

GI SCIENCE  
IGERT

*TRAINEE  
PROGRAM  
HANDBOOK*

2008-2009

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## **Requirements for all Trainees\* funded by the IGERT Geographic Information Science program at SUNY Buffalo**

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To qualify and maintain eligibility for IGERT Project Funding\* and complete their doctoral studies in GI Science, all trainees in the IGERT in GI Science program at Buffalo must:

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- Be admitted to one of the seven departmentally-based participating Doctoral programs; maintain status as a full-time graduate trainee in good standing in the home department; and successfully complete all doctoral degree requirements of the home department.
- Conform to all other regulations and requirements of their home department, the IGERT program in GI Science, and the Graduate School of the University at Buffalo.
- Take the four required GI Science core courses. These courses may also count toward the degree requirements of the home department, and should be completed within the first two years of the trainee's studies.
- Demonstrate competence in the use of Geographic Information Systems by the end of the second year of the trainee's studies. Competence may be demonstrated through successful completion of an appropriate course or by documentation of equivalent experience.
- Participate in a weekly IGERT colloquium series, which will vary in format between informal 'brown bag seminars' and distinguished visiting speakers.
- Participate in a new program orientation retreat of approximately 2 days, scheduled just prior to the beginning of the fall semester of the trainee's first year.
- Participate in faculty-led research on campus in GI Science, including spending one summer or semester working in cooperation with an IGERT faculty member from outside the trainee's home academic department.
- Undertake an International Experience component. This component will normally include attending an international summer school for one to two weeks; and participating in one extended international research activity of approximately four months.
- Spend at least one summer or semester in an internship in a research environment. An extended international research activity can be used to fulfill this requirement.
- Select a Ph.D. advisory committee chaired by a member of the UB IGERT faculty roster, and including at least one other IGERT faculty member from outside the trainee's academic home department at UB.
- Write and defend a dissertation proposal, and complete and defend a dissertation on a topic related to geographic information science selected in consultation with their advisory committee.
- Attend two research conferences per year, with travel support from the IGERT grant, in the final 3 years of their studies, one trip to a multidisciplinary conference in GI Science and the other to a professional meeting within their home discipline.

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All funding sources of IGERT program trainees must be explicitly coordinated with IGERT program funding. Not all forms of supplementary compensation are allowed.

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*\* In accordance with National Science Foundation guidelines, IGERT Project Traineeships (formally referred to as Fellowships) are available only to U.S. Citizens and Permanent Residents.*

# Integrative Geographic Information Science Doctoral Program

## Academic Elements

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### I. Coursework, Colloquia, and Proficiency Requirements

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All IGERT trainees must take a core of four required courses, participate in a weekly colloquium series, and demonstrate competence in the use of Geographic Information Systems.

#### A. Required [Core] Courses

All IGERT trainees must take the following four courses. Trainees are expected to complete their core courses by the end of their second year in the IGERT program.

- (1) GEO 591 Introduction to Geographic Information Science  
(3 credit hours, typically offered during the fall semester)
- (2) PHI 531 Problems in Ontology: Ontological Foundations of Geographic Information Science  
(3 credit hours, typically offered during the fall semester)
- (3) ***EITHER*** CSE 562 Database Systems  
(3 credit hours, typically offered during the Fall semester)  
***OR*** GEO 595 Database Design for GIS  
(3 credit hours, typically offered during the Spring semester)
- (4) PHI 640 Ethics and Professional Development  
(typically offered during the spring semester)

*Check with departments or instructors regarding prerequisites for these courses.  
Courses listed may not necessarily be offered every academic year.*

#### B. IGERT Colloquium Series

All IGERT trainees are expected to attend the IGERT Multidisciplinary Colloquium during all years of their doctoral studies. Colloquia are typically scheduled each Friday afternoon during the academic year, for approximately 1.5 hours, between the hours of 12:00 and 3:00 pm. The series features a mix of visiting speakers, research presentations by the Trainee, local faculty research talks, and workshops on other aspects of interdisciplinary professionalism. The colloquium schedule is available at <http://www.geog.buffalo.edu/giscience/colloquium.shtml>.

#### C. IGERT GIS Proficiency Requirement

IGERT trainees must demonstrate competence in the use of Geographic Information Systems by the end of their second year of studies. Competence may be demonstrated through successful completion of an appropriate course or courses, or by documentation of equivalent experience.

Although other combinations of coursework, training and experience may also qualify, successful completion of any one of the following four combinations of courses will allow trainees to meet the IGERT GIS Proficiency requirement.

### **GIS Proficiency Courses:**

1. GEO 506, Introduction to GIS (also offered as GEO 389)  
Lecture and Labs, 4 credit hrs
2. CIE 507, GIS Applications in Civil Engineering, 3 credit hrs
3. GEO 591, Introduction to GI Science, 3 credit hours  
*\*PLUS\**  
Laboratory Sections (only) of GEO 506, Introduction to GIS (1 credit hour)
4. GEO 591, Introduction to GI Science, 3 credit hours  
*\*PLUS\**  
GEO 556, GIS Design, 4 credit hours  
*\*PLUS\**  
A qualified Introductory ArcGIS workshop

# Integrative Geographic Information Science Doctoral Program Academic Elements

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## II. Extra-Departmental Research Experience

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All IGERT trainees must spend a semester or full summer engaged in a research project with an IGERT faculty member\* who is from a department other than the trainee's home academic department. The research topic should fall within one of the three major IGERT research areas, or another relevant GI Science research area.

It is recommended the extra-departmental research experience be scheduled prior to the completion of coursework phase of the trainee's IGERT Doctoral program.

