4th ANNUAL FLORIDA STATEWIDE SYMPOSIUM:
ENGAGEMENT IN
UNDERGRADUATE RESEARCH

October 14-15, 2011
Orlando, Florida
www.researchsymposium.ucf.edu
Early Engagement of Students in Research: Best Practices for Diversity and Inclusion

Speaker: Sandra Gregerman
Director, Undergraduate Research Opportunity Program, University of Michigan-Ann Arbor

- The Undergraduate Research Opportunity Program (UROP) at the University of Michigan is a national award winning program.
- UROP creates research partnerships between students (first year, second year, and transfer) and faculty.
- In 2010-2011, 1300 students participated in UROP working with over 800 research mentors.
- The seminar will include a set of structured program components to support early engagement of students in research.

Friday, October 14 from 1:30 pm - 2:30 pm
Cape Florida CD, Student Union
4:30 pm - 5:15 pm  Panel Discussion: Mentoring First and Second Year Students in Research  
Cape Florida 316A  
Michael Aldarondo-Jeffries, Alejandro Brice, Christopher Leone, and Margaret Taylor

Panel Discussion: Student Showcases  
Cape Florida 316B  
LouAnne Hawkins, Kimberly Reiter, and Kimberly Schneider

5:30 pm - 7:00 pm  Poster Session and Reception  
Burnett Honors College

7:00 pm  Dinner on your own  
See suggestions on page 18

SATURDAY, OCTOBER 15

8:00 am – 9:00 am  Directors’ Continental Breakfast  
BHC 130

9:00 am – 10:00 am  Early Engagement of Students in Research: Interactive Workshop  
BHC 126  
Sandra Gregerman

10:10 am – 10:55 am  Undergraduate Research in the Visual Arts: Best Practices From the Studio Arts and Their Application Across Disciplines  
BHC 126  
Liz Atzberger and Amy Broderick

Getting Students Involved Early: Multiple Models  
BHC 128  
Kimberly Schneider and Amy Bickel

11:05 am – 11:50 am  Librarian Support of Undergraduate Research at UF Libraries  
BHC 126  
Cindy Craig

Science Inspired Art  
BHC 128  
Costas Efthimiou, Debra Reinhart, Bonnie Swan, Theo Lotz, and Michael Georgiopoulos

12:00 pm - 12:45 pm  Just Do It – Lessons Learned From Coordinating the First Annual Florida Student Research Symposium: Excellence in Undergraduate Research  
BHC 126  
LouAnne Hawkins

Old Literary “Cats” in New Robes: Literary Research with Digital Storytelling  
BHC 128  
Margaret Taylor

12:45 pm - 1:30 pm  Lunch and Conversation  
Statewide Student Conference Planning  
BHC 130

1:30 pm – 2:30 pm  Using Web Sites and Social Media to Promote Undergraduate Research  
BHC 130  
Kimberly Schneider

2:30 pm – 3:00 pm  Debriefing  
BHC 130
Defining an Evaluation Framework for Undergraduate Research Experiences
Lisa Massi, Michael Georgiopoulos, Cynthia Young, Cherie Geiger, Patrice Lancey, and Divya Bhati (University of Central Florida)
(Cape Florida 316B)

In an effort to improve the evaluation framework for the authors’ NSF-funded S-STEM program (Scholarships in Science, Technology, Engineering, and Mathematics) that supports undergraduate research experiences (UREs) for its participating students, we analyzed quantitative and qualitative data from the 2009-10 senior exit survey for graduating students in the UCF College of Engineering and Computer Science. The survey data offered a large sample size (n=687) of which 104 or 15% of students reported participation in a URE; non-URE students were used as a comparison group. We then compared our findings with five published studies on UREs with large sample sizes.

Beyond the Stacks: Using the Library for More Than Just Research
Michelle Demeter and Bridgett Birmingham (Florida State University)
(Cape Florida 316A)

The library is an invaluable resource for any student conducting research, whether using databases, scheduling personal consultations, or using the available technology. However, the library can offer so much more than research resources. Often a heavily trafficked central location on campus, university libraries can provide a unique place on campus to attract more attention to and interest in undergraduate research. This poster presentation will offer a variety of ways you can approach your university library and tap into their varied resources, including staff time and the creative use of the physical space itself.

