Find Out About Upcoming Undergrad Research Workshops and Events (Page 6)

Student Interview: Rachel Newsome, Psych

U/G Research: How did you become involved in research as an undergraduate student at Georgia Tech?

RN: I started working in Dr. Fredda Blanchard-Field's Adult Development lab in the summer of 2007, working for credit in aging research. I worked on a few projects in this lab with a post-doctoral fellow, Dr. Christiane Hoppmann, learning about how older and younger adults solve problems they come across in everyday life, and also how emotion regulation changes with older and younger adults. I loved what I was doing there and continued working for pay, and I am still working in that lab a few hours each week until we finish a big project looking at everyday problem solving and decision making. After taking a class on Biopsychology this spring,

I realized that I wanted to learn more about the brain, and started working with Dr. Audrey Duarte in her Memory & Aging lab. I have always been fascinated by how the brain and biology affect behavior. I spent the summer learning about electrophysiology and how to administer EEGs and analyze ERP data from Nate Parks and Dr. Duarte. With their help, I learned about neuroimaging research and started an individual project focusing on how emotional stimuli affect memory in aging. We will use functional MRI and EEG to examine the differences in young and older adults. This project really combines all of my interests: neuroimaging, aging, memory, and emotion. My previous experience with Dr. Blanchard-Fields and Dr. Hoppmann has really helped me to succeed with this project. I work in

the Memory and Aging lab between fifteen and twenty hours each week now, and I just received the President's Undergraduate Research Award (PURA) to continue working on this project, "The Effects of Aging on Contextual Binding for Emotional Stimuli" in the spring of 2009.

U/G Research: Describe your role within your professor's research and research group.

RN: I am a research assistant in Dr. Blanchard-Field's lab and I am the lab manager of Dr. Duarte's lab.

Undergraduate Research News

Student Interview: Will Boyd, Physics

U/G Research: How did you become involved in research as an undergraduate student at Georgia Tech?

WB: I've been an undergraduate research assistant in Dr. Joseph Perry's lab in Georgia Tech's Chemistry & Biochemistry Department since July 2007. During my freshman year, I took Honors General Chemistry with Dr. Perry which sparked my interest in some of the research that Dr. Perry was involved in, and nonlinear optics research in general. The following summer he offered me a paid, full-time research position which I was thrilled to accept! I continued working for the Perry group as a paid, part-time undergraduate research assistant through fall 2007, and in spring 2008, I began working on my own project in conjunction with a graduate student studying the excited state photophysics of dye-coated silver nanoparticles. PURA funded this project during spring 2008, and I continued working on it full-time this past summer through the Chemistry Department's MDITR Summer Research Program for Undergraduates (REU), a paid, full-time research internship program funded by the NSF. This past fall I continued my research, and with Dr. Perry's consent, hired another undergraduate to assist me with my project. I plan to continue my research through spring 2009.

U/G Research: Describe your role within your professor's research and research group.

WB: Initially, my role within the Perry research group was to shadow my mentor around the lab and to help him with tasks related to his research project. Those first few months served as an excellent introduction

PURA

President's Undergraduate Research Award

Summer 2009 Applications due March 4

Apply for competitive $1,500 salary awards or
up to $1000 funding to present your work at a professional conference

Visit http://undergradresearch.gatech.edu/funding.php for more information and application instructions.

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Will Boyd..cont'd from page 2

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to much of the lab instrumentation, as well as the ongoing variety of research projects in the Perry group. With my application for PURA for spring 2008, I took up my own project, which involved working with many of the graduate students in the Perry group, as well as research scientists, and post-doctoral candidates. This is the role I continue to follow as I pursue my research in the Perry group.

U/G Research: How key was your professional relationship with your mentor?

