

SFM mapping of coastal erosion at Point Woronzof, Anchorage

Presented by Dr. Gennady Gienko



Abstract: SFM (Structure from Motions) is a powerful semi-automatic photogrammetric tool for quick and inexpensive, but precise 3D modeling. The presentation will outline theoretical and practical aspects of mapping areas of active coastal erosion at a very high resolution. The case study presents spatiotemporal changes of the coastal bluff at Point Woronzof, Anchorage, observed over six months of 2016. Temporal “slices” of 3D surface models allowed for volumetric calculations of displaced bluff material, as well as detection and classification of zones with varying resistance to erosion. Several geo-visualization

techniques have been explored to display the dynamics of changes.

Biography: Gennady Gienko holds a Ph.D. degree from Moscow Institute of Engineers in Geodesy, Aerial Surveying and Cartography (1987). He worked at Siberian State Geodetic Academy (1988-2001), Israeli Institute of Technology (2001-2002), and University of the South Pacific (2004-2009). Since 2009 Gennady has been working for the Department of Geomatics at the University of Alaska Anchorage. He teaches courses in GIS, Remote Sensing, Digital Image Analysis, Photogrammetry, High-Density Surveying and Point Cloud Analysis. His research interests are in remote sensing, image analysis, 3D modeling, and geostatistics.

Friday, March 24th, 2017, 11:45am-12:45pm

UAA College of Engineering, EIB 211