

Thushara Gunda

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EDUCATION

Vanderbilt University, Nashville, TN May 2017 (expected)
Ph.D. candidate, Civil and Environmental Engineering

University of Virginia, Charlottesville, VA May 2010
B. Sc. with Highest Distinction in Environmental Sciences
B. A. in Environmental Thought & Practice (an interdisciplinary policy major)
Minor in Dance
Major(s) GPA: 4.0/4.0
Overall GPA: 3.979/4.0

RESEARCH GRANTS

Small Research & Travel Grant, College of Arts & Sciences, UVA Fall 2010
Awarded for travel and related expenses to the 2009 American Geophysical Union Fall Meeting, where I presented my senior thesis.

Harrison Undergraduate Research Award, Center for Undergraduate Excellence, UVA Spring 2009
Awarded for lab equipment and related research expenses for senior thesis.

College of Arts and Sciences Research Grant, College of Arts & Sciences, UVA Spring 2009
Awarded for lab equipment and related research expenses for senior thesis.

Small Research & Travel Grant, College of Arts & Sciences, UVA Spring 2009
Awarded for field supplies for senior thesis.

AWARDS & HONORS

Awards

Wallace Poole Prize Spring 2010
EVSC Interdisciplinary Research Award Spring 2010
Udall Scholarship Spring 2009
Richard Scott Mitchell Fellowship Spring 2009, Spring 2008
Butterfly Scholarship Spring 2008
Richard K. Bloomer Award Spring 2007

Honors

21 Society Service List Spring 2010
Dean's List Fall 2006 – Spring 2010
Echols Scholar Fall 2006 – Spring 2010
Science Scholar Fall 2007 – Spring 2010
Pi Epsilon Environmental Honor Society Inducted Spring 2009
Phi Beta Kappa Inducted Spring 2009
Golden Key International Honour Society Inducted Spring 2008
Intermediate Honors Spring 2008

PRESENTATIONS & POSTERS

Presentations

Gunda, T., A. Converse, A. Riscassi, and T. Scanlon. 2009. "Topographical and Hydrological Influences on the Spatial Distribution of Mercury at the Catchment Scale." Presented at the U21 Undergraduate Research Conference, Glasgow, Scotland, October 2009.

Posters

Gunda, T., A. Converse, A. Riscassi, and T. Scanlon. 2009. "Topographical and Hydrological Influences on the Spatial Distribution of Mercury at the Catchment Scale." Presented at Envirodays, Department of Environmental Sciences, Charlottesville, VA, January 2010. Recipient of Overall Best Undergraduate Presentation. Also, presented at the American Geophysical Union Fall Meeting, San Francisco, CA, December 2009.

Gunda, T., M. Wise. 2008. "Geological Significance of Blue Quartz in the United States of America."

Gunda, T., Z. Liu, P. G. Hatcher. 2007. "Lignin as an Indicator of Algal Blooms in Chesapeake Bay?"

RESEARCH EXPERIENCE

Distinguished Majors Senior Thesis, Charlottesville, VA Jan 08 – May 10

Student Researcher

- Conducted a paired catchment study to study mercury transport and recycling in the Shenandoah Mountains.
- Launched a field campaign and collected a total of 89 litterfall and 85 soil samples from 15 randomly chosen sites in each catchment.
- Processed and analyzed samples in a Cold Vapor Atomic Fluorescence Spectrometer.
- Conducted analyses of variance and covariance to determine statistically significant differences in mercury concentrations.
- Received \$7,500 in research grants (see **Research Grants**).
- Presented findings in Glasgow, Scotland; San Francisco, CA; and Charlottesville, VA (see **Presentations & Posters**).

ETP Capstone Seminar, Charlottesville, VA Jan 10 – May 10

Co-editor, Author

- Co-editor of "Policy Options for Controlling Greenhouse Gas Emissions in Virginia" report, which highlighted the severe hazards to Virginia from climate change and identified specific cost-effective, "sensible" policies that the state should enact in the short term.
- Authored the Energy Efficiency chapter.
- Report was presented to the VA State Air Pollution Control Board.

Rockfish River Basin Study, Charlottesville, VA Jan 07 – May 07

Student Researcher

- Studied basin morphology of the Rockfish River to determine which factors contributed to the river's response during Hurricane Camille.
- Factors evaluated include basin morphology/shape/length and lithological formations.

