

## **3D Analyst Geoprocessing**

### **Goals of the workshop**

- Introduce the geoprocessing tools available in 3D Analyst.
- Explain options for raster- and TIN-based surface creation.
- Present what surface analysis tools are available and explain how they work.
- Demonstrate a number of surface creation and analysis tools for illustration.
- Provide recommendations and best practices.

### **Major topics covered**

- 3D geoprocessing toolsets. Major areas of functionality.
- Raster interpolation options.
- TINs and triangulation options.
- Breaklines and hard versus soft enforcement.
- Terrain datasets and relationship with TINs and rasters.
- Data conversion methods.
- TINs and terrain datasets and their use to construct high-quality rasters.
- Surface derivatives: slope, aspect, and hillshade.
- Feature interpolation explained.
- Visibility and line-of-sight analysis.
- Effects of earth curvature and light refraction on visibility.
- Volumetric analysis, surface difference, and some application examples including floodplain delineation.
- Looking ahead.