

Geospatial Laboratory for Soil Informatics (GLSI)

Research Program Goals

A research laboratory at an academic institution aims to develop researchers and advance science. This is done by initiating research contributing to the scientific body of knowledge and society. Ultimately, this laboratory and its associated people will be evaluated by their ability to share what has been learned from its research. A leading venue for doing this is publication in scientific journals. The focus of this laboratory is spatial analysis, especially concerning soil.

Operational Philosophy

The GLSI research group is a cooperative enterprise between the supervising professor, professional staff, post-docs, graduate students, and undergraduate workers. While everyone has their own projects, the research group purposively contains diverse skill sets. We accomplish more through teamwork and the sharing of ideas. Sometimes, additional labor is needed to complete certain aspects of a specific project. We all help when we can because our project may need help next time.

Proprietary Information

Some of the data analyzed by GLSI has been provided under legally binding non-disclosure statements. To ensure those agreements are upheld, no data shall be shared outside the GLSI research group without the review of the supervising professor. Also, the supervising professor must approve any combination of data from multiple projects.

Mentor-Mentee Compact

What is expected from the supervising professor

As a professor, I am expected to write grants, initiate research, teach courses, and mentor future scientists. In that context, I will support graduate students by providing:

- Guidance in the selection and design of a research topic
- Availability for regular meetings and information discussions to address questions and obstacles to your research and opportunities for your professional development
- Constructive assessment of the quality and progress of your research
- Provide a stimulating work environment and the equipment required to conduct the agreed-upon research
- Financial support covering graduate assistantship
- Mentoring by example and discussion for how to be effective in research, communication, and professional activities
- Advice on the utility of classes for the student's goals
- Guidance in presenting poster and oral presentations at scientific meetings
- Timely review of research products
- Promote you as a scientist and your work
- Ensure the lab is a safe place for all
- Opportunities for you to provide feedback on my role as an adviser

What is expected from the graduate student

General themes:

- Learn how to plan, design, and conduct high-quality scientific research
- Advance understanding of scientific literature, assisted by readings assigned by the supervising professor
- Learn how to present your research
- Work towards the publication of your scientific findings
- Participate in the review process within the research group
- Present at least one professional conference
- Creativity is encouraged, but progress towards time-sensitive goals is required
- Masters students will be expected to publish at least one paper; PhD students will be expected to publish at least three. At a minimum, one of these papers should be under review before graduation.

Specific policies:

- Vacation
 - Your assistantship appointment includes no formal vacation, sick, holiday, or other leave. However, you can take a reasonable amount of time for these purposes. Semester breaks are logical times for taking time away from the lab, but other times can be arranged. In any case, these things must be communicated with me. Except for unforeseeable events (sickness, funerals), at least a month in advance is appropriate notice.
 - Consideration should be given to lab activities. For example, we regularly rely on each other to help with sampling campaigns. Therefore, we must communicate well within the group to ensure we can provide that support when needed.
- Harassment
 - We are all ultimately responsible to government laws and university policies that specify certain behaviors as unacceptable and dictate how they should be addressed. To simplify it, our lab does not tolerate behaviors that cause an unnecessarily, uncomfortable work environment. We work hard to accomplish more and rely on constructive criticism to improve; that is not the discomfort described here. Different social interactions can be perceived differently by different people. Once it has been communicated that a behavior - which is non-essential to work - is not welcome, it is expected that behavior will be avoided in the future.

End-of-semester reviews

Periodically, we will meet one-on-one to discuss progress and goals. Although you can share this with me at any time, you should especially remember at this meeting to tell me if you are unhappy with any aspect of your experience as a graduate student here. I can assist with problems with other students, professors, or staff. However, working with others you may not get along with is part of professional life. Similarly, we should discuss any concerns you have regarding my role as your adviser. At the same time, I will tell you if I am satisfied with your progress and if I think you are on track to graduate by our target date. I will explain any deficiencies to you so you can take steps to fix them. It is best to address any issues early before they become significant problems.

Assistantships are rare and often hard-fought to obtain funding for. If you are here as one of my graduate students, I believe you can do great things. I look forward to helping you reach your potential!

-Bradley