Advancing Research at the Undergraduate Level: The Successes and Challenges of Developing and Sustaining an Undergraduate Thesis Program
Denise Crisafi (University of Central Florida)
(Cape Florida 316B)

The following presentation will discuss how The Burnett Honors College at UCF has been able to successfully implement and continually develop an undergraduate thesis writing program. While the development of this program has been met with many successes, namely increasing student and faculty participation and diversity, challenges have also been encountered that have the potential to stymie its future growth. Such challenges include, but are not limited to, the economic climate and the student-to-faculty ratio. Possible ramifications of these issues will be discussed as well as solutions that will ensure the continued growth of this type of program.
Panel Discussion: Mentoring First & Second Year Students in Research
Michael Aldarondo-Jeffries (University of Central Florida), Alejandro Brice (University of South Florida- St. Petersburg), Christopher Leone (University of North Florida), and Margaret Taylor (Florida Southern College)
(Cape Florida 316A)

This discussion will address the issues and benefits of mentoring undergraduates early in their careers, as well as the best practices for doing so on various campuses and within disciplines. Panelists represent a wide variety of disciplines.

Panel Discussion: Student Showcases
LouAnne Hawkins (University of North Florida), Kimberly Reiter (Stetson University), and Kimberly Schneider (University of Central Florida)
(Cape Florida 316B)

This discussion will provide insight into the development and coordination of student showcases for research presentations. Various universities will discuss their models while providing suggestions for creating or improving on-campus student conferences.

POSTERS (5:30 pm - 7:00 pm)

GIS As An Undergraduate Research Instrument
Richard Snow and Mary Snow (Embry-Riddle Aeronautical University)

Geographic Information Systems (GIS) encompass all aspects of spatial data analysis from data acquisition and manipulation through problem solving to the graphic presentation of results. Thus, GIS is a unique instrument for conducting undergraduate research as students learn to store, retrieve, manipulate, analyze, and display data according to a variety of user-defined specifications in order to address particular environmental and social problems. This presentation offers diverse examples of undergraduate research projects based on the scientific method that were accomplished using GIS.

Instilling Awareness of Ethical Research Practices
Flona Redway and Teresa Petrino (Barry University)

Practicing the responsible conduct of research (RCR) is important in the development of a scientist. Upon entering the MARC and RISE programs, students receive 20 hours of RCR training. Pertinent areas discussed include values in science, research as a profession, elements of responsible conduct, conflict of interest, research misconduct, IACUC certification, and IRB guidelines. Principles are reinforced in the Biomedical Ethics and Seminar courses. Students practice RCR in the classroom, the teaching labs, and the research labs as they carry out mentored research. Students build on their experiences to become responsible professionals. Supported by NIH MARC and RISE Grants, Barry University.

The X-Lab: A Cross-Disciplinary STEM Laboratory Program Targeted to Lower-Division Pre-Health Majors
Elisa Livengood and David Julian (University of Florida)

Bioscience research is increasingly interdisciplinary and quantitative, spanning the STEM disciplines. However, lower-division science courses at major research universities are typically taught by separate departments with little or no coordination between disciplines. Consequently, undergraduate students compartmentalize their STEM knowledge along traditional disciplinary lines despite our protestation that modern research is cross-disciplinary. As part of the HHMI-supported Science for Life Program, we are developing the Cross-Disciplinary Science Laboratory (“X-Laboratory”) program, a three-semester, six-credit series of introductory laboratory courses designed to train first- and second-year students in fundamental and advanced bioscience research techniques integrated with inquiry-based, cross-disciplinary instruction in foundation STEM concepts.

