

## Office of Geographic Information Systems and Remote Sensing Research (OGIS)

### Who we are:

OGIS is an affiliation of teaching and research faculty from 5 colleges, 15 departments and the Virginia Tech Libraries who share an interest and expertise in Geospatial Information Technologies (GIT).

### Participating Colleges and Departments:

#### Agriculture and Life

**Sciences:** Crop, Soil and Environmental Science • Entomology

**Architecture:** Environmental Planning and Urban Design • Landscape Architecture • Urban Affairs and Planning

**Arts & Sciences:** Biology • Geography • Geology

**Engineering:** Aerospace • Biological Systems • Civil and Environmental • Electrical and Computer

**Natural Resources:** Conservation Management Institute • Fisheries and Wildlife • Forestry

#### Veterinary Medicine

#### Virginia Tech Libraries

### Selected Partners:

Advance Auto Parts • DOE • EPA • NASA • NSF • USGS • USDA Forest Service • Virginia CIT • Virginia Department of Forestry • Virginia Space Grant Consortium • Virginia State Police • West Virginia University

### Results:

#### OGIS Research Symposium

– held each spring to provide current research presentations to the Geospatial community around the commonwealth.

Presentations are invited from all universities and state agencies.

**CEARS**– the Center for Environmental Applications of Remote sensing is a NASA funded remote sensing research center housed in the College of Natural Resources.

**Center for Geographic Information Technology (CGIT)** – a new university center for GIS and GPS partnered with CEARS that completes OGIS's GIT mission

### What we do:

Geographic information systems, the global positioning system, and remote sensing are multibillion-dollar industries that have exhibited growth in the range of 15-25% over the past 10 years. With Virginia's prominent location near the seat of federal government in Washington, DC, the Commonwealth is a focal point for explosive growth in Geographic Information Technology (GIT).

Computerized mapping and spatial analysis along with data collection from afar directly support the profitability and efficiency of any Virginia firm or agency that

makes use of the technologies. OGIS works to assist Virginia companies, state agencies and federal agencies with needed research, development, training and education to make full competitive use of geographic information systems, remote sensing technologies, and the global positioning system.

**OGIS mission statement** – to promote broad application of GIT: geographic information systems (GIS), remote sensing, and the global positioning system (GPS) through applied and theoretical research, outreach, and education in direct collaboration with the federal government, Virginia's industries, state and local governments, and Virginia Tech faculty.

**Research** – to date, members of OGIS have received over \$4.8M in external research funding from partners such as those listed at the left. Projects have ranged from applications dealing with environmental concerns such as the spread of gypsy moths, the Virginia Gap analysis, mine reclamation, and watershed water quality, to technical design projects such as feature extraction from hyperspectral remote sensing and LIDAR, sensor and unmanned aircraft design, to wireless telecommunication system layout and design.

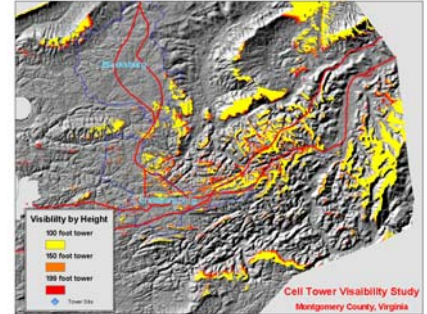
**Education** – through the efforts of OGIS members, there are currently over 66 hours of geospatial coursework available to undergraduate and graduate students at Virginia Tech. Student demand for courses in the geospatial sciences has grown exponentially in the past few years. For non-traditional students, OGIS members present three-day workshops to faculty who wish to explore and implement GIS components in their courses through the Virginia Tech Faculty Development Institute. Off-campus, OGIS members have taught numerous short courses through the division of continuing education on topics such as Introduction to GIS, and the Global Positioning System. Through CGIT we are expanding Virginia Tech's GIT presence in northern Virginia.

**Service/Outreach** – OGIS members are active throughout the Commonwealth in promoting the use of appropriate geospatial information technologies. Members have been on the planning board of the annual Virginia GIS conference for several years, support a web page at Virginia Tech, serve useful geospatial data to the Commonwealth, serve on the Virginia Geographic Information Network University Committee, and sponsor an annual research symposium. OGIS members have also taken the lead in procurement of software site licensing which has enriched educational opportunities for our undergraduate and graduate students. Two OGIS members are regular sponsors of DEVELOP, NASA's Digital Earth education and outreach program that provides internships for several VT undergraduate students each year.

**Facilities** – OGIS members have had the use of the CEARS lab for both teaching and research for several years, and many participating department have smaller scale facilities for their upper division classes and research groups. Since spring 2001, OGIS members have had access to a new teaching/research laboratory in 1010 Torgerson Hall for teaching GIT lab sections with up to 64 students per section.

### Priorities and Opportunities:

With the great demand for geospatial information professionals in the Commonwealth and around the world, OGIS is currently pursuing offering minor and major undergraduate and graduate degrees in GIT. We envision the opportunity to concentrate in these areas through a non-traditional program made up of a core of multidisciplinary courses followed by a specialization of upper level courses taught in our traditional disciplines across campus.



**Contact Information** – You may best reach us through our web page at URL ([http://ecs.lib.vt.edu/VT\\_OGIS/](http://ecs.lib.vt.edu/VT_OGIS/)), via email or telephone. The OGIS web site has additional contact information. On the contacts page you will find contact information for specific departments and individuals. Please feel free to contact the OGIS member whose interests most closely match yours.

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