DEVELOPMENT OF A MODEL FOR MECHANICAL ENGINEERING OBJECT CONTROL USING FOURIER SERIES BASED ON COMPUTER VISION SYSTEM

A.D. Stukalova nastyas_email@rambler.ru

Bauman Moscow State Technical University, Moscow, Russian Federation

Abstract

The purpose of the article was to do the harmonic analysis of definition of Fourier series coefficients using the example of building spatial coordinates obtained on the basis of computer vision system. We suggest the method of defining the harmonic number sufficient for obtaining the curve which matches with defined one as much as possible. When solving the given problem, we used software package Matlab. As a result, we designed a 3D-model for object control based on the universal dividing head. Moreover, we solved the problem of video camera mounting and illumination by means of universal tripods.

Keywords

Fourier series, harmonic analysis, computer vision system, nondestructive testing, 3D-model of measuring setup, surface control

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Stukalova A.D. — Master's Degree student, Department of Metrology and Interchangeability, Bauman Moscow State Technical University, Moscow, Russian Federation.

Scientific advisor — A.S. Komshin, Dr. Sc. (Eng.), Assoc. Professor, Department of Metrology and Interchangeability, Bauman Moscow State Technical University, Moscow, Russian Federation.