
Some relations of discrete and wave in dynamical systems

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The article presents analysis of the corpuscular and wave properties of discrete dynamical systems, and gives proof of limitations of corpuscular approach in assessing the traveling waves. It is shown that such form of natural vibrations as standing wave allows to obtain a real loading of the dynamic system in all points only at the moment of maximum deflection of the masses. As for any given time it works only in some points of the system (node points of waveforms). On other times the load in the system can be found in accounting of sine of phase angle between the traveling and standing waves.

Keywords: wave, corpuscular, dualism, frequency, phase velocity, impedance, damping coefficient, natural mode.

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