# Effects of Drones on Construction Workers at Height

## Safety challenges of UAV integration in the construction industry: Focusing on workers at height

*Idris Jeelani and Masoud Gheisari. CPWR Small Study, 2022.*

## Overview

Unmanned aerial vehicles (UAVs) are increasingly being used on construction sites. Previous research has focused on the bene□ts they can offer, with litt7vt med0/GSvTndire.fhU 0 10 54(uid (vseciefeceaJ(ee/ 76goCren)ryaas (UA)27 (Vs) are increasingly)-5 (sphthat UA)2s to l10 0 0 1has f6go8i (This Smallndire

## Key Findings

- The results indicate that working with or near unmanned aerial vehicles (UAVs) reduces the attention workers devote to the task at hand, which could result in falls when they are at height.
- UAVs working at some distance (12 ft. and 25 ft.) cause more distraction than UAVs in close proximity (1.5 ft. and 4 ft.), as participants looked away from their tasks more when the UAV was farther away.
- Construction professionals generally have a negative attitude toward working with or near UAVs, but hands-on virtual reality interaction with UAVs helped participants view UAVs less negatively.
- Physiological data and the self-reported questionnaires did not show that working with UAVs at any distance causes signi□cant psychological or emotional distress.
- Recommendations for the safe integration of UAVs in construction include training the workforce, designing UAVs to limit the frequency and severity of risks they pose, and preparing the construction sites to ensure that UAVs work ef□ciently and safely around workers.

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