### **Procedure:**

In cooperation with the extra-departmental faculty research supervisor, the IGERT trainee should prepare a one page proposal indicating:

- The topic(s) of research, with a short statement relating the topic to the IGERT program and the trainee's own goals
- Clarification of the trainee's role in the research effort (what he/she will do)
- Any outcomes, products, deliverables the trainee will prepare
- Approval (signatures) of the extra-departmental research supervisor and the trainee's academic advisor.

The trainee should submit the proposal, including a copy in digital format, to the IGERT/NCGIA office. Proposals are encouraged at least four to six weeks prior the beginning of the activity.

### **Deliverable:**

The trainee should, if possible, formally register for the effort as an independent study under the sponsoring faculty member. If the trainee does not register for an independent study, he or she will need to obtain a letter from the supervising faculty member certifying successful completion of the effort. This letter must be submitted to the IGERT/NCGIA office within four weeks of the completion of the project.

\* If the trainee wishes to work with a faculty member who is not affiliated with IGERT, the trainee will need to prepare a research proposal (as described above) and submit it to the IGERT/NCGIA office **along with** a justification of the request. The justification should include the relationship of the topic to the IGERT program. The research program must be clearly tied to the expertise of the non-IGERT faculty member, and should be a specialty that is not available from among the IGERT faculty. This proposal will need to be approved by the trainee's academic advisor, and will be submitted to the Steering Committee for consideration.

# **Integrative Geographic Information Science Doctoral Program**

## **Academic Elements**

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### **III. International Experiences**

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#### **A. Vespucci Summer School**

The IGERT in GI Science program co-organizes an annual International Summer Institute in GIScience for early-career researchers. The International Summer Institutes, also known as the Vespucci Summer School, will include research presentations by early-career scholars, and collaborative and team-building experiences such as proposal-writing contests. This event is a module of approximately one to two weeks, seated within the GIScience Summer School, held near Florence, Italy under the sponsorship of The Vespucci Initiative (<http://www.vespucci.org>).

Each Buffalo GIScience IGERT trainee who enters our program in 2004 or later will be required to attend one of these International Summer Institutes. We will also invite other US PhD trainees to enter a national competition to join the IGERT in GI Science trainees at this event.

#### **Procedure:**

Each spring, the IGERT in GI Science Program will post internal and external calls for applications for that year's Vespucci Summer School. These calls for applications will carry details on that year's summer school schedule and syllabus, as well as applicable organizational information. Those IGERT in GIScience trainees who are intending to participate that year should respond to the internal call.

#### **Expenses:**

The IGERT in GI Science program will fund the participation of each of its trainee in one year's Vespucci Summer School as follows: The IGERT in GI Science program will cover cost of registration fees for the IGERT module. The IGERT program will also reimburse its trainee, up to a maximum dollar amount, for the cost of round-trip travel (US Carriers Only), and for applicable lodging and meal expenses. If actual travel and lodging costs for an IGERT in GI Science trainee exceed this maximum, the residual costs may still be reimbursed under the individual trainee's allowance allocation.

#### **B. Extended International Activity**

IGERT Trainee are expected to visit a cognate research group in another country for a period of at least four months, in order to gain an in-depth experience with international variations in research infrastructure and culture, and to make professional contacts outside the United States. Trainee should contact the IGERT administrator for recommendation regarding the best time to schedule this activity.

International activities are focused at three sites, one for each of our major research themes. Instruction and research discussions are in English at all three of the pre-selected sites. Trainees may also to apply to spend their international research internships at other sites, with this petition to be approved by the IGERT Steering Committee on a case by case basis.

The primary international activity sites are:

For Basic Geographic Information Science:

Institute for Geoinformatics, University of Münster, Germany

For Geographic Environmental Science:

International Institute for Geo-Information Science and Earth Observation,  
Enschede, The Netherlands

For Geographic Social Science:

Centre for Advanced Spatial Analysis, University College, University of London

### **Procedure:**

It is strongly recommended that the trainee consult with the IGERT Director and his/her advisor in the early stages of preparing his or her extended international research activity. If the trainee chooses one of the three primary sites, the appropriate IGERT program faculty member will contact the prospective host site on the trainee's behalf to establish the initial contact. Then, the trainee should work with the potential host and his or her advisor to prepare a proposal for the extended research stay. Proposals should be one to two pages, and should include:

- (a) The international host site selected
- (b) Timing and duration of research stay
- (c) The proposed job (duties, description)
- (d) Any anticipated outcomes, results, products the trainee will prepare
- (e) Indication of the site's willingness to host your activity
- (f) Any related costs charged by, or financial support received from the host site

The proposal should first receive approval from the trainee's academic advisor, and then be submitted to the IGERT/NCGIA office for review by the IGERT Director. Proposals should be submitted four to six months prior to the start of the proposed event.

Trainees are encouraged to consult with the University at Buffalo's Study Abroad Office for advice on traveling and living overseas.

### **Deliverable:**

The trainee should submit to the IGERT Office, within 30 days of completing the research stay: (1) a report (approx. 500 words) on the activities and outcomes of their stay; and (2) a letter from the internship host verifying the trainee's participation in and completion of the event.

### **Expenses:**

The IGERT in GI Science program will fund the participation of each of its trainee in one Extended International Activity as follows: The IGERT in GI Science program will cover reasonable visitor fees charged by the host institution. The IGERT program will also provide funds, up to a maximum dollar amount, to defray the trainee's cost of round-trip transportation, and his or her housing expenses while abroad. If actual travel and lodging costs for an IGERT in GI Science trainee exceed this maximum, the residual costs may still be reimbursed under the individual trainee's allowance allocation.

