

## Integrative Graduate Education and Research Training (IGERT) in GI Science

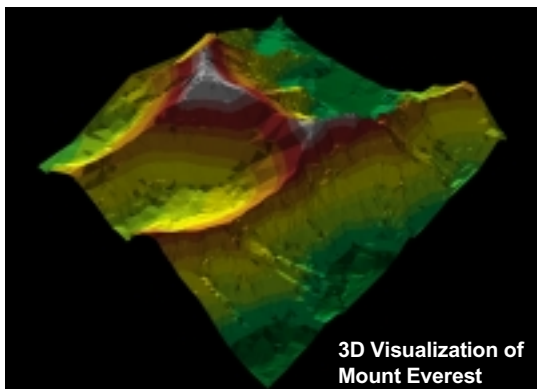
The University at Buffalo offers a multidisciplinary doctoral concentration in **Geographic Information Science** – an exciting new field that redefines spatial concepts and their use in the digital age.

With support from the National Science Foundation's IGERT program, a limited number of enhanced funding packages are available.

The goal of the program is to prepare a cadre of Ph.D. students for the varied demands of a career in Geographic Information Science. The students will acquire broad multidisciplinary backgrounds, as well as essential technical and professional skills.

Students in the GI Science concentration at the University at Buffalo will take a set of courses in GI Science, while also completing requirements for doctorates in any of eight discipline-based departments:

- Anthropology
- Civil, Structural & Environmental Engineering
- Communication (Information Studies)
- Computer Science & Engineering
- Geography
- Industrial Engineering
- Philosophy
- Political Science



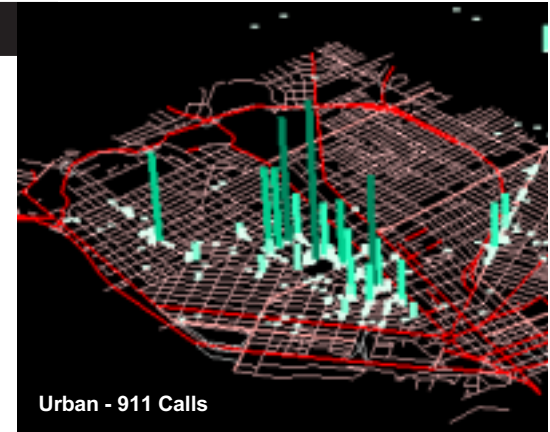
IGERT students will obtain research training through mentoring, internships, workshops, and participation in active research programs under six major research themes: environmental modeling, cognitive models of geographic information and society, geographic space, computational implementations of geographic concepts, human capital research using GIS, and regional modeling and optimization.



### NCGIA-Bufferlo

The NCGIA was founded in 1988 as a National Science Foundation Center for research and applications of geographic methods. It is based at the University of California at Santa Barbara, the University at Buffalo, and the University of Maine. Today, the NCGIA continues as an independent consortium specializing in research, education and outreach in Geographic Information Science.

As a campus research unit at the University at Buffalo, NCGIA-Bufferlo manages the Buffalo portion of the national center, administers other grants, and coordinates research. NCGIA-Bufferlo also coordinates the University's participation in the University Consortium for Geographic Information Science.



### GI Science Research at the University at Buffalo

- ▶ Analyzing changing patterns of crime to better allocate police resources to affected neighborhoods.
- ▶ Improving methods to handle geospatial data compression, indexing and clustering in very large databases
- ▶ Integrating high-performance engineering models with GIS to create new models for groundwater analysis.
- ▶ Developing tools and procedures to investigate connections between latent human health problems, and environmental exposures.
- ▶ Helping governments design and implement geographic information systems for their communities
- ▶ Using cross-linguistic empirical research to develop new models of how people view, understand, and describe spatial entities and relationships.
- ▶ Investigating the costs and benefits, and potential designs of Intelligent Transportation Systems.

## University at Buffalo

Founded in 1846, the University at Buffalo is New York's premier public center for graduate and professional education and the state's largest and most comprehensive public university. As a member of the prestigious Association of American Universities, the University at Buffalo stands in the first rank among the nation's research-intensive public universities. Its public mission of outreach to the community, state, and nation ties a significant portion of its research and education efforts to the needs of society.

A member of the State University of New York, the University at Buffalo has an enrollment of 25,000 students and a distinguished faculty of approximately 2,000. Its public charter allows it to offer undergraduate, graduate and professional education at a reasonable cost.

## Additional Information

**For further information about Geographic Information Science at the University at Buffalo, please contact:**

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**Visit our website:**

**<http://www.geog.buffalo.edu/ncgia/>**



**NATIONAL SCIENCE FOUNDATION**

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# Doctoral Studies in Geographic Information Science



**National Center for  
Geographic Information and Analysis**

**UB** **University at Buffalo**  
The State University of New York