



Applications of UAVs in Civil Infrastructure

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Message from the Guest Editors

Drones have proven to have significant potential in supporting the condition assessment of civil infrastructure and contribute to more efficient maintenance procedures. Unmanned Aerial Vehicles (UAVs) can function as flexible platforms for carrying high-quality digital data acquisition equipment such as image sensors of different spectral ranges, laser, lidar scanners and GPR as well as further surveying and non-destructive testing devices. They can be operated semi or fully autonomously and thus perform extensive data generation operations near large structures very efficiently. The processing of acquired sensor data can support digital modeling of existing structures, provide deep insight into the structure's condition and through repeated and systematic flights pave the way to modern data-driven and predictive maintenance strategies. Furthermore, drones can be applied in the context of infrastructure planning for early site investigations or construction progress monitoring. Drones have proven to be very efficient in the management of seismic events and for the safe survey of damaged buildings in order to plan the recovery or restoration of damaged historical buildings.





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Message from the Editor-in-Chief

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