

Abstract Submitted
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Image Processing Method of the Motion-Capturing PSP/TSP for the Measurement of a Free-Flight Object MASATO ISHII, National Research Institute of Police Science, Japan, HIDEKI GOYA, TAKESHI MIYAZAKI, University of Electro-Communications, HIROTAKA SAKAUE, University of Notre Dame — The motion-capturing PSP/TSP system consists of a two-color PSP/TSP and a high-speed color camera. Red and green luminescent images are acquired simultaneously as signal and reference outputs by this system. Simply by rationing the red and the green images, we can obtain a pressure/temperature distribution on the surface of a target object. This system is applied to measure the surface pressure/temperature of a free-flight object. However, an acquired image includes motion blur, focus blur and random noise around the object. We discuss image processing methods and evaluations to optimize those uncertainties. Three types of the edge detect methods are used, which are the sobel, the laplassian and the canny. We will also show the evaluation results to discuss an optimized image processing for the motion-capturing PSP/TSP system.

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