# Object Localization with Subpixel Resolution for Robotic Assembly

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## ABSTRACT

This paper presents techniques for object localization with subpixel resolution in robotic assembly. The subpixel resolution was achieved using pattern matching and curve fitting techniques for localization of reference patterns and Xenopus oocytes. The paper discusses the effect of noise on the accuracy of object localization and analyses the relationship between the standard deviations. A statistical analysis shows that pattern matching and curve fitting lessen the effect of noise on the determination of object position.

Keywords: robotics, object localization, robotic assembly, positional assembly.

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