Rackham Student Government Funding Application

Organization Name: Geo-Institute
SOAS Account #: 933081
Registered with MSA? Yes No

Primary Contact Name: Nicholas Brant
Title: President
Email: njbrant@umich.edu
Phone: (734) 735-2114

Secondary Contact Name: Srinivasa (Sid) Nadukuru
Title: Secretary
Email: siddu@umich.edu
Phone: (734) 646-1419

Please check any of the following that describe your organization:

- Academic/Professional X
- Creative Arts/Expression (Visual, Performance, and/or Exhibition)
- Community Service
- Cultural/Ethnic
- Environmental
- Graduate X
- Honorary
- International
- Political
- Publications/Journalism
- Religious
- Science/Technical X
- Social Justice

Describe the overall purpose/mission of your organization and the planned initiatives and activities intended to uphold said objective(s).

The purpose of the Geo-Institute GSO is to uphold and advance the integrity, honor and dignity of geotechnical engineering and to enhance the education of students who are preparing to become geo-professionals. The University of Michigan GSO upholds these objectives by organizing: guest lectures that participate in the Geotechnical Seminar Series, academic field trips to local construction projects or sites related to geotechnical engineering and social events each semester aimed at creating a cohesive relationship between graduate students and geotechnical engineering faculty.

# of active student members: 10
# of graduate student members: 10

Average attendance at group meetings (Board, committee, event planning, etc.): 4
Average attendance at similar events: 20
Average graduate student attendance at similar events: 14

Email application to the RSG Treasurer, at RSG-treasurer@umich.edu with subject “RSG Funding Request”.
How often does your group meet?  ___ monthly or bi-monthly ___

Does your group charge dues to members?  Yes  No

Do all of your activities/events take place on campus?  If yes, where do you prefer to hold your programs?  If not, where else do they take place?

No. Our fall social, a picnic where we also play volleyball, takes place at Gallup Park. Field trips take place wherever possible, e.g. our last field trip took place in Sterling Heights. The GeoCongress is an international event that draws geo-professionals from around the world. This year the GeoCongress will be in San Francisco, CA.

Does your group engage in political activity, i.e., electoral, partisan, etc.?  If so, describe this activity.

No.

Does your group engage in lobbying efforts?  If so, describe these efforts.

No.

Does your group work with any University department or other student organizations in any capacity?  If so, please describe this collaboration.

Yes. Together with EERI and GREENPeas, Geo-Institute hosts an annual CEE Tech Seminar. The seminar is a department wide event that presents topics from current graduate students.

Is your group affiliated with a national, parent, and/or umbrella organization?  If so, please describe this relationship and how it plays a role in your organization's functioning.

Yes. The parent organization to the Geo-Institute GSO is the Geo-Institute of ASCE. Geo-Institute hosts an annual geo-professionals convention, GeoCongress. A part of GeoCongress is dedicated to educating students. It also hosts the annual competitions where individual students and GSO's across the country can compete in poster competitions and a design competition, GeoWall.

What is your yearly budget?  What % of your budget have you set aside for this event?

Our yearly budget is $1,000. 0% of our budget is set aside for this event.

Email application to the RSG Treasurer, at RSG-treasurer@umich.edu with subject “RSG Funding Request”.
Event Description

Event name: **Winter 2012 Guest Lecture**
Event date(s): **Winter semester (exact date unknown)**
Event location: **2355 GG Brown (CEE conference room)**

1. Briefly describe this event. What is its overall purpose?

   The geotechnical seminar series seeks to enhance the knowledge of professional geotechnical engineering among the civil and environmental engineering community.

2. Describe how this event will affect our campus and the graduate student body.

   Lectures provide a real-world perspective of geotechnical engineering practice. It also provides students the opportunity to experience mainstream geotechnical engineering technology that is used to accomplish geotechnical engineering designs.

3. Describe how this event will include other groups or departments.

   The seminar is advertised, usually one week in advance, to the entire CEE department.

4. With which other groups or departments are you sponsoring this event, if any?

   None.

5. If your organization is traveling, explain why this is integral to your event and how it will impact the graduate student community.

   **No travel involved aside from picking up the guest lecturer from DTW and dropping them off the following day. Fuel cost for the two round-trips should be around $10/trip.**

6. If your organization is purchasing food, explain why this is integral to your event and how it will impact the graduate student community. Also, where are you ordering from and what is the approximate food cost/attendee?

