

Geospatial Data Analysis Short Course

Deadline:

Jan 27, 2019

The National Socio-Environmental Synthesis Center (SESYNC) invites applications for participation in a Geospatial Data Analysis Short Course to be held March 27-29 at SESYNC in Annapolis, Maryland. The course aims to accelerate the adoption of open source computing resources for geospatial and temporal analyses of socio-environmental (SE) issues. The event will combine lectures with hands-on computer labs that teach new analytical methods and workflow skills through several example applications: land cover change following wildfire, environmental vulnerability to lead exposure, suitability analysis for conservation easements, and flood mapping in urban environments.

Participants can expect to learn about geospatial data processing steps, managing workflows, and spatial and temporal analyses of both raster (i.e. image) and vector (i.e. shape) datasets. Specific topics include plotting spatial data, raster algebra, cropping, and extraction against vector data, and geometric operations for intersecting or otherwise manipulating vector data. Example problems pursued during the course will involve image classification using remotely sensed data and raster time series analysis using image collections. The short course will emphasize coding data pipelines in R, using several contributed packages (e.g. `sf`, `raster` and `leaflet` for interactive geovisualization), but also address options to use Python modules for geocomputing and the GDAL/OGR libraries on which geocomputing in both R and Python heavily rely.

Through this short course, participants should expect to:

- use open source libraries for geocomputing and reproducible research
- learn new methods for analysis and visualization of geospatial data
- meet several sources for geospatial data
- have fun

Eligibility

Members of SESYNC science teams (i.e. participants in a pursuit or workshop funded by SESYNC) will be given priority. Remaining space will go to applicants studying problems at the intersection of humans and the environment and that involve quantitative and/or qualitative data with a strong spatial component. Applicants may be at any career stage, from graduate student to senior researcher/faculty and from academic, government, or non-profit sectors. Advanced undergraduate students holding research assistantships will also be considered.

Each participant must be able to bring a laptop on which they can install open source software.

Costs & Support

There is no fee for the course. Support for travel and lodging in Annapolis, MD may be available as-needed and if requested in your application.

Questions?

Send email to the course instructors, Benoit Parmentier <bparmentier@sesync.org [1]> and Ian Carroll <icarroll@sesync.org [2]>.

*The University of Maryland is an Equal Opportunity Employer
Minorities and Women Are Encouraged to Apply*

Source URL: <https://www.sesync.org/opportunities/short-courses/geospatial-data-analysis-short-course-0>

Links

[1] <mailto:bparmentier@sesync.org>

[2] <mailto:icarroll@sesync.org>