

REFERENCELESS WAVEFRONT RECONSTRUCTION USING THE TALBOT SENSOR

The most common used approach of wavefront measurement is based on the sampling light amplitude distribution. By analyzing intensity patterns derived from reference and object wave, the local front slopes can be measured. The new approach for referenceless wavefront reconstruction is proposed by using the Talbot sensor. It is shown, that by comparing the images of an object wave produced in two sequential Talbot planes, the local front slopes can be measured too. Experimental results have been compared with Talbot and Shack-Hartmann sensors while using classic methodology

Primary authors: BRAZHNIKOV, Denis; Mr SHARASHIDZE, David (Taras Shevchenko National University of Kyiv); Mr KOTOV, Myhailo (Taras Shevchenko National University of Kyiv); Dr KOVALENKO, Andrey (National Taras Shevchenko Univ. of Kyiv)

Presenter: BRAZHNIKOV, Denis

Track Classification: Laser Physics and Optoelectronics