# Integrative Geographic Information Science Doctoral Program

## Academic Elements

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### IV. Internships

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All IGERT trainees must participate in an internship in a research environment or in another relevant career-developing experience. The internship should be at least 6 weeks in length, and internships of longer duration are strongly encouraged. **AN EXTENDED INTERNATIONAL RESEARCH ACTIVITY CAN BE USED TO SUBSTITUTE FOR THIS REQUIREMENT.** It is recommended the internship be scheduled adjacent to the third year of the trainee's studies.

#### **Procedure:**

The trainee should prepare an internship proposal for prior review by the IGERT Steering Committee. It is strongly recommended that the trainee consult with the IGERT Director and his/her advisor/mentor in the early stages of preparing the proposal. The proposal should be one to two pages, and should include:

- (a) The internship site (i.e. Company, Branch, Location, Department and Supervisor)
- (b) Timing and duration of internship
- (c) The proposed job (duties, description)
- (d) Any anticipated outcomes, results, products the trainee will prepare
- (e) Indication of the site's willingness to host your internship
- (f) If the internship is with a federal agency, or funded directly or indirectly by US government source, you must disclose any financial support received from the internship host\* (See Footnote)

The proposal should first receive approval from the trainee's academic advisor and IGERT mentor, and then be submitted to the IGERT/NCGIA office for review by the IGERT Director.

#### **Deliverable:**

The trainee should submit to the IGERT Office, within 30 days of completing the internship: (1) a report (approx. 500 words) on the activities and outcomes of their internship; and (2) a letter from the internship supervisor verifying the trainee's participation in and completion of the internship.

#### **Internship Expenses: \***

Reimbursement of travel, relocation and lodging expenses incurred in pursuit of an out-of-town internship falls under the IGERT Trainee Allowance policy.

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*\*IGERT project sponsor regulations prohibit co-funding, from multiple federal sources, of specific elements of activities. If the trainee will receive financial support from the internship sponsor, that support must be coordinated with any support received from the IGERT grant.*

# **Integrative Geographic Information Science Doctoral Program**

## **Academic Planning**

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### **I. Planning Academic Requirements**

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All IGERT trainees must file a comprehensive course plan, showing the semester or summer during which they intend to schedule each of their departmental courses, IGERT courses, and other degree requirements.

This plan should be filed with the IGERT Office at the beginning of the fall semester, and updated prior to the beginning of each academic year. It is understood that this plan will be subject to reasonable changes, especially for trainees early in their doctoral career.

The plan should: (1) indicate how the trainee's IGERT and departmental requirements will be integrated into the time frame; (2) maximize the course credit hours covered under the trainee's University Tuition Scholarship; (3) project the number of semesters the trainee will need to complete his or her degree.

The plan should be signed and approved by:

- The trainee
- The trainee's academic advisor
- A representative of the trainee's home academic department  
(i.e the Department Director of Graduate Studies or the Department Chair)
- The IGERT Director or designee

A sample format appears in the Academic Forms section of this handbook. However, any format that includes the appropriate information and carries the necessary signatures may be used.

**Integrative Geographic Information Science Doctoral Program  
Academic Forms**

**IGERT Trainee Requirement Planning Form – Page 1**

**LIST BELOW ALL REQUIREMENTS TO DEGREE, DEPARTMENT REQUIREMENTS, IGERT REQUIREMENTS  
PLANNED FOR THE NEXT FOUR SEMESTERS**

**THIS FORM MUST BE UPDATED AT THE BEGINNING OF EACH FALL SEMESTER**

**IGERT Requirements to include:**

Introduction to GI Science  
Database Systems  
Problems in Ontology  
Ethics and Professionalism

GIS Proficiency  
Extra Departmental Research  
Vespucci Summer School  
Extended International Experience and/or  
Internship

**Trainee Name:** \_\_\_\_\_

**Date Prepared:** \_\_\_\_\_

Fall \_\_\_\_\_

Course No.	Course Title/Activity Name	Crt Hrs

Spring \_\_\_\_\_

Course No.	Course Title/Activity Name	Crt Hrs

Summer \_\_\_\_\_

Course No.	Course Title/Activity Name	Crt Hrs

**IGERT Trainee Requirement Planning Form – Page 2**

**Please copy form to add additional semesters.**

Fall \_\_\_\_\_

Course No.	Course Title/Activity Name	Crt Hrs

Spring \_\_\_\_\_

Course No.	Course Title/Activity Name	Crt Hrs

Summer \_\_\_\_\_

Course No.	Course Title/Activity Name	Crt Hrs

**Required Signatures**

Trainee: \_\_\_\_\_ Date: \_\_\_\_\_

Academic Advisor: \_\_\_\_\_ Date: \_\_\_\_\_

Department Director of Graduate Studies: \_\_\_\_\_ Date: \_\_\_\_\_

IGERT Director: \_\_\_\_\_ Date: \_\_\_\_\_

**Integrative Geographic Information Science Doctoral Program  
Academic Forms**

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**GIS Proficiency Form**

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Date: \_\_\_\_\_

Trainee Name: \_\_\_\_\_

Name of Academic Advisor: \_\_\_\_\_

TO THE TRAINEE: LIST ALL APPLICABLE COURSES, TRAINING SESSIONS OR ACTIVITIES. FOR NON-UB COURSES, ATTACH A COPY OF THE COURSE OUTLINE AND PROOF OF SUCCESSFUL COMPLETION.

