

Missing Area Detection and Damage Localization in Image Sequences for Bridge Inspection using Unmanned Aerial Vehicles

*Gi-Hun Gwon¹⁾, Sungsik Yoon²⁾, Jin-Hwan Lee¹⁾, In-Ho Kim³⁾ and Hyung-Jo Jung⁴⁾

^{1), 3), 4)} *Department of Civil and Environmental Engineering, KAIST, Daejeon 34141, Republic of Korea*

²⁾ *Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, IL 61801-2352, USA*

⁴⁾ hjung@kaist.ac.kr

ABSTRACT

In this study, the methodology of missing area detection and damage localization is proposed through image coordinate estimation. The proposed methodology includes image center point coordinate determination using working distance and image coordinate estimation through field of view calculation. Thereafter, missing area detection and damage localization are conducted in image sequences using the acquired coordinates. Experimental validation of the proposed methodology were performed on the concrete shear wall and the bridge. Compared with image stitching results and human-based damage detection results, the proposed methodology identified missing areas and damage locations within appropriate accuracy in the region of interest.

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REFERENCES

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¹⁾ Graduate Student

²⁾ Visiting Scholar

³⁾ Research Professor

⁴⁾ Professor