National Museum of Natural History, Washington, D. C. May 08 – Aug 08

Research Training Program Intern

- Used X-ray Fluorescence and X-ray Diffraction to study the geological significance of blue quartz in the eastern United States at the National Museum of Natural History.
- Presented a poster highlighting results (see **Presentations & Posters**).

Old Dominion University, Norfolk, VA May 07 – Aug 07

Coastal Observation Intern

- Collected water samples from the Chesapeake Bay.
- Used GC-MS and FTICP-MS to characterize particulate and dissolved lignin inside and outside algal blooms in the Chesapeake Bay.
- Presented a poster highlighting results (see **Presentations & Posters**).

National Museum of Natural History, Washington, D. C.

Aug 07

Intern

- Characterized morphology and other physical properties of carbonates within hiddenite and emerald pockets from Hiddenite, NC.
- Conducted an extensive literature search of subsequent topics.

EMPLOYMENT HISTORY: ENVIRONMENTAL

Weston Solutions, Inc., Austin, TX

Nov 10 – Jul 12

Assistant Project Scientist

- Updated an Integrated Natural Resources Management Plan (INRMP) for Little Rock Air Force Base, AK.
- Served as the Document Manager and the Administrative Record Coordinator for the Lake Texoma Environmental Impact Statement under the NEPA process.
- Conducted site visits and generate corresponding Environmental Site Assessment reports and Storm Water Pollution Prevention Plans.
- Collected, recorded, and processed groundwater and air samples to determine concentrations of chemical constituents of concern.
- Performed statistical analyses such as the Wilk-Shapiro, Rosner's, and Mann-Kendall to determine data distribution, outliers, trends in chemical concentration over time, and Upper Prediction Intervals for background clean-up levels.
- Researched industry- and market-accepted values for energy and cost savings to evaluate feasibility of energy efficient measures at army hospitals.
- Organized quarterly creek cleanups, holiday fundraisers, and other community-related volunteer events as the chair of the Make-A-Difference committee.

United States Business Council for Sustainable Development, Austin, TX

Jul 10 – Nov 10

Intern

- Conducted research regarding the feasibility of a collaborative (i.e., synergistic) business solutions approach to water conservation.
- Worked on a "how-to" manual for by-product synergy collaboration between private enterprises.

Albemarle County, Charlottesville, VA

Jan 08 – May 10

Environmental Intern

- Assisted the Environmental Compliance Manager with the implementation of the environmental management system and climate change program.
- Developed a county-wide baseline greenhouse gas emissions inventory.
- Served as the technical liaison to the Local Climate Action Planning Process.
- Generated various reports regarding county-wide energy consumption, EPA landfill greenhouse gas rule, county budget projections, and best management practices.

EMPLOYMENT EXPERIENCE: OTHER

Resident Life Office, Charlottesville, VA

Aug 09 – May 10

Resident Advisor

- Organized an array of developmental opportunities that promoted interactions between students residing on the first floor of Malone and faculty.
- Informed the students of social and cultural programs, empowered them to collaborate, and think critically.
- Developed skills in crisis management, peer mentoring, and hosting of social events.

Jan 09 – Sep 09

Athletics Department, Charlottesville, VA

Tutor

- Assisted 4-6 athletes with the completion of their environmental sciences homework.
- Created lesson plans for studying and administered practice exams.

Aug 07 – May 09

Education Library, Charlottesville, VA

Student Assistant

- Independently assisted patrons with research (submitting requests for articles, using databases, etc).
- Shelved discharged materials, straightened library, and closed the library two nights a week.

Aug 06 – Dec 06

University of Virginia Phonathon, Charlottesville, VA

Student Caller

- Called alumni, current students and/or their parents to confirm their contact information, to update them on events at the University, and to accept donations for the Annual Fund.
- Raised \$15,000+.

COMMUNITY INVOLVEMENT/LEADERSHIP EXPERIENCE

Nov 10 – May 12

U.S. Green Building Council – Central Texas Balcones Chapter, Austin, TX

Emerging Professionals Austin Vice Chair

- Coordinated bimonthly meetings for the Emerging Professionals committee in Austin for the USGBC – Central Texas Balcones Chapter.
- Organized volunteer activities and mixers for the committee.

Aug 10 – Nov 11

Grand Aspirations, Austin, TX

Resources Team Leader

- Developed a resource management strategy to secure financial and material resources needed to support Grand Aspiration leaders and programs sustainably for the long-term.
- Served as grant manager for a \$50,000 Pepsi Refresh grant.