Course Name/Number or Training Session Name	School or Location and Semester or Dates Taken	Grade

**Certification of Reviewer:**

**IGERT GIS Proficiency Requirement is *(check one)***

**Satisfied**

**Not Satisfied**

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

TO THE REVIEWER: LIST ADDITIONAL COURSEWORK OR TRAINING REQUIRED, IF ANY:

**Return Original Form to IGERT/NCGIA Office, 301 Wilkeson Quad.  
Trainee should retain a photocopy**

**Integrative Geographic Information Science Doctoral Program  
Academic Forms**

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**Course Waiver Request**

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Trainee's Name: \_\_\_\_\_ Date: \_\_\_\_\_

Requesting Waiver of:  
Course (name and number): \_\_\_\_\_

Previous Course Taken: College or University: \_\_\_\_\_

Course Number and Title: \_\_\_\_\_

Number of Credit Hours Earned: \_\_\_\_\_

Grade Received: \_\_\_\_\_

**Please Attach:**

- (1) A copy of your transcript showing the grade received; and (2) A copy of either (a) the detailed course syllabus, or (b) a copy of the course catalog description and a letter from the course instructor documenting the topics covered, or (c) other approved documentation demonstrating the course content

**Signatures:**

**Trainee:** \_\_\_\_\_ **(Signature and Date)**

**Academic Advisor:** \_\_\_\_\_ **(Signature and Date)**

**Course Waive Request is:      Approved      Denied**

**IGERT Director** \_\_\_\_\_ **(Signature and Date)**

**Return Original Form to IGERT/NCGIA Office, 301 Wilkeson Quad.  
Trainee should retain a photocopy**

## **GI SCIENCE CERTIFICATE OPTION**

Doctoral trainees in several participating academic departments have the opportunity to earn an Advanced (Graduate) Certificate in Geographic Information Science. This Certificate has been approved by the State Education Department / The University of the State of New York, and trainees meeting its requirements are awarded a Certificate upon graduation from their doctoral degree programs. The participating University at Buffalo academic departments are: Anthropology, Civil, Structural and Environmental Engineering, Computer Science and Engineering, Geography, Geology, Industrial Engineering, Philosophy, and Political Science. Any trainee in these eight doctoral degree programs who meets IGERT requirements will also meet Certificate requirements. Others, including international students, un-funded students, and students funded from other sources, are also eligible to apply to the Certificate program.

The Geographic Information Science Certificate program requirements are patterned on the academic components of the IGERT program, although the IGERT program carries additional requirements that are not echoed in the Certificate program.

Interested trainees should file an application with the IGERT office by the end of their second year of doctoral studies.

**APPLICATION FOR ADVANCED (GRADUATE) CERTIFICATE  
CONCENTRATION IN GEOGRAPHIC INFORMATION SCIENCE**

*FOR PH.D. MAJORS IN ANTHROPOLOGY, CIVIL STRUCTURAL & ENVIRONMENTAL ENGINEERING, COMPUTER SCIENCE  
& ENGINEERING, GEOGRAPHY, GEOLOGY, INDUSTRIAL ENGINEERING, PHILOSOPHY POLITICAL SCIENCE*

<b>Name (Last, First, MI)</b> _____	
<b>UB Person #:</b> _____	
<b>Phone:</b> _____	<b>Email:</b> _____

**1. SUNY Buffalo Department ("home department") Enrolled In:** \_\_\_\_\_

**2. Research Concentration(s) of Interest:**

- Basic Geographic Information Science
- Geographic Environmental Science
- Geographic Social Science

**3. Name of your Academic Advisor** \_\_\_\_\_

**4. Names of Ph.D. Committee Members (if known)** \_\_\_\_\_

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**5. Check any of the courses you have already taken at SUNY Buffalo:**

- Introduction to Geographic Information Science                       Database Design for GIS
- Problems in Ontology: Geospatial & Computational Ontology                       Database Systems
- Ethics and Professional Development

**6. Applicant Signature and Date** \_\_\_\_\_

Please submit application to IGERT/NCGIA Office, 301 Wilkeson Quad, North Campus

## COST OF EDUCATION FUNDING IGERT in GISCIENCE TRAINEE ALLOWANCES

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### I. Allowance Overview

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All IGERT trainees may draw upon available funds (their “IGERT Allowance”) to support a variety of IGERT-related educational needs. This allowance is allocated on an annual basis, from August 21<sup>st</sup> 2008 to August 20<sup>th</sup> 2009. The annual allowance for trainees in an IGERT in GI Science Fellowship year is \$4,500. The annual allowance for trainees in an “Enhanced University Support” year is \$2,500.

Allowances may be spent on educational materials and course supplies, to support travel to academic conferences and workshops, to support the trainee’s participation in training events and internships, and in fieldwork. It may also be used to defray any non-funded expenses related to participating in the international experience elements of the program. **During the years in which a trainee does not receive health insurance as a benefit of his or her departmental assistantship, a portion of this allowance may also be used to defray the cost of the available University at Buffalo insurance packages.**

Unspent allowance allocations in early years can be carried forward to later years.

Trainees must apply for use of their IGERT allowances, following the guidelines given on the following pages. The trainee needs to receive his or her academic advisor’s approval of the academic merit of the activity, and the approval of the IGERT Director or Administrator of the fiscal eligibility of the activity. Prior approval of all allowance use is strongly encouraged, and in some cases, is required.

All payments and reimbursements are subject to the regulations of the Research Foundation of SUNY and the National Science Foundation, and the IGERT program in GI Science. Some of the key regulations include:

- A student must be an IGERT trainee in good standing at the time *the activity takes place* to have the cost of that activity covered by the IGERT allowance.
- Failure to complete an activity may be grounds for denial of payment.
- Original receipts documenting expenditures are ordinarily required, and supplementary documentation may also be required.
- No concurrent funding from multiple federal sources: A trainee may not *concurrently* receive funding from both IGERT and another US Federal Government source unless there is an explicit separation between the activities AND the activity types. For example, a trainee may not concurrently receive a stipend from IGERT and a salary from another federal source. Nor may the expenses for a particular activity, such as travel to a specific conference, be divided between the IGERT grant and another federal grant.
- Tax exemption: We are not able to reimburse for NYS sales tax. You may receive NYS sales tax exemption on materials covered by your supply allowance by providing the vendor with a tax exemption certificate. You may not use a project tax exemption form for items that would not be reimbursed from the project.

