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Abstract

Analysis of canopy temperature is significant method for monitoring the plant water status. Increase in leaf temperature detected by infrared thermography largely reflect stomatal closure as a measure of "stress". Hence this can be used as a meter for irrigation scheduling. The proposed system's key phase is where the optical image and its related infrared image are automatically registered which resolves problem of quantifying the data of the scene. From the plant canopy an optical image is captured and is registered with its corresponding IR image. The work here involves applying the Canny Edge Detection algorithm and variable resolution based on normalized cross correlation algorithm for improved image

registration process while maintaining biological significance. The outcomes of the study exhibit the efficiency and reliability of the proposed system with a substantial reduction of computational complexity.

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Index Terms

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Keywords

Optical And Ir Image Registration Plant Water Stress Analysis Thermal Imagery Variable Resolution Algorithm Based Normalized Cross Correlation

Cwsi

Canny Edge Detection