   **Food for any given lecture may consist of cookies, crackers and/or fruit with water, juice or tea. Food costs are minimal and can be expected to be between $10 and $20.**

7. If your organization is bringing a speaker, performer, DJ, photographer (or any other paid individual for services rendered), explain why this is integral to your event and how it will impact the graduate student community. Please explain how the amount he or she will be paid was determined based on similar services. Additionally, attach a short biography to the end of this application.

   **The lecturer/speaker will be given an honorarium. The target is $100; however, the actual amount will vary according to actual round-trip airfare (estimated at $320 from Seattle to Detroit). The speaker has yet to be confirmed for this event.**

8. If your organization is applying for capital goods (anything that can be reused after the event has taken place), explain why such goods are integral to the event.

Email application to the RSG Treasurer, at [RSG-treasurer@umich.edu](mailto:RSG-treasurer@umich.edu) with subject “RSG Funding Request”.
Not applicable.

9. Who is eligible to participate? (Keep in mind the more diverse the graduate student participation, the more likely RSG will fund)

Anyone and everyone are eligible to participate.

10. How many participants do you expect? What % of those participants do you expect to be graduate students?

Between 15 and 25 people are expected to attend. About 65% should be graduate students.

11. Are your date and location confirmed?  Location = Yes        Date = No

12. Will you charge admission?        Yes        No
    If so, how much per person?

13. Will this be donated to charity?    Yes        No
    If yes, what percentage will be donated?

14. How do you intend to advertise, in particular to graduate students?

All graduate students in geotechnical engineering are expected to attend. Beyond a simple e-mail, professors of geotechnical engineering will advertise the lecture to their students. Flyers will also be posted around the department.

15. To what other funding bodies have you applied and/or have received funds from? Please note each funding body here, the amount for which you applied, the amount that was granted, and to what purpose you intend to put those allocated funds. Requests of funding for the majority of events cost solely to RSG will rarely be fully funded, please seek out additional funding sources as well.

<table>
<thead>
<tr>
<th>Funding Body</th>
<th>Amount Requested</th>
<th>Amount Granted</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>COE</td>
<td>$430</td>
<td>$0</td>
<td>Winter 2012 guest lecture</td>
</tr>
</tbody>
</table>

16. If RSG does not fully fund your event in the amount requested, how do you intend to cover those costs? Will the event still be held?

Currently no funds are available for this event. If it isn't funded through RSG, then it will not be held.

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Event Budget

List all expenses. Please use the notes section below each category to explain costs in greater detail. Be sure to cover ALL costs, not just those you are asking RSG for funding for.

<table>
<thead>
<tr>
<th>Category</th>
<th>Total Cost</th>
<th>Amount Requested from RSG</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advertising &amp; Publicity</strong></td>
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<tr>
<td>• Posters/fliers</td>
<td>$</td>
<td>$</td>
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<tr>
<td>• Other:</td>
<td>$</td>
<td>$</td>
<td></td>
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<tr>
<td>Notes:</td>
<td></td>
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<tr>
<td><strong>Operations</strong></td>
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<tr>
<td>• Office supplies (please specify):</td>
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<td>Notes:</td>
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<tr>
<td><strong>Printing &amp; Publications</strong></td>
<td>$</td>
<td>$</td>
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<tr>
<td>Please attach a copy of the publication to the end of this application.</td>
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<tr>
<td><strong>Facilities &amp; Equipment Rental</strong></td>
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<tr>
<td>• Equipment (please specify):</td>
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<td>•</td>
<td>$</td>
<td>$</td>
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<tr>
<td>• Room rental</td>
<td>$</td>
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<td>Notes:</td>
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<tr>
<td><strong>Services</strong></td>
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<tr>
<td>• Speaker honorarium</td>
<td>$100</td>
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<tr>
<td>• Speaker travel</td>
<td>$340</td>
<td>$340</td>
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<tr>
<td>• Speaker lodging</td>
<td>$65</td>
<td>$65</td>
<td>3</td>
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<tr>
<td>• Other: Food</td>
<td>$25</td>
<td>$25</td>
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<tr>
<td><strong>Student Travel</strong></td>
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<tr>
<td>• Lodging</td>
<td>$</td>
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<tr>
<td>• Transportation</td>
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<tr>
<td>• Vehicle Rental</td>
<td>$</td>
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<tr>
<td>• Gas</td>
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<tr>
<td><strong>Capital Goods</strong></td>
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<tr>
<td>• T-shirts</td>
<td>$</td>
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<tr>
<td>• Other:</td>
<td>$</td>
<td>$</td>
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<tr>
<td><strong>Food:</strong></td>
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<tr>
<td><strong>Other:</strong></td>
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<tr>
<td><strong>TOTAL EXPENSES</strong></td>
<td>$530</td>
<td>$530</td>
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</tbody>
</table>

Please remember to attach a mock-up version of the flier, publication, or t-shirt design with the RSG logo or “Sponsored by the Rackham Student Government” statement to your application.

