves that can exist in discrete systems [2-3] apart from its numerous applications in physics and engineering. In this work, we generate the discrete rogue waves [4] by the supratransmission way with a chain of pendula submitted to a harmonic-driving source with constant amplitude and parametrical excitation. This opens the door for the application of discrete rogue waves within a simple device.

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