Collaboratively Supporting Undergraduate Research: The Journal of Undergraduate Research and the Libraries’ Digital Collections
Laurie Taylor (University of Florida)

In this presentation, we explain a new phase in the existing collaboration between the University of Florida (UF) Libraries and the UF Center for Undergraduate Research. The Libraries and Center for Undergraduate Research have had an existing collaborative relationship to support student research. In 2011 that collaboration extended to include support for publishing the Journal of Undergraduate Research using the UF Digital Collections which are hosted and operated by the Libraries as an access and preservation repository with a suite of related services.

Preservation of Undergraduate Research Through the Creation of Senior Research Classes at Florida Gulf Coast University
Charles Gunnels IV, Brian Bovard, Nora Demers, Win Everham, Ai Ning Loh, and Michael Saverese (Florida Gulf Coast University)

Undergraduate research is a defining characteristic of Florida Gulf Coast University. Maintaining an undergraduate research requirement has become increasingly difficult, as the university has grown rapidly. Departments of Biological Sciences as well as Marine and Ecological Sciences have developed senior research classes recently to meet student demands. Initial successes can be traced to courses, such as Scientific Process, which introduces research in incremental steps. We hope that the creation of senior research classes will allow us to maintain our tradition of mentor/“mentee” relationships for the most motivated students while providing all students with a quality undergraduate research experience.
A Stage Approach to Undergraduate Independent Research in Psychology
Linda Bacheller (Barry University)

Among the greatest challenges undergraduate research mentors face is the variability of skills displayed by a diverse student population. One approach to addressing this problem is a “three-stage” course sequence that allows students to systematically advance through the independent research experience. This structural approach takes the student from the conceptualization of a research idea through to the completed manuscript. With clear goals, outcomes, and expectations for each stage, the mentor is able to address the students’ academic gaps within this clearly defined structure. This process nurtures the students to develop their full potential, transforming them from “learner” to “chrysalis-scientist.”

An Exploration of Undergraduate Students’ Understanding of What Constitutes Plagiarism
Shannon Whitten and Karen Mottarella (University of Central Florida)

The authors previously reported evidence that in a UCF Web-based course, up to 77% of students copied and pasted their essay responses from Web sites. Moreover, 33% of these statements on the essay exam question were plagiarized by students (Whitten, Collins, Maleski, & Mottarella, 2009). In one study by Frose et al. (1995), approximately half of students did not know how to properly cite a source. Clearly, plagiarism is a problem in higher education that cannot be ignored at any university that places value on academic integrity. The present study explores what undergraduate students believe constitutes plagiarism.

Promoting Research: The Student Undergraduate Research Council
Kimberly Schneider (University of Central Florida)

The goal of the Student Undergraduate Research Council (SURC) at the University of Central Florida is to support and promote undergraduate research campus-wide. This group works closely with the Office of Undergraduate Research to increase the number of students engaged in research projects. The objectives of the student group are two fold: (1) to promote undergraduate research to students campus-wide, and (2) to support and advise the Office of Undergraduate Research. Each year 10 members are accepted into the SURC group to serve as ambassadors, mentors, and advocates for undergraduate research.

SPECIAL WORKSHOP
9:00 am - 10:00 am
Early Engagement of Students in Research: Interactive Workshop
Sandra Gregerman (University of Michigan)
(BHC 126)

This workshop will provide a follow-up activity from the keynote address. Participants will have an opportunity to work in small groups or campus teams to explore the feasibility of developing a similar program or initiative within your specific institutional context. Questions to be explored will include: What institutional needs/goals does undergraduate research address? Who are likely partners on campus who also are trying to address these needs and goals? Where are the current pockets of expertise in undergraduate research on your campus? What areas do not currently have a culture of undergraduate research? Given your mission and/or current strategic initiatives, how might you align early engagement of students in research with these broader institutional goals?