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## II. Academic and Research Supplies

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The IGERT trainee allowance may be used to defray the costs of academic supplies.

### Allowable Items (selected examples)

Textbooks and readings required for courses you complete or for dissertation research

Photocopying and printing costs incurred in completion of classwork, dissertation work or approved academic research.

Academic or research software packages, notebooks, computer disks, etc. used for classwork, dissertation work, or approved academic research

Computers\* computing supplies, peripherals

***\*Check with IGERT/NCGIA Office for eligibility and ownership policies prior to purchase***

### Ineligible items (selected examples)

Punitive fines, such as library fines, parking tickets, or course resignation fees

Books and materials for courses resigned prior to completion

Periodical and journal subscriptions and organization membership dues

Furniture, including filing cabinets, desks and chairs

Personal items – those materials and services that are not a necessary component of your academic and items for the use of anyone other the designated IGERT Fellow

**Only selected examples of allowable and ineligible items are given. If you have any questions about the eligibility of an item, please contact the IGERT/NCGIA office.**

### **Procedures:**

#### **Method I: Petty Cash Reimbursement**

Submit a request for reimbursement, using the Petty Cash Reimbursement form, to the IGERT/NCGIA Office. Original, itemized receipts will be required. Please note we are not able to reimburse for NYS sales tax. In many cases you may receive NYS sales tax exemption on materials covered by your supply allowance by providing the vendor with a tax exemption certificate. You may not use a project tax exemption form for items that would not be reimbursed from the project.

#### **Method II: Direct Purchase of item from the IGERT office**

Certain orders may be purchased directly by the IGERT office from the vendor. This method is especially recommended for purchase of computers or computing-related supplies, for items for which academic (discount) pricing is available, or for high-cost items.

To draw against his or her allowances, the trainee needs to receive his or her academic advisor's approval of the academic merit of the activity, and the approval of the IGERT Director or Administrator of the fiscal eligibility of the activity. Prior approval of all allowance use is strongly encouraged, and in some cases, is required.

NCGIA

NATIONAL CENTER FOR GEOGRAPHIC INFORMATION ANAD ANALYSIS  
STATE UNIVERSITY OF NEW YORK AT BUFFALO

301 Wilkeson Quad Buffalo, NY 14261-0055 USA	PHONE: (716) 645-2545 FAX: (716) 645-5957
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## IGERT REIMBURSEMENT REQUEST

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**#1 – ATTACH original receipts**

*(if receipt does not include means of payment, include other proof such as credit card statement)*

COURSE NO.	ITEMIZED PURCHASES	AMOUNT
	Total :	

**#2 - SIGN**

**Payee Certification: I certify that the above is just, true and correct; that no part has been paid except as stated and a transaction will not be requested from another funding source.**

**Payee Signature:** \_\_\_\_\_

**#3 – APPROVAL. For items NOT required for a course, please explain how the item relates to your training AND have your advisor sign this form.**

Attach additional documentation if necessary.

**Signature of IGERT Advisor**

**Date**

# IGERT in GISCIENCE TRAINEE ALLOWANCES

## III. Conference and Academic Travel Support

Trainees should attend two research conferences per year in the final 3 years of their studies, and active participation in these events is strongly encouraged. An even distribution of trips between GI Science events and home academic discipline events is encouraged. Related travel, lodging, and registration costs may be reimbursed from a trainee's IGERT allowance.

### Procedure and Deadlines:

- The trainee should apply for conference travel support no later than five weeks prior to the event by submitting a completed IGERT Trainee Travel Application form to the IGERT/NCGIA office.
- A copy of any paper or presentation must be submitted to the IGERT/NCGIA office, as must copies of any future papers based on the conference presentation.
- The paper and/or presentation must explicitly acknowledge the support received from the National Science Foundation. The acknowledgement should appear at the bottom of the title page, and should read:  
*This material is based upon work supported by National Science Foundation Grant No. DGE 0333417 "Integrative Geographic Information Science Traineeship Program", awarded to the University at Buffalo.*
- The paper and/or presentation must also identify the trainee as a member of the UB IGERT Program as of his or her home academic department. The acknowledgement must appear on the title page. The recommended format is:

Jane K. Student

IGERT in Geographic Information Science and  
Department of [Name]  
University at Buffalo

- Upon receipt of approval of the travel application, the trainee is responsible for making his or her own travel arrangements. **The trainee should consult with IGERT/NCGIA staff prior to committing to any non-refundable arrangements, especially if air travel is involved.**
- Trainees may request advance funding for a proportion of anticipated travel expenses. Advances must be requested from the IGERT/NCGIA office four weeks prior to the departure date. Original receipts must be obtained for expenditures funded by a travel advance. All required receipts and supporting documentation must be returned to the IGERT/NCGIA office within two weeks of the trip's completion.
- The reimbursement granted for a specific trip may be limited to less than the available amount in the trainee's annual allocation.

