

Estimation of the flow rate of river water using drone

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Coastal areas near Akkeshi bay in Hokkaido was observed using drones to estimate the propagation speed of a river front using image correlation. River fronts have spatial scales that are several kilometers long and disturbances that are several meters. Drones have good mobility and are suitable for coastal observation with only a few people. The propagation speed of a river front has not been estimated using drones. We will present images of a river front in Akkeshi bay in Hokkaido where we found lines of bubbles that indicated the location and the movement of a river front. By taking images consecutively at the same position, our goal is to estimate the flow field associated with the river front using image correlation based on brightness after spatial smoothing. We plan to present the movement of disturbances within the front in addition to the movement of the river front.