



Faculty of Engineering
University of Kragujevac



Ministry of Science, Technological
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10th International Congress Motor Vehicles & Motors 2024

ECOLOGY - VEHICLE AND ROAD SAFETY - EFFICIENCY

Book of abstracts



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and Motors



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SAFETY – EFFICIENCY**

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MVM2024-017

Marko Delić¹
Vesna Mandić²
Dragan Adamović³
Dušan Arsić⁴
Đorđe Ivković⁵
Nada Ratković⁶

ANALYSIS OF PHOTOGRAMMETRY APPLICATION POSSIBILITIES FOR REVERSE ENGINEERING OF COMPONENTS IN THE AUTO INDUSTRY

ABSTRACT: Reverse engineering is a technique that has recently been used in all areas of industry. The application of reverse engineering in the auto industry occupies a very important place. 3D scanners are often used to digitize parts with fine details or large sheet metal, and they can be very expensive. In this paper, the possibility of using photogrammetry for reverse engineering of components in the auto industry will be analyzed. Digitization of the automotive component will be done in two ways, using a mobile phone camera and free photogrammetry software and a suitable professional scanner. The accuracy of the cloud of points obtained and time required for digitization by both methods will be compared. At the end conclusion will be drawn whether it is currently possible to use photogrammetry in industrial conditions.

KEYWORDS: 3D scanning, photogrammetry, reverse engineering, point cloud

1Marko Delić, Faculty of Engineering, University of Kragujevac, SestreJanjić 6, marko.delic@kg.ac.rs

2Vesna Mandić, Faculty of Engineering, University of Kragujevac, SestreJanjić 6, mandic@kg.ac.rs

3Dragan Adamović, Faculty of Engineering, University of Kragujevac, SestreJanjić 6, adam@kg.ac.rs

4Dušan Arsić, Faculty of Engineering, University of Kragujevac, SestreJanjić 6, dusan.arsic@fink.rs

5Đorđe Ivković, Faculty of Engineering, University of Kragujevac, SestreJanjić 6, djordje.ivkovic@fink.rs

6Nada Ratković, Faculty of Engineering, University of Kragujevac, SestreJanjić 6, nratkovic@kg.ac.rs