

Contouring of phase and visualization of light field phase singularity points using circular Radon transform

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Abstract

The paper investigates the possibility of using the circular Radon transform, introduced by the authors in their previous works, to solve the optical problems such as phase contouring and visualization of points of phase singularity of light fields. A comparison with the existing methods of phase visualization is performed. Analytical expressions are obtained and numerical calculations are carried out, confirming the effectiveness of using the circular Radon transform for solving the indicated optical problems.

Keywords: radon transform, contouring of phase, light field, optical problem.

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