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# Two-Dimensional Periodic Arrays for Structural Health Monitoring: Theory and Experiments

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This paper presents theory and experimental characterization of a two-dimensional periodic array for structural health monitoring applications. All elements of the array are connected together to achieve the control of the array with a single channel. The array is characterized experimentally both in actuator and sensor modes on an aluminium plate. In the actuator mode, the array achieves directional actuation of guided waves through a sweep of steering frequencies. In the sensor mode, the array functions as a directional filter. Direction of arrival of impinging waves can be correlated with the steering frequencies of the array.

**Ключевые слова:**

**Содержание.**

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