



UAV application in coastal morphological study

Kuan-Yu Chen

Graduate Institute of Hydrological & Oceanic Sciences, National Central University, Taiwan

Intensive studies were conducted to observe long term coastal morphological change using satellite imagery. However, long satellite revisit time makes it difficult to capture the daily event. In this study, continuous images were used to analyze the daily coastal morphological variation. Unmanned Flight Vehicle (UAV) equipped with a high resolution camera ($\sim 4000 * 3000$ pixel) was used to capture image every one hour. After comparing with different imaginary post-processing method, Simple Linear Iterative Clustering (SLIC) superpixels was used due to its (1) high efficiency in computing time (2) high accurate of segment in different feature of the images. Results show that analyzing image with high time resolution using high accuracy processing tool enable us to capture the detail coastal morphological change which facilitate the interpretation of physical phenomenon.