

## GIF Mission

The Geospatial Innovation Facility supports a broad spectrum of environmental science via cutting-edge mapping technology.

As the hub for geospatial technology at UC Berkeley, GIF connects people to each other and to geospatial technology in order to benefit the environment and society as a whole.

Visit the GIF website at [gif.berkeley.edu](http://gif.berkeley.edu) to read the latest news about geospatial technologies, learn more about GIF services and support, see how GIF is helping scientists and students, and find out what GIF can do for you.



## How can GIF help you?

### GeoLunch

GIF hosts a weekly GeoLunch seminar series featuring presentations and group discussions related to geospatial theory, research, and application. Visit our website to see the schedule of upcoming GeoLunch events.



### Advising

Staff members are available for advice and assistance on geospatial projects throughout the week. Visit our website for information about our office hours.

### Work with us

We are always interested in collaborating on interesting projects. Contact us to learn how GIF can offer your research projects and grant opportunities an innovative geospatial component.



Visit our website for more information and answers to common geospatial technology questions at [gif.berkeley.edu](http://gif.berkeley.edu)

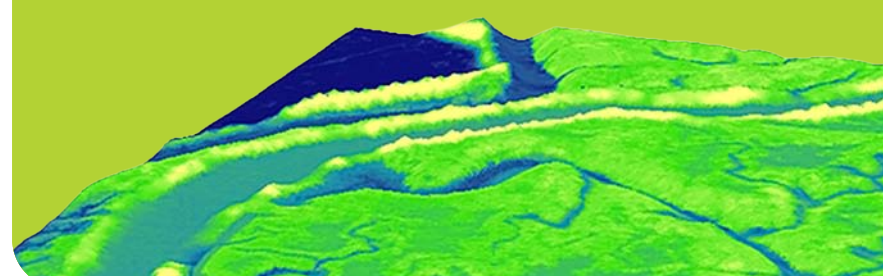
## How can you help GIF?

Donations are welcome, in the form of funds, equipment or suggestions for workshops and partnerships. We appreciate your involvement!

Schedule a visit, e-mail, or call us.

Kevin Koy, Manager  
Jeremy Freund, Geospatial IT  
Maggi Kelly, Faculty Director

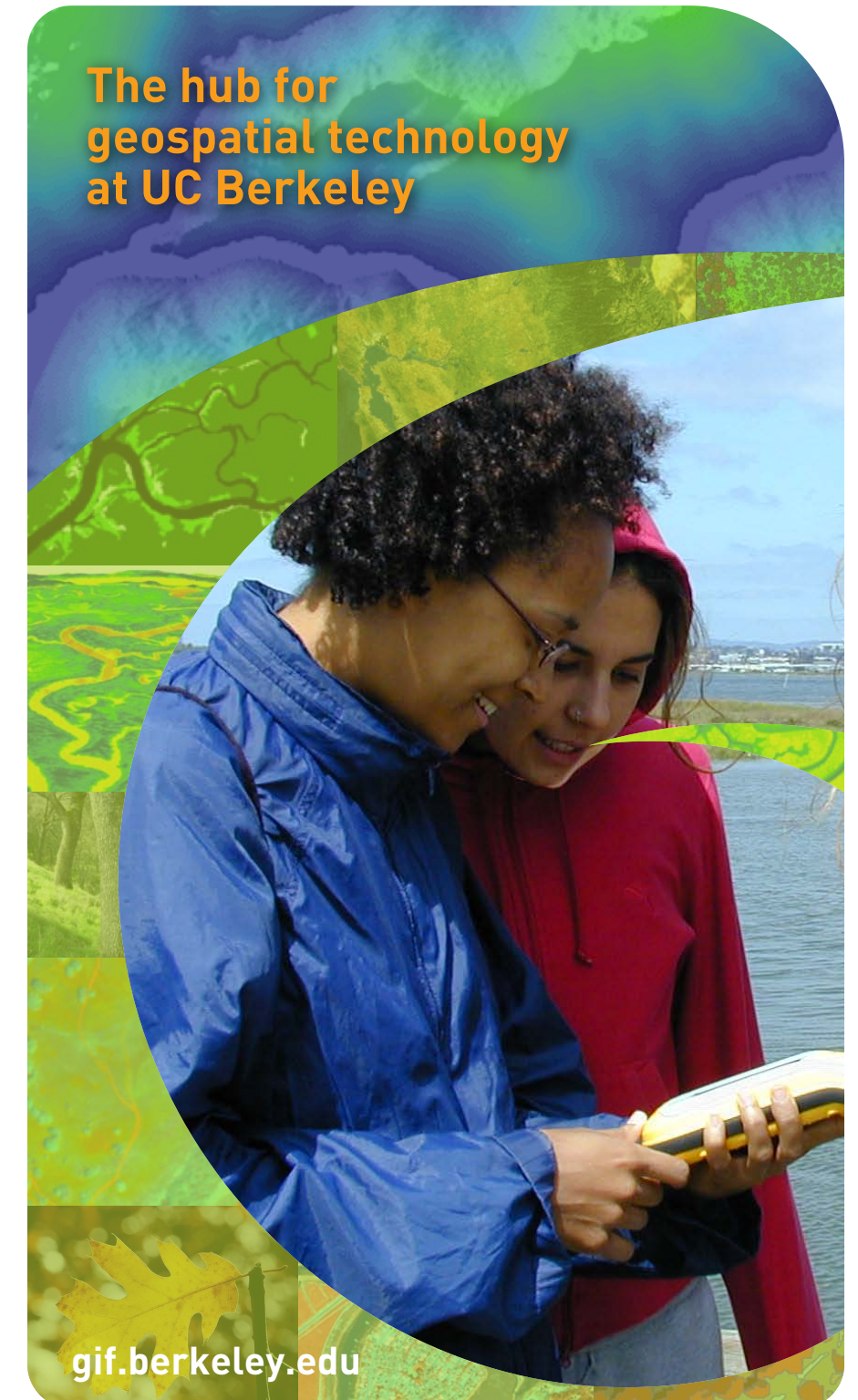
111 Mulford Hall #3114  
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# GEOSPATIAL INNOVATION FACILITY

