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# The algorithms of data processing in the model-based vision systems of industrial robots

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*This article analyzes of methods and algorithms for image processing in the model-based vision systems of industrial robots. The first part of the article is shown that the introduced by the authors compound algorithm of the segmentation image due to numerical experiment on image detail identification based on the analysis of the image edges provides higher efficiency than the Canny algorithm. The second part deals with the methods and algorithms of sizing and object transfers. It is shown in the article the advantages and disadvantages of the optimal algorithm and the algorithm of the "center of mass" as well as experimental studies. The results of the study can be used for solving the problems concerning the making model-based vision systems of industrial robots, such as sorting, as well as the orientation finding objects in the operating area during the mechanical processing and operation monitoring of sizes of in-process parts.*

**Keywords:** *vision system, methods, algorithms, recognition, measurement, sorting items, machining.*

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