Dec 06 – May 10

Environmental Sciences Organization

Vice President (4/09-5/10)

- Helped organize ESO activities (e.g., field trips, canoe trips, and seminars).
- Led service projects (e.g., adopt-a-stream).
- Maintained web site.

President (4/07-4/08)

- Collaborated with UVA Environmental Health & Safety Department to complete the university's first greenhouse gas emissions inventory.
- Led a group of 8 students to New Orleans, LA to assist the National Wildlife Federation with restoring Brechtel City Park, where we removed invasive species, installed bird houses, and planted over 200 native trees.

Water Quality Lab Director (12/06-4/07)

- Collaborated with VA Department of Environmental Quality to monitor the impairment of the Rockfish River.
- Coordinated the collection and processing of samples to isolate regions of highest contamination.
- Information was used to install a permanent benthic macroinvertebrate monitoring system by the VA Department of Water Quality.

Apr 09 – May 10

Environmental Sustainability Committee

Policy Evaluations Task Force Leader

- Researched other institutions that have or attempted to implement a campus green fund program.
- Worked closely with administration to articulate a referendum detailing the creation of a sustainability fund for the spring elections.
- The proposed referendum passed with 76% of the student body's approval.

Presidential Committee on Sustainability, University of Virginia

Nov 09 – May 10

Environmental Impact Subcommittee Member

- Worked with UVA administration and faculty to promote the implementation of a 10-year plan to reduce the University's environmental footprints.

Sustainability Minor

Dec 09 – May 10

Founding committee

- Worked with numerous, diverse student environmental leaders to establish a sustainability minor at the University of Virginia.
- Served as the primary liaison to the Environmental Sciences department, which had numerous professors interested in the minor, and the Dance department, which established its minor just a few years ago.

Arts & Sciences Council

Apr 07 – Sep 09

Environmental Department Representative, Finance Committee Member

- Served as a liaison between the Arts & Sciences Council and the EVSC department, hosted EVSC department events, and updated EVSC faculty on college-wide events.
- Served as the point-person for co-sponsorship requests on the Finance committee.

Hindu Students Council

Apr 07 – May 09

Chapter Coordinator (4/08-5/09)

- Promoted awareness of Hinduism by organizing events such as Satsangs (i.e., discussions) and Indian Classical Music & Dance Night.
- Guided the leadership development of the rest of board by advising them through planning events.

Programming Chair (4/07-4/08)

- Organized social activities (e.g., potluck dinners) and cultural activities (e.g., Holi and pujas).

VOLUNTEER ACTIVITIES

Madison House, Charlottesville, VA

Jan 07 – May 10

- Cleared and maintained trails through the City Parks/Rivanna Trails program; 4 hrs/week; 4 semesters.
- Watched over kids between 1.5-3.5 years old at the Wesley Daycare center; 2 hrs/week; 2 semesters.
- Assisted the development of handicapped children through the Charlottesville Area Riding Therapy program; 4 hrs/week; 1 semester.
- Built houses through the Housing Improvement Program in the local Charlottesville community area; 4 hrs/week; 1 semester.

Baptist Collegiate Ministries, Slidell, LA

Jan 08

Duration: One Week

- Helped rebuild houses damaged by Hurricane Katrina.
- Installed drywall, sanded cabinets, and helped put up a new roof and new siding.

Alternative Spring Break, Nags Head, NC

Mar 07

Duration: One Week

- Assisted the Nature Conservancy with the maintenance of the reserve.
- Rebuilt broken split rail fences, designed and constructed a footbridge, and cleared trails.

INTERNATIONAL TRAVEL

Glasgow, Scotland

Oct 09

Duration: One Week

- Presented undergraduate thesis results at the U21 Undergraduate Research Conference (see **Presentations & Posters**).

PROFESSIONAL ASSOCIATIONS

American Geophysical Union, Student Member.

Sep 09 – Present

ADDITIONAL SKILLS

- Software knowledge: Microsoft Office (advanced), arcGIS (novice), MATLAB (novice), Java programming (novice), webpage management (novice)
- Languages: French (intermediate), Telugu (intermediate).
- Dance: Kuchipudi - Indian classical dance (intermediate), Jazz (novice), Ballet (novice), Modern dance (novice).