Cutting-Edge Mapping Technology at UC Berkeley

The hub for  
geospatial technology  
at UC Berkeley

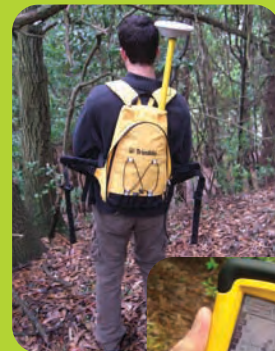


[gif.berkeley.edu](http://gif.berkeley.edu)

# GIF Technological Expertise

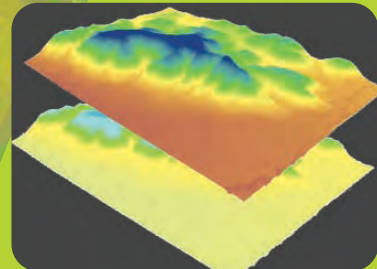
GIF provides leadership and training across a broad array of geospatial technologies. The integration of these various technologies places GIF at the forefront of today's growing geospatial community.

## GEOSPATIAL TECHNOLOGIES



### Global Positioning Systems (GPS)

GPS acquire precise, georeferenced field data. GPS data, such as plant and animal locations, are then commonly integrated into GIS and remote sensing applications.



### Geographic Information Systems (GIS)

GIS allow for geospatial analysis, mapping, visualization, customization, database development and model building.

### Remote sensing

Remote sensing provides accurate current and historical information about geographic areas via a variety of imaging sensors, including aerial and satellite imagery, radar and LIDAR systems.



### Internet-based GIS (WebGIS)

A hybrid of GIS and Internet technologies, WebGIS brings the power of spatial visualization and analysis to any web browser, encouraging public participation in environmental management.

# GIF Services

GIF is committed to the support of undergraduates, graduate students, researchers, and members of the University of California Cooperative Extension. GIF staff members work on individual projects, teach workshops, speak in courses, give tours of the facility, and advise students one-on-one when they visit Mulford Hall.

## Printing and Design

GIF's 42-inch large-format plotter (HP DesignJet 4000) can print large posters for presentations; GIF staff provide graphic design and map design assistance. A color laser printer is also available to GIF users.



## Workshops

GIF workshops train students, faculty, and staff on geospatial tools and applications, including GPS, GIS, remote sensing, and WebGIS; suggestions for specific geospatial workshops are welcome. ESRI online training and regular "GeoLunch" seminars are offered to all UC Berkeley students, staff, and faculty.

## Instructional Support

Each year, GIF staff members train the undergraduate students of Biology and Geology of Tropical Islands (ESPM C107) on GPS and GIS before they take a nine-week trip to the French Polynesian island of Moorea to learn about tropical island ecology.



## Research Support

GIF staff have helped graduate students analyze IKONOS satellite imagery to find and map wetland habitat for threatened animal subspecies in California and have aided undergraduates to relocate historic plots from the California Vegetation Type Mapping (VTM) project. GIF staff assist researchers in navigating the increasingly complex array of available remote sensing data and help researchers add a remote sensing component to their research grants.



# About GIF

Located in 111 Mulford Hall on the UC Berkeley campus, GIF supports high-quality urban and environmental research and education by connecting people with geospatial imaging and informatics technologies, which allow users to:

- acquire spatial data, using Global Positioning Systems (GPS) and remote sensing
- analyze complex problems with Geographic Information Systems (GIS) and spatial analysis
- communicate results through mapping, visualization and the web

## Software

GIF provides its users with the most up-to-date geospatial software, trains users to use these tools and provides consultation and troubleshooting services. We strive to offer a variety of software alternatives so that our users may choose the best option for their research needs.

- Desktop GIS systems allow for geospatial database development, spatial analysis, mapping, visualization, customization and model building. GIF desktops offer the full ArcGIS enterprise system, as well as free and open source GIS applications, including DIVA, GRASS and QGIS.
- Remote Sensing applications are available to enable the visualization and analysis of aerial and satellite based image data. GIF desktops offer professional versions of ENVI, ERDAS and Definiens, as well as open source ILWIS, OpenEV and OSSIM.
- Virtual globes offer an exciting new way to visualize and interact with geospatial data. GIF desktops offer ArcGIS Explorer, Google Earth, Microsoft Virtual Earth and NASA World Wind.
- GIF is one of only four "Centers of Excellence" in the U.S. for the leading object-based image processing software Definiens Professional.
- GIF desktops are regularly updated with the new applications and the latest versions of our existing software suite.

## Hardware

GIF rents a variety of Garmin and Trimble GPS units for fieldwork and provides geospatial hardware and installation services.

## Facilities

GIF offers user workspace, classroom facilities for environmental science courses and office space for visiting scholars.