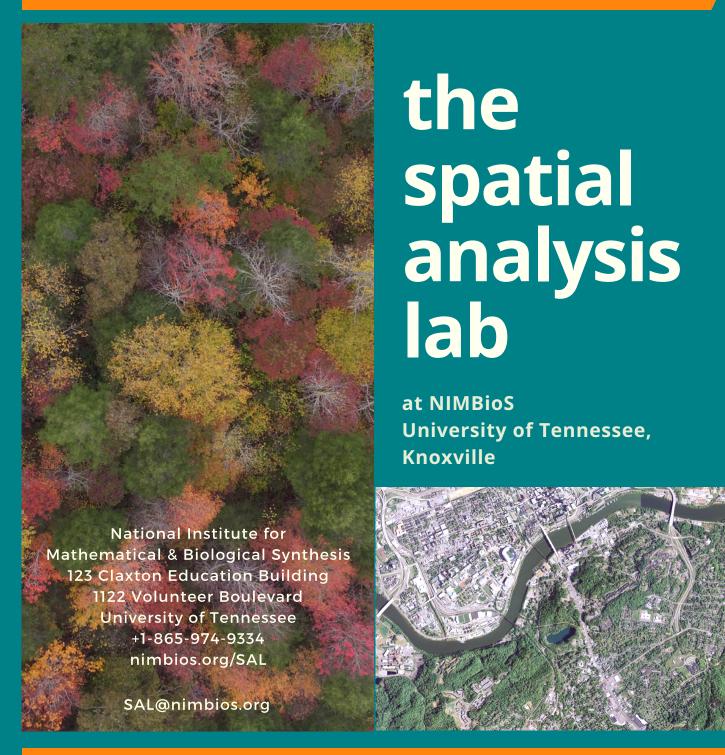Expanding geospatial research, teaching and public outreach at the University of Tennessee

the spatial analysis lab

at NIMBioS
University of Tennessee, Knoxville

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Mathematical & Biological Synthesis
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HOW TO WORK WITH THE SPATIAL ANALYSIS LAB NOW

- **Current Project Engagement:**
  Enhance your project by working with us on a spatial analysis component

- **Grant Facilitation:**
  Add SAL capabilities to strengthen & expand the scope & impact of a grant or contract proposal

- **Education & Outreach:**
  Develop a tutorial or workshop with us that combines your research area with the capabilities of SAL & NIMBioS

SAL is a collaboration of:

- NIMBioS
- College of Arts & Sciences
- Department of Ecology & Evolutionary Biology
- Department of Geography

NIMBioS
National Institute for Mathematical and Biological Synthesis

THE UNIVERSITY OF TENNESSEE KNOXVILLE

The Spatial Analysis Lab (SAL) at NIMBioS reflects UT's commitment to expanding research activities that collect and synthesize large-scale spatial data to understand biological, geographic, and socio-economic processes. SAL enables cross-disciplinary research for those in academia, government and industry who are engaged in biogeographical modeling, spatial statistics, data acquisition and mapping.

The lab is also used for training students in spatial data collection and analysis, for supporting the work of researchers at NIMBioS, and for tutorials and workshops offered through NIMBioS, including online courses.

A unique component of SAL is a sub-concentration on spatial analysis in biology. Biology at SAL, or BaSAL, supports research activities that collect and synthesize large-scale spatial data to understand biological and socio-economic processes, especially in the areas of biodiversity, disease ecology, and human-environment interface.

The lab capabilities include large-scale spatial data capture and collection, data visualization and analysis, and training and outreach.

Field instrumentation includes a terrestrial laser scanner and an unmanned aerial system (max. payload: 5 kg) with visual, multispectral and hyperspectral sensor packages. The lab also has Trimble Juno handheld GPS units.

The lab has an FAA, Part 107 Certified Pilot and is an insured operation.

CAPABILITIES:

NEW DATA COLLECTION

DATA ANALYSIS & VISUALIZATION

DATA STORAGE

TRAINING & OUTREACH

INSTRUMENTATION:

- High Capacity Server Storage

- GIS & Remote Sensing Analysis & Application Software (ArcGIS, ENVI, Trimble Pathfinder Office, FARO SCENE)

- Terrestrial Laser Scanner

- Unmanned Aerial System With Visual, Multispectral & Hyperspectral Sensor Packages

- Trimble Juno Handheld GPS Units

- Workstation Support