WB: Having a professional relationship with my faculty mentors, Dr. Perry and Dr. De Heer, has been essential to my productivity in their respective laboratories. For many undergraduates starting out, it can be quite intimidating to ask a professor for the opportunity to do research. As scary as it may be (and as scary as it was for me starting out!), this feeling of intimidation is in fact quite healthy. In my case, it worked to ensure a relationship of respect (and even a little awe) between myself and my faculty mentors, and served as an excellent incentive to work hard in the lab. Having a professional relationship with the graduate students, post-docs, and research scientists in your lab has been equally important as my relationships with my faculty mentors. These have been the people I've worked with on a day-to-day basis. Their guidance and assistance with my research has been priceless, and I've made some of my best friends at Tech in the process.

U/G Research: Have you presented your work in any forum or published a paper?

This past summer I gave an oral presentation and display a research poster at forums near the end of my REU program. More

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Rachel Newsome...cont'd from page 1

In the Adult Development lab my tasks have included running participants in experiments, data entry, data verification, and data transcription. In the Memory & Aging lab I work with Dr. Duarte to design and program the experiments we are running and to analyze the data generated from the experiments.

U/G Research: What have you learned during your experience that goes beyond the classroom?

RN: Research is an important part of Georgia Tech as a university, and most classes emphasize current research as the tools for gaining new knowledge. Being involved in this research is exceedingly satisfying as you are creating new knowledge and helping the scientific community! This experience has been really great for me; personally, I have learned a lot about research, about the brain, and generally, just about people. Working with older adults from the community who volunteer as participants in both labs has helped me to gain a better appreciation for aging. The past two years have helped me to realize that I want to continue to pursue research as a student and eventually as a professional. I would like to take what I have learned and continue to learn about memory and aging and apply it to Alzheimer's research.

U/G Research: What's the number one piece of advice you would give to fellow undergraduates who might be in interested in research?

RN: Take advantage of the research opportunities that Tech has made available. Find something that you are interested in, and pursue it while you are here. There are so many ways to get involved with research, and it's such a satisfying experience!

Undergraduate Research News

Mentoring Corner

Creating Effective and Appropriate Projects

Ever stumped on how to create a project for a promising undergraduate student? If so, join us as we discuss several strategies for developing projects and expectations with undergraduate researchers at our next workshop in the Mastering Mentoring series sponsored by UROP and CETL (See ad on page 5).

Developing Writing Skills in Undergraduate Researchers

In addition to contributing to the field of knowledge in one's discipline and helping train the new generation of researchers in your field, one of the top goals for most mentors of undergraduate students is publishing a paper or presenting at a conference. Cultivating excellence in writing skills is important for undergraduate researchers and future graduate students. The UROP library has three books on the subject which may be of interest to you—

books that you can recommend to your students as resources useful when writing that journal article or conference paper, a final report, or a full-length thesis.

Writing for Science and Engineering: Papers, Presentations, and Reports by Heather Silyn-Roberts

One of the suggested texts for our Research Option thesis writing class, this book succinctly covers the basics of writing in a practical guide geared toward engineering, science, and technology students. Topics covered in the book include preparation of abstracts, theses, and journal articles; tips on oral presentation; and progress reports (both oral and written). Students are also given tips on document organization, references, style, and proofreading.

How to Write a BA Thesis: A Practical Guide from Your First Ideas to Your Finished Paper by Charles Lipson

Written by a professor who has direction over 100 students through a senior thesis, this book offers a "mentoring" type approach to providing advice to students. The book offers not only tips on writing with high quality and presenting information visually, but offers information on creating timelines for your thesis work and writing a research proposal—information that is valuable to students from all disciplines. A major section of the book is geared toward conducting research in the humanities and social science areas.

A Manual for Writers of Research Papers, Theses, and Dissertations by Kate L. Turabian, revised by Booth, Colomb, and Williams

An update of the original version first published in 1937, the book is called by many "the standard for generations of students and their teachers, revised for a new age." The book is organized in three

main sections: research writing from planning to production, citation of sources, and style. Content in the book is based on the Chicago Manual of Style and provides comprehensive information on everything from spelling to punctuation, use of abbreviations, quotations, among others. The section on research and writing is comprehensive, moving from a description of research through the literature review, effectively building a research argument, presenting your evidence, and final working and revising multiple drafts.

Books may be checked out of the UROP library for a 2-week period by contacting Karen Harwell at urop@gatech.edu.