### Eligible travel expenses:

- round trip transportation costs, most economical means. If flights are involved, U.S. carriers must be used.
- actual lodging costs up to the applicable maximum rate for the conference or metropolitan area
- per diem allowance for meals not included in the conference
- conference registration costs ("membership" fees are NOT eligible for reimbursement)
- other expenses may be eligible, questions should be directed to the IGERT/NCGIA staff

### Receipt requirements:

- Transportation: Original ticket receipt (i.e. passenger receipt portion of an airticket or e-ticket receipt) showing ticket cost. Additional receipt requirements may apply for other forms of transportation.
- Lodging: Original, itemized hotel bill.
- Meals - Per diem breakfasts and dinners: Lodging receipt is required for receipt of full per diem meal rates. If no lodging receipt will be available, check with the IGERT/NCGIA office for applicable rates and procedures.
- Copy of conference program including (1) the conference agenda/schedule of events and (2) the listing of any event including the trainee's participation.
- Conference Registration Fee: Original receipt.

## IGERT TRAINEE TRAVEL APPLICATION FORM

*Please TYPE or PRINT*

Name: \_\_\_\_\_

Date of Request: \_\_\_\_\_

Social Security Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

### PURPOSE OF TRAVEL

Name of Conference or Workshop: \_\_\_\_\_

Academic field of Conference: \_\_\_\_\_

Location: \_\_\_\_\_

Dates (include travel days): \_\_\_\_\_

Paper Title and Author(s) (attach abstract): \_\_\_\_\_

Expected Paper Acceptance Date (*attach copy of acceptance if available*): \_\_\_\_\_

### BUDGET SUMMARY (Check with IGERT/NCGIA Staff for allowable rates)

Transportation (air, car, train, bus, etc.):

Method: \_\_\_\_\_

Travel Cost: \$ \_\_\_\_\_

Meals: Number of days: \_\_\_\_\_

Meal Cost: \$ \_\_\_\_\_

Lodging: Name of Hotel: \_\_\_\_\_

Cost of Lodging: \$ \_\_\_\_\_

Conference Registration Fee: \_\_\_\_\_

\$ \_\_\_\_\_

Other (*please explain*): \_\_\_\_\_

\$ \_\_\_\_\_

TOTAL CONFERENCE COSTS REQUESTED	\$ _____
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If you have requested funds for this travel from other sources, please name source:

Amount requested from this other source: \_\_\_\_\_

\$ \_\_\_\_\_

**PLEASE ATTACH:**     **-Copy of Conference Program (section listing your presentation)**  
                              **-Copy of paper/presentation title page and abstract**

### SIGNATURES

\_\_\_\_\_  
*Trainee*

\_\_\_\_\_  
*Academic Adviser*

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Maximum Amt. Approved: _____	Authorized by: _____	Date: _____
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Conditions: _____	
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## IGERT in GISCIENCE TRAINEE ALLOWANCES

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## IV. Training and Fieldwork Support

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The IGERT allowance may be used to defray the costs of activities, such as workshops or classes, which enhance the trainee's academic or professional development. Trainees are generally expected to use their allowance for activities not available through regular academic year course offerings. Costs related to dissertation and fieldwork are also eligible. Other activities that serve the intent of the policy also open to petition and consideration. Reasonableness and relevance, and the potential of the activity to contribute to the trainee's scholarly or professional development, are included among the evaluation criteria.

### **Procedure and Deadlines:**

To use their allowance to support training and fieldwork activities, the IGERT trainee must file a request for prior approval of the activity. Requests should be submitted to the IGERT/NCGIA office, two to three weeks prior to the date a response is needed. A request should include the following information:

- Title of activity/class
- Location, schedule, duration of event
- Cost (amount of IGERT funding requested)
- Number of credit hours or similar measure, if available
- A copy of the course (or activity) description, such as a course catalog description, or syllabus
- A brief explanation (one to two sentences) of the relevance of the activity to the trainee's academic program/the IGERT program. If not otherwise obvious, an explanation of why the activity is not included as part of the regular semester coursework would also be required.
- The date by which a response from IGERT is needed (i.e. registration deadline)
- Approval (signatures) of the trainee's academic advisor

### **Payment/Reimbursement**

If circumstances allow the IGERT/NCGIA office may be able to pay for the cost of an approved activity directly, in many cases however, payment will have to take the form of a reimbursement to the trainee after completion of the activity. To be reimbursed for the cost of an activity, specific proof of payment/receipt criteria must be met. Trainees should check with the IGERT/NCGIA office for information on requirements.

Failure to successfully complete the training activity is grounds for the denial of payment or reimbursement for the costs of the activity.



## **IGERT in GISCIENCE TRAINEE ALLOWANCES**

### **Health Insurance**

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**The Full Traineeship Years and the Enhanced University Support carry different health insurance benefits.**

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#### **A. ENHANCED UNIVERSITY SUPPORT YEARS**

During the enhanced university support years, all health insurance will fall under the policies of the trainee's base line assistantship. If the trainee does not receive a health insurance benefit through his or her base line, the trainee can use his or her IGERT allowance to defray the costs of purchasing insurance through the University's Student Medical Insurance Office. Additional information on that policy appears below.

#### **B. FULL TRAINEESHIP YEARS**

The insurance in the Full Traineeship years may be purchased under the IGERT in GI Science Trainee Allowance. During the full traineeship years, the allowance is estimated to be \$4,500 per person per year. **Up to \$3,000 of this amount could be used for health insurance.**

##### **B. 1. Available Insurance Plans – Full Traineeship Years – Option 1**

The standard insurance plan is offered through the University's Student Medical Insurance (SMI) Office. The SMI policy is described at: <http://www.subboard.com/smi/> and select Domestic Student under FAQ for general information.

This plan is purchased at the beginning of the academic year, and the cost is charged to the trainee's University student account. The IGERT program will then pay Student Response Center (SRC) out of the trainee's allowance fund for the applicable amount of the bill. If the trainee is personally responsible for any portion of the charges (if the premium charge exceeds the funds available in that trainee's allowance) then the trainee must then pay the residual amount of the bill to SRC.