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[72x51]Email application to the RSG Treasurer, at RSG-treasurer@umich.edu with subject “RSG Funding Request”.
Proposed guest lecturer for Winter 2012, Bob Holtz from the University of Washington – Seattle:

Bob Holtz, PhD, PE, D.GE, has degrees from Minnesota and Northwestern, and he attended the Special Program in Soil Mechanics at Harvard under Professor A. Casagrande. Before coming to the UW in 1988, he was on the faculty at Purdue and Cal State-Sacramento. He has worked for the California Dept. of Water Resources, Swedish Geotechnical Institute, NRC-Canada, and as a consulting engineer in Chicago, Paris, and Milano. His research interests and publications are mostly on geosynthetics, soil improvement, foundations, and soil properties. He is author, co-author, or editor of 23 books and book chapters, including Introduction to Geotechnical Engineering, 2nd Edition (with W. D. Kovacs and T.C. Sheahan, 2011), as well as more than 270 technical papers, discussions, reviews, and major reports.

Professor Holtz is a Distinguished Member of ASCE, was President of the ASCE Geo-Institute 2000-1, and currently serves as the International Secretary for the Geo-Institute. He is a Member Emeritus of TRB Committee on Soil and Rock Properties, a Past President of North American Geosynthetics Society; and a member of several other professional and technical organizations. He has taught numerous short courses and given many presentations at seminars and conferences, both in the U.S. and abroad. In 2010 he was named the 46th Karl Terzaghi Lecturer, which has been presented at several US venues and in Brazil, China, and Canada. In 2008, he was named the Puget Sound Academic Engineer of the Year.

Throughout his academic career, Professor Holtz has had an active consulting practice, involving geosynthetics, foundations, soil reinforcing, soil improvement, properties and containment of nuclear wastes, slope stability and landslides, investigation of failures, and acting as an expert witness. His clients have included federal, state, and local public agencies, civil and geotechnical engineering consultants and contractors, attorneys, and manufacturers, both in North America and overseas.

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Wadhams Road Bridge Foundation Stabilization
by
Richard Anderson, P.E., Dist. M. ASCE
Principal Engineer, SOMAT Engineering, Inc.

Wednesday, November 2, 2011 at 4:30pm
Room 2355 GGBL

Abstract: The reconstruction of the Wadhams Road bridge posed unique challenges due to historic global instability problems. The original 1939 design of the bridge was for a three-span bridge with a significant volume of new embankment on the south (unstable) slope. Initial placement of the embankment fill caused the slope to begin moving. After this construction was halted, the County Road Commission (CRC) changed the design which eliminated the embankment and added eight spans to the south and one span to the north for a total of 12 spans. The additional spans were supported by pile bents. Over time, movement downslope towards the river was noticed by distortion of the bents. In 1948 and 1949, the Michigan Department of State Highways (now known as MDOT) drove battered piles to resist the forces generated by the global instability of the slope. The system of battered piles did not work. By the mid-70’s, the downhill movement had reached a point that required further remediation of the bridge, including loading the toe of the slope with rip-rap. These efforts were unsuccessful. In 2006, the CRC hired URS Corporation (URS) with subconsultant SOMAT Engineering, Inc. to design a bridge replacement. It was determined that it was not economically feasible to resist the forces for the entire bridge width caused by the slope instability. The most economical solution was a two-span bridge with the pier supported by built-up box-section piles designed to resist the earth forces applied to the pile face and sides in combination with the axial forces. The piles were designed to resist enormous bending moments and shear forces. The unique foundation system for the pier consists of eighteen 68 foot long built-up box-section steel piles that are approximately 23 inches wide by 45 inches deep. The piles were inserted into 5 foot diameter excavated shafts. The bottom 21 feet of the shaft was encased in concrete into the stable underlying clay and sand. Pea gravel filled the area around the pile above the socket. The interior of the pile was also filled with concrete. In addition to the piles, the pier footing (pile cap) is restrained by a series of post-tensioned ground anchors that are anchored uphill into the stable soil below the unstable soil. There is no history of similar issues at the abutment locations and therefore they are supported by conventional pile foundations.

***** Everyone is invited – snacks will be available **********