Mastering Mentoring:
An Interactive Skill Building Workshop Series

- Are you a faculty member who is currently, or will be supervising, undergraduates in a research setting?
- Are you a graduate student or post-doc who is currently or who will be working with under graduate students in research settings?
- Did you know that "finding a good mentor" is one of the most important factors undergraduate researchers cite as helpng them complete a successful project?

Come learn more about how to be a good mentor! Both veterans in undergraduate research mentoring and those new to the experience are welcome!

The Mastering Mentoring series began in Fall 2008 as a follow-on to Georgia Tech's annual Mentoring Undergraduates in Research workshop. Participants will gather to discuss more focused topics related to mentoring undergraduates in research using a variety of formats, including case studies, panel sessions, and role playing. Individual sessions in the series will be offered on various topics during fall and spring semesters.

Session 2: Creating Effective and Appropriate Projects for Undergraduate Research
Tuesday, February 10, 2009

11am-1pm

Gordy Room, Wardlaw Building

Brown Bag – bring your own lunch, drinks and desserts provided.

RSVP by Tuesday, February 3, 2009 at
http://masteringmentoringprojects.eventbrite.com/

A workshop series sponsored by the Undergraduate Research Opportunities Program (UROP) and the Center for the Enhancement of Teaching and Learning (CETL).

Undergraduate Research News

Upcoming Workshops & Events

4th Annual ACC Meeting of the Minds Undergraduate Research Conference
April 4-6, 2009
North Carolina State
Apply to represent Georgia Tech to present your research at the ACC conference. All disciplines are welcome. **Applications are due Monday, February 2, 2009**. For additional information , visit http://www.undergradresearch.gatech.edu/documents/ACC-conf-2009-application.pdf

Undergraduate Research Kaleidoscope: Pecha Kucha Style
Monday, Feb. 9, 2009
7:00pm
Library East Commons
Join us for a series of unique presentations on Undergraduate Research in the Pecha Kucha style. For additional information cotact the LEC's Charlie Bennett at cb129@mail.gatech.edu.

President's Undergraduate Research Award (PURA)
Information Session and Proposal Triage
Thursday, Feb. 12, 2009
4-5pm
Piedmont Room, Student Center
Join us as we discuss the application procedure for the President's Undergraduate Research Award (PURA). We'll cover eligibility, proposal writing, and the application procedure. Students may wish to come with a draft proposal to obtain feedback.

Presenting with Power – Oral Presentation Workshop
Tuesday, March 24, 2009
11:00am- 12:00 Noon
Student Center Room 321
This interactive workshop is designed to be hands on. Participants will leave the workshop with a working draft of their PowerPoint slides and with concrete tips on how to present their research effectively and dynamically. Register by e-mailing urop@gatech.edu

Eye-Catching Posters
Thursday, March 26, 2009
11:00am - 12:00 Noon
Bill Moore Success Center, Pres. Suite C&D
We'll examine several research posters used in the past and comment on their design. Students will also learn tips on how to effectively convey their research in a poster setting. Register by e-mailing urop@gatech.edu.

4th Annual (April 1) Undergraduate Research Spring Symposium & Awards Ceremony

Submission Deadline February 25

For more information, visit
http://undergradresearch.gatech.edu/SpringSymposium.php.

Will Boyd..cont'd from page 3

recently, in November I presented my Perry group research at two undergraduate research conferences. I gave an oral presentation at the "19th Annual Argonne Symposium for Undergraduates" at Argonne National Laboratory near Chicago, IL, and a poster presentation at the "2008 Sigma Xi Annual Meeting & Student Research Conference" in Washington, D.C.

U/G Research: What have you learned during your experience that goes beyond the classroom? What impact has this project made on your academic experience while at Georgia Tech and your future career choices?

WB: One of the most significant things I've done as an undergraduate has been to join a research group and to stick with the research for an extended period of time. Research has opened my eyes to just how important and useful the coursework taught in the classroom can be in the real world. To that effect, my undergraduate research experience has been a very real incentive to excel not only in the laboratory, but also in the classroom. In addition, undergraduate research has given me some important insights into the daily life of a researcher.

