ROGER: The CyberGIS Supercomputer

Welcome To ROGER

BRIDGING BIG DATA, BIG HARDWARE, & BIG MINDS

In the fields of engineering and science, the immense data collected incorporates time-series and spatial components requiring very special processing if analyzing at a fine-grained scale. ROGER aims to make this data processing easier, faster, more reliable, and above all more *insightful*.

Resourcing Open Geospatial Education and Research, ***ROGER*** is the world's first-ever CyberGIS Supercomputer designed especially for computationally intensive geospatial data processing and analysis.

Where is ROGER?

ROGER is located at the National Petascale Computing Facility» on the University of Illinois Urbana-Champaign campus and is managed by the CyberGIS Center for Advanced Digital and Spatial Studies».

What Makes ROGER Unique?

SOFTWARE

No where else in the world will you find a supercomputer supporting optimized, Geospatial parallel processing

- Geo- and spatial-enabled software for comprehensive analysis.
- Open-source to facilitate collaboration and portability. No need to worry about proprietary restrictions.
- GPUs to enable and enhance intricate graphics.
- Click here to learn more...

High-Speed Network To Interact With Your Results

ROGER supports applications for visualization, but what's different here is the high-speed network connection that enables realistic, **interactive** visualizations.

Pre-loaded Data

Anyone familiar with data collection knows how time consuming it can be, especially with geographic data. Here at the CyberGIS Center we try and take some of the heaving lifting off of your hands so you can focus on the analysis portion. Our team actively collects and imports data for end users to freely utilize.

Location-Enabled

GIS data requires unique formatting with the correct software to support it. GIS files come in over **50** different formats. With the packages installed on ROGER, researchers do not need to worry about compatibility. Utilizing an extensive open-source community, we have built a system equipped to handle any and all formatting with applications that *seamlessly integrate* your files with little overhead.

Vast Storage That's Shared

Big Data would be useless if not for a large storage system. ROGER emphasizes storage. Take for example the supercomputer Blue Waters, which processes at a peak performance of 13.34 PF. ROGER has about 1% of Blue Waters processing power, however ***20%*** of its data storage. GIS analytics would be non-existent if not for contextual knowledge. This entails the processor knowing both what it is processing and what is around it. Click here for more on hardware...


ROGER
RESOURCING OPEN GEOSPATIAL EDUCATION AND RESEARCH
ROGER
NCSA
CyberGIS Center for Advanced Digital & Spatial Studies

Browse Content by Topic

To Learn More About ROGER:

About ROGER

General overview of the ROGER cluster.

Resource Configuration on ROGER

Introduction & overview to how ROGER is set-up/its subsystems.

ROGER's System Hardware

Technical summary of the cluster's hardware.

For Help on Using ROGER:

HPC: A Quick Start Guide

Brief introduction on how to login and submit a simple batch job on ROGER.

ROGER User Guides

Detailed set of user guides for each subsystem, including information on how to optimize the available resources provided by ROGER.

To Learn More About CyberGIS

CyberGIS Center Homepage»

The CyberGIS Center for Advanced Digital and Spatial Studies is located at the University of Illinois Urbana-Champaign and is responsible for managing ROGER. Click above to find out more and how they are innovating the field of GIS (Note: site sometimes will not open if using a Chrome browser).

What Is CyberGIS?»

The Wikipedia page for CyberGIS.

Expert Team

When you work on ROGER you also gain an extensive network of expert resources.

- **The CyberGIS Center:** can help design, optimize, and work through some of your team's toughest problems. We know GIS and we know computers, but most of all, we know how to integrate the two to get you the best results in the least amount of time.
- **The ROGER community:** comprom ised of skilled researchers from all across the nation, ready and willing to share insight and help advance your own research.

Acknowledging ROGER Usage

Papers, presentations, and other publications that feature work that relied on ROGER's resources, services, and/or expertise should include the appropriate acknowledgement of ROGER, as well as the NSF grant that supports it (NSF-1429699).

Examples of where one may site ROGER:

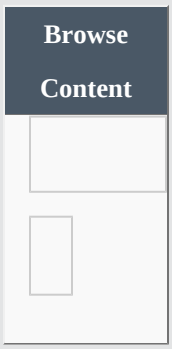
- Proposals and Publications
- Training's and workshops that used ROGER
- Any data products
- Student engagement (including classes)
- Science impact stories

To acknowledge the use of ROGER:

"The work used the ROGER supercomputer, which is supported by NSF under grant number: 1429699."

To acknowledge the help of team members at the CyberGIS Center:

"*We thank [team name(s)] for [his/her/their] assistance with [describe tasks such as geospatial data analysis, visualization, etc.], which was made possible through the CyberGIS Center Help Desk.*"



System Maintenance Updates

About System Maintenance: The ROGER system is scheduled to have maintenance on every second Thursday of the month. Please check back for updates regarding changes to the maintenance schedule.

Upcoming Maintenance Dates:

Thursday June 8th

"SPATIAL IS SPECIAL"