

The Coastal Waters Consortium Presents:

# Scientist Spotlight



## Dr. Ramesh Shrestha

### What is your educational background?

BS in Math, Physics and Statistics, Tribhuvan University, Nepal; BS in Land Surveying Sciences, NE London Polytechnic; MS in Civil Engineering, Oregon State University; PhD in Civil & Environmental Engineering, University of Wisconsin, Madison.

### What inspired you to become a scientist?

I am a mapping geodesist and I do not call myself scientist. Growing up in the high mountainous remote region of Nepal with no basic necessities such as running water, electricity, roads, or a school of any kind, getting education has been the fundamental lesson ingrained into my brain by my parents. And that has taken me to a life long journey to what I have become today - Director of the National Center for Airborne Laser Mapping (NCALM) funded by the National Science Foundation (NSF). NCALM provides research quality Lidar data to scientific communities at large and since its inception in 2003, more than 330 peer reviewed journal articles based on the NCALM Lidar data have been published in prestigious journals such as Nature, Physics Today, Science Proceedings of the National Academy of Sciences.

### Can you describe what you enjoy the most about conducting scientific research?

I find interacting with scientists from many fields of science to help them prepare and submit proposals for research projects, and then providing research quality data for the research funded, extremely rewarding. The process brings me into contact with researchers far beyond the relatively small geodetic community, and makes my contributions to the advance of geodesy more meaningful.

### What is your role as a scientist for CWC?

As the Director of NCALM, I manage day to day operation of NCALM and interact with researchers. In addition to providing research quality data, NCALM mission also includes developing new complementary technologies to lidar and much needed education in Geosensing technologies. Lidar data has been used for from climate change, change detection, archaeology, river echo systems, landslides, coastal erosion, disaster response, earthquake deformation, flooding, fire, to effect of oil spill.

### Can you summarize your oil spill research and describe any surprising findings you have come across?

NCALM collects, calibrates, process and validates its Lidar observations to provide research quality data to scientific community. As a member of researchers, NCALM collected lidar and hyperspectral data for Coastal Water Consortium. The data are being analyzed and used for oil spill research led by Michael Kearney, University of Maryland.

The Coastal Waters Consortium's mission is to assess the chemical evolution, biological degradation, and environmental stresses of petroleum and dispersant within Gulf of Mexico coastal and shelf ecosystems.