

# Abstract

This paper presents an analysis of what factors cause blur on an image, especially macroscopic images of wood. The image is divided into 6x6 sub-images (blocks), which will then be determined factors causing blur based on patterns and variations of Laplacian calculated from each block. Validation is conducted using two different datasets. The first dataset is Wood Species Dataset that is given a median blur, and testing is performed to validate the proposed algorithm. The second dataset is a dataset collected directly using a smartphone camera, and testing is carried out to determine what factors influence the occurrence of blur in wood macroscopic images. The test results show the proposed algorithm produces a pattern that can determine the factors causing blur.

**Keywords:** Blur Detection, Variance of Laplacian, Wood Image