Indeed, my undergraduate research experience, along with my study abroad experience investigating the growing economic and science powers in Southeast Asia, are undoubtedly the two biggest contributing factors to my goal to pursue a career in science research and entrepreneurship.

Summer Undergraduate Research Opportunities

It's not too early for your Georgia Tech students to be thinking about plans for summer. Opportunities are available for undergraduate students to spend part of the summer working side-by-side with researchers at various universities in the U.S. and abroad. Students are able to gain valuable experience in full-time research with a cohort of students from universities across the country and are able to not only participate in exciting research projects, but experience the research culture at another university. Students learn how to investigate challenging questions and solve open-ended problems that most likely have not been solved before. Such experiences strengthen a student's resume and lead to the development of unique career experience.

Opportunities are available in programs for all majors. The National Science Foundation (NSF) sponsors programs from across the country from Alabama to Washington state. Programs are also sponsored by the National Institute of Standards and Technology (NIST), NASA, the National Institutes of Health (NIH), the Mayo Clinic, and many others. Additionally, programs are available abroad either through the NSF or other international organizations or universities. Most programs have deadlines in early to late February, some as early as mid-January. Many have use rolling admission, so apply early and often!

For additional information and links to possible programs visit: http://undergradresearch.gatech.edu/research_opportunities.php.

Undergraduate Research Opportunities Program (UROP)

Undergraduate Research Opportunities
Program (UROP)
Georgia Institute of Technology
MC 0740
Atlanta, GA 30332-0740
Phone: 404-385-7325
Fax: 404-385-6940
E-mail: urop@gatech.edu
www.undergradresearch.gatech.edu

News from the Director

Welcome Back! It seems I'm always saying "this semester will be a busy one," but the spring term is one of the busiest in undergraduate research with Research Option students finishing their theses, additional workshops being sponsored, the ACC undergraduate research conference, and of course, our annual Undergraduate Research Spring Symposium and Awards. I encourage you to apply to present your work at this year's symposium (or to encourage your friend or student) to be held on April 1st. The event not only provides an opportunity for students to present their work in an interdisciplinary setting, but also is an opportunity for the campus to showcase the outstanding accomplishments of its undergraduate population and celebrate undergraduate research on campus! Applications for the event will be accepted online through February 25, 2009.

Hopefully you've noticed an expansion in our programs for undergraduate research mentors through our new collaborative series Mastering Mentoring jointly sponsored with Georgia Tech's Center for the Enhancement of Teaching and Learning (CETL). We continue to enjoy a great turnout at our events and some interesting discussion regarding mentoring strategies. Join us in February for our next event in the series – a brown bag on creating effective and appropriate projects for undergraduate research. Both new and experienced mentors are welcome.

Lastly, I am happy to announce that the Atlantic Coast Conference (ACC) has chosen Georgia Tech as the host of its 5th annual Meeting of the Minds undergraduate research conference to be held in April 2010. We look forward to hosting the event and thank you in advance for your support.

Check out our student and faculty profiles in this issue. We are always looking for suggestions of new students to interview!

Best,
Karen Harwell

Let Your Voice Be Heard!!

Student Advisory Board for Undergraduate Research (SABUR)

The Student Advisory Board for Undergraduate Research (SABUR) works toward implementing new ideas for programs and resources for students interested in research. If you're interested in serving on this board, please email the Chair, Savannah Gowdy at gt.sabur@gmail.com. *Freshman, sophomores, and juniors are particularly encouraged to become involved!*

WE WANT TO HEAR FROM YOU!!!!

UROP Facebook Page

Interested in hearing more about upcoming Undergraduate Research events, news, funding, etc? Then join the GT Undergraduate Research Opportunities Program (UROP) Group on Facebook.

Listserv

To receive information and announcements from Georgia Tech's Undergraduate Research Opportunities Program (UROP), join the urop-news listserv. To join: Send an e-mail to sympa@lists.gatech.edu with a subject of "subscribe urop-news".