Abstract Submitted
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Study of Pair Mirror-Resonance in Fibonacci Arrays with Sagittal Waves[1] LAMBERTO CASTRO-ARCE, División de Ingeniería, Departamento de Ingeniería Industrial, Universidad de Sonora, JULIO CESAR CAMPOS-GARCÍA, Campus Cajeme, Universidad de Sonora, CARLOS FIGUEOA-NAVARRO, División de Ingeniería, Departamento de Ingeniería Industrial, Universidad de Sonora, MARTÍN EDUARDO MOLINAR-TABARES, Organismo de Cuenca Noroeste, Comisión Nacional del Agua — The states of polarization of sagittal waves in quasi-periodic structures of Fibonacci type are studied. Complementary to the periodic case where the state of polarization is obtained through the average of the longitudinal and transversal energies in an unitary cell, and for a super cell (periodic case with defect), we will evaluate here the polarization of elastic waves in plates with arrays of different levels or Fibonacci orders. Also the mirror effect, increasing the Fibonacci level we have found an additional structure in the spectrum of reflected and transmitted energy. We observe not just the appearance of the resonance but also the emergence of a new peak of reflection of the longitudinal wave. Through the analysis of the multilayer structure Fibonacci level 6, in practice we are creating a superstructure in blocks.

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