Illustration of costs and charges, based on 2008-2009 rates:

**Single Coverage:** \$1,439 for a year (12 months). This would normally be fully covered from the trainee's allowance

**Premium to add Dependent: An additional \$3,216**

**Premium to add Dependent Child/Children: An additional \$2,505**

If a trainee charges for insurance exceed \$3,000 (the amount from the IGERT allowance that may be used for insurance), then the trainee would be responsible for paying the residual to SRC by the due date on the bill. For example, if a trainee would like single plus spouse coverage, the total cost would be \$1,439 + \$3,216 = \$4,655. Since the charges exceed \$3,000, the trainee would be responsible for paying the residual \$1,655 to SRC by the due date on the bill.

## B. 2. Available Insurance Plans – Full Traineeship Years – Option 2

The alternative insurance plan is the Research Foundation's Student Insurance plan. The **coverage** is the same as for the Research Foundation's Graduate Student plan, and is described at:

[http://hr.buffalo.edu/index.php?module=pagemaster&PAGE\\_user\\_op=view\\_page&PAGE\\_id=72&MMN\\_position=442:440:441](http://hr.buffalo.edu/index.php?module=pagemaster&PAGE_user_op=view_page&PAGE_id=72&MMN_position=442:440:441)

However, you do not receive dental or vision coverage. Note that you must attend an orientation session to enroll in this health insurance. Please see above site for more information.

The costs of this plan are charged on a bi-weekly basis. The IGERT program will pay the applicable amount of the charges directly to the Research Foundation from the trainee's allowance fund. If the trainee is personally responsible for any portion of the charges (if the premium charge exceeds the funds available in that trainee's allowance) that residual amount will be deducted from the trainee's biweekly stipend checks.

The **biweekly** rates are:

Single: \$91.19  
Plus 1: \$197.27  
Plus 2 or more: \$261.07

# IGERT PROGRAM EVALUATION

THE UNIVERSITY AT BUFFALO'S IGERT PROJECT INCLUDES COMPREHENSIVE PROGRAM OF SELF- AND EXTERNAL EVALUATION. THE COMPONENTS OF THIS PROGRAM ARE DESCRIBED BELOW.

## **1. External Advisory Board**

The IGERT program has appointed an external Advisory Board, composed of individuals drawn from relevant Doctoral programs at peer institutions in the United States, plus representatives of industry and the government sector. The Advisory Board is a consultative body, and will review annual reports from the Project Director, and provide feedback and advice on progress toward the goals of the project. The Advisory Board also meets in person annually or biannually, typically in the Fall semester. During their meetings in Buffalo, the Advisory Board members will meet not only with the Director and the Steering Committee, but also with the IGERT trainees, participating faculty, and appropriate campus officials. Cognizant NSF program officers are also invited to participate in all Advisory Board meetings. The members of the Buffalo IGERT Advisory Board are listed on page 31.

## **2. Feedback interviews and reports**

Trainees funded by the IGERT program will be provided with a written report on their progress on IGERT program requirements at the end of each year, or more frequently as circumstances require. This progress report will also be copied to the trainees' academic and IGERT advisors. Trainees asked to meet individually each year with a member of the IGERT Steering Committee who is not on their advisory committee, as part of both trainee and program assessment.

## **3. Self-evaluation (survey) reports**

Each year, the IGERT program will prepare a self-evaluation study. All IGERT trainees will be asked to complete a survey instrument that asks them to assess the program and its elements, and to indicate any components they hope to see included in future years of the program. This anonymous survey will be analyzed in confidence by the IGERT support staff, with summary results presented to the IGERT Director and Steering Committee. All participating IGERT faculty will also be asked to complete a survey instrument

## **4. Annual NSF (web-based) reports**

The National Science Foundation requires all IGERT programs file an annual report to the Foundation, which is collected via a web-based system. All trainees are required to complete the designated trainee component, and all IGERT faculty are solicited for input to other components. New to this report is a required reporting of all IGERT trainees' activities, which include publication and conference presentations. Every year, the IGERT staff will ask trainees to provide a list of activities for that reporting year.

## **5. NSF site visits**

A team of external evaluators typically reviews each IGERT in GI Science program once during each five-year award period. The review consists of a site visit by a team of experts, interviews of program participants, and the preparation of an extensive report. This program's site review is not yet scheduled. A report from the site visit of the predecessor IGERT in GI Science program is available upon request.

## **IGERT Faculty Participants Fall 2008-2009**

For list of faculty participants, go to <http://www.geog.buffalo.edu/giscience/faculty.shtml>

### **IGERT/NCGIA Staff Contact Information**

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Director of the National Center for Geographic Information and Analysis (NCGIA)

301 Wilkeson

645-0505

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**Linda Doerfler**

301 Wilkeson

645-0504

email: [doerfler@buffalo.edu](mailto:doerfler@buffalo.edu)

