Forrest Williams

Hi I’m Forrest, an American geomorphologist who uses remote sensing and field studies to track the movement of sediment throughout large regions. I am currently pursuing a PhD at Massey University where I am monitoring the movement of large landslides across New Zealand. In addition to my work, I am passionate about public science communication and am an avid runner. Continue reading to learn more about me and my current projects. You can also check out my latest paper <a href=https://doi.org/10.1016/j.geomorph.2020.107313>here</a>

Monitoring large landslides in New Zealand

Slow-moving landslides don’t pose a serious threat to human life, but they do impact the health of our rivers. While these landslides are common in New Zealand, little is known about these landslides because they are difficult to monitor. In my PhD I am using advanced remote sensing techniques, such as interferometric synthetic aperture radar (InSAR), to track these landslides and to assess their impact on New Zealand’s rivers.

Measuring the impact riverbank erosion in Iowa

Riverbank erosion is an important source of pollutants to Iowa’s rivers, but are riverbanks a dominant source of pollution? My colleagues at Iowa State University and I are using both in-field and remote sensing techniques to determine if the amount of Phosphorus and sediment contributed by riverbank erosion is comparable to the amount that is contributed by eroding farm fields. For this project I developed AIMM, a remote sensing model that measures riverbank erosion over large regions.

Using Google Earth Engine to monitor farming practices

The Daily Erosion Project provides daily estimates of farmland erosion across the Midwest, but it needs to know how much plant material is present in farm fields in order to run. After collecting a massive amount of field data, we are now using the Google Earth Engine platform to develop and implement a remote sensing model to measure the amount of plant residue cover present in farm fields across the Midwest.