

# Vibrations mode viewing with DSPI

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*F. Garoi\**, *A. Sima*, *D. Apostol*, *V. Damian*, *P. C. Logofătu*

National Institute for Lasers, Plasma and Radiation Physics  
Atomistilor 409, PO Box MG-36, Magurele 077125, Ilfov, ROMANIA

## ABSTRACT

An experiment for detecting small deformations by speckle interferometry is related in this paper. Vibration modes of an aluminium plate are observed by digital speckle pattern interferometry (DSPI). For the experimental approach, a Mach-Zender interferometer arrangement was used and the speckle interferograms were recorded with a CCD camera and processed on a computer. These fringes depend on the path differences due to the vibration of the aluminium plate from its original state. Vibration amplitudes between 0.3 – 0.6  $\mu\text{m}$  were measured for seven vibration modes of the plate.

**Keywords:** speckle, interference, speckle interferometry, vibrations, non-destructive testing

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\* Contact person: [florin.garoi@inflpr.ro](mailto:florin.garoi@inflpr.ro); Website: <http://ila.inflpr.ro>