Reimbursements – travel, books, supplies

Part time staff

## IGERT in GI Science Trainees and Affiliates 2007-2008

### *TRAINEES AND AFFILIATES*

<b>Name</b>	<b>Department</b>	<b>Email</b>
Gregory Babonis	Geology	gbabonis@buffalo.edu
Karl Bandilla	Civil Engineering	bandilla@buffalo.edu
Paul Berglund	Industrial Engineering	berglund@buffalo.edu
Christopher Brehme	Geography	cbrehme@buffalo.edu
Colleen Bronner	Civil Engineering	cbronner@buffalo.edu
J. Wesley Buckwalter	Philosophy	jwb9@buffalo.edu
Brett Burkett	Geology	bburkett@buffalo.edu
Daniel Cadzow	Anthropology	cadzow@buffalo.edu
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Alexander Cox	Philosophy	apcox@buffalo.edu
Jeremy Crowley	Geology	jc394@buffalo.edu
William Duncan	Philosophy	wdduncan@buffalo.edu
Cara Fraser	Anthropology	cbfraser@buffalo.edu
Amy Frazier	Geography	frazier9@buffalo.edu
Zev Gottdiener	Anthropology	zng@buffalo.edu
Jeffrey Gower	Geography	jgower@buffalo.edu
Matthew Henchey	Industrial Engineering	mhenchey@buffalo.edu
Dale Hess	Geology	dalehess@eng.buffalo.edu
Christopher Hoefflich	Computer Science & Eng	csh7@buffalo.edu
Joseph Holler	Geography	jholler@buffalo.edu
Peter Horvath	Geography	horvath5@buffalo.edu
Benjamin Kamphaus	Anthropology	bdk3@buffalo.edu
Michael Loranty	Geography	mloranty@buffalo.edu
Maureen Mayer	Civil Engineering	mrmayer@buffalo.edu
David Myers	Industrial Engineering	djmyers2@buffalo.edu
Kristo Miettinen (affiliate)	Philosophy	kristo.miettinen@us.army.mil
Ifeoma Nwogu	Computer Science & Eng	inwogu@buffalo.edu
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Heath Robinson	Geography	ehr@buffalo.edu
Suzanne Roussie (affiliate)	Geography	sroussie@buffalo.edu
Roderick Salisbury	Anthropology	rbs3@buffalo.edu
Anshuman Singh	Civil, Structural Env Eng	as338@buffalo.edu
Seth Spielman	Geography	ses27@buffalo.edu
Michelle Sunm	Industrial Engineering	mksunm@buffalo.edu
Andrew Trgovac	Geography	atrgovac@buffalo.edu
Roman Yampolskiy	Computer Science & Eng	rvy@buffalo.edu
Justin Yates	Industrial Engineering	jtyates@buffalo.edu
Amy Webb	Geology	acwebber@buffalo.edu
Raymond Whitlow	Anthropology	rwhitlow@buffalo.edu

## IGERT Academic Departments & Contacts

### Department of Anthropology

University at Buffalo  
380 Fillmore, Ellicott Complex  
Buffalo, NY 14261  
Phone: (716) 645-2414  
Fax: (716) 645-3808  
Web: <http://www.anthropology.buffalo.edu>  
Graduate Admissions Secretary:  
**Margaret Kasprzyk**, (716) 645-2414 x104  
Email: [mmk22@buffalo.edu](mailto:mmk22@buffalo.edu)

### Department of Civil, Structural & Environmental Engineering

University at Buffalo  
202 Jarvis Hall  
Buffalo, NY 14260  
Phone: (716) 645-2114  
Fax: (716) 645-3733  
Web: <http://www.csee.buffalo.edu>  
Graduate Admissions Secretary:  
**Kirsten Brown**, (716) 645-2114, ext. 2333  
Email: [kabrown@eng.bufflo.edu](mailto:kabrown@eng.bufflo.edu)

### Department of Computer Science & Engineering

University at Buffalo  
201 Bell Hall  
Buffalo, NY 14260  
Phone: (716) 645-3180  
Fax: (716) 645-3464  
Web: <http://www.cse.buffalo.edu/>  
Graduate Admissions Secretary:  
**Yvette Pardee**, (716) 645-3180, ext. 122  
Email: [cse-gradinfo@cse.buffalo.edu](mailto:cse-gradinfo@cse.buffalo.edu)

### Department of Geography

University at Buffalo  
105 Wilkeson Quad, Ellicott Complex  
Buffalo, NY 14261-0023  
Phone: (716) 645-2722 Fax: (716) 645-2329  
Web: <http://www.geog.buffalo.edu/>  
Graduate Admissions Secretary:  
**Betsy Abraham**, (716) 645-2722, ext. 13  
Email: [babraham@buffalo.edu](mailto:babraham@buffalo.edu)

### Department of Geology

University at Buffalo  
876 Natural Sciences Complex  
Buffalo, NY 14260  
Phone: (716) 645-6800 Fax: (716) 645- 3999  
Web: <http://www.geology.buffalo.edu/>  
Graduate Admissions Secretary:  
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### Department of Industrial Engineering

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438 Bell Hall  
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Graduate Admissions Secretary:  
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### Department of Philosophy

University at Buffalo  
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Buffalo, NY 14260  
Phone: (716) 645-2444 Fax: (716) 645-6139  
Web: <http://www.philosophy.buffalo.edu>  
Graduate Admissions Secretary:  
**Judy Wagner**, (716) 645-2444, ext. 135  
Email: [jjwagner@buffalo.edu](mailto:jjwagner@buffalo.edu)

## External Advisory Board Members

<b>Mark Aldenderfer</b>	Department of Anthropology, University of Arizona
<b>Susan Cutter</b>	Department Geography Director of the Hazards Research Lab University of South Carolina
<b>Jack Dangermond</b>	President ESRI
<b>Mark Daskin</b>	Department of Industrial Engineering & Management Sciences, Northwestern University
<b>James W. Harrington, Jr.</b>	Department of Geography, University of Washington
<b>Christopher Menzel</b>	Department of Philosophy Texas A&M University
<b>William Rose</b>	Department of Geological Engineering and Sciences, Michigan Technological University
<b>Barbara Ryan</b>	Associate Director for Geography U.S. Geological Survey
<b>Shashi Shekhar</b>	Professor of Computer Science, Institute of Technology, University of Minnesota
<b>Chunmiao Zheng</b>	Professor of Hydrogeology , Department of Geological Sciences The University of Alabama