INTERACTIVE WORKSHOPS
10:10 am - 10:55 am
Undergraduate Research in the Visual Arts: Best Practices From the Studio Arts and Their Application Across Disciplines
Liz Atzberger and Amy Broderick (Florida Atlantic University)
(BHC 126)

The studio arts have a strong tradition of emphasizing original scholarly work at the undergraduate level. Studio undergraduates frequently develop individual research projects, determining the methods and objectives themselves under the guidance of faculty mentors. In executing these projects, student artists demonstrate their emerging mastery of the discipline’s fundamental methods and mediums, while simultaneously applying that knowledge to the articulation of original content. Many pedagogical practices from the studio arts have practical applications in other disciplines. This session invites colleagues into the studio to explore these best practices and the inspiration they might offer to students and faculty across disciplines.
Getting Students Involved Early: Multiple Models
Kimberly Schneider and Amy Bickel (University of Central Florida)
(BHC 128)

Getting students involved in research early has shown to increase retention and overall student success. UCF has operated the Summer Research Academy (SRA) for eight years in order to prepare rising sophomores/juniors and transfer students to engage in research early in their career. UCF is currently expanding this model to run additional introduction to research coursework. Additionally, UCF implemented a new living-learning community for undergraduate research in the fall of 2011. The program currently has 28 first-year students who are living together, taking courses together, and are involved in research. The new programs are supported through National Science Foundation funding.

11:05 am - 11:50 am
Librarian Support of Undergraduate Research at UF Libraries
Cindy Craig (University of Florida)
(BHC 126)

The University of Florida Libraries have begun a collaboration with the Center for Undergraduate Research. This newly consolidated Center supports students from a number of programs with a research component (e.g., McNair Scholars, University Scholars, etc.). A multidisciplinary team of librarians have begun providing reference and instruction services to students from these programs. This talk will outline how the library liaisons are reaching out to undergraduate students from a variety of disciplines (e.g., sciences, humanities, etc.) who have the needs of graduate students (e.g., undergraduate thesis projects, etc.).

Science Inspired Art
Costas Efthimiou, Debra Reinhart, Bonnie Swan, Theo Lotz, and Michael Georgiopoulos (University of Central Florida)
(BHC 128)

Artists have drawn inspiration from science and mathematics to create works of art since antiquity. At UCF, the ICubed project strives to inform our community by encouraging new STEM-art (STEAM) collaborations among university researchers and by enticing non-STEM students to become part of creative projects that involve the STEM disciplines. Participating art and design students attended seminars and worked collaboratively with STEM students to create science-inspired art. This session will provide results from our STEAM project. We will also cover some of the science-inspired art of several renowned artists.

12:00 pm - 12:45 pm
Just Do It – Lessons Learned from Coordinating the First Annual Florida Student Research Symposium: Excellence in Undergraduate Research
LouAnne Hawkins (University of North Florida)
(BHC 126)

Perhaps you have helped coordinate a professional or institutional conference, served as conference program chair, or served as conference site coordinator. If so, you appreciate the many challenges inherent in organizing a conference. However, have you considered the unique hurdles associated with organizing a first-time conference? In spring of this year, the University of North Florida hosted the first annual statewide symposium showcasing undergraduate research. Join us as we explore the lessons learned as we organized this inaugural event. Share your thoughts, observations, and experiences as Florida’s universities and colleges prepare to pass the torch to future host institutions.

Old Literary “Cats” in New Robes: Literary Research with Digital Storytelling
Margaret Taylor (Florida Southern College)
(BHC 128)

The focus of this presentation is the literary research students will do on T.S. Eliot’s Old Possum’s Book of Practical Cats and the musical “Cats.” Based on their research, in small groups students will create their own “cat persona” as the central character of their own creative short story that expresses a significant aspect of human life. Next, students will create a digital story, incorporating live student performance/cartoon characters/photographs and 5-6 brief musical segments that emphasize the characters’ major traits and underscore the events. Students might compose their own musical scores and will present their story.

1:30 pm - 2:30 pm
Using Web Sites & Social Media to Promote Undergraduate Research
Kimberly Schneider (University of Central Florida)
(BHC 130)

Strong Web sites and good use of social media sites help increase the exposure of students to undergraduate research opportunities. This interactive workshop will discuss how to strengthen web sites to be more student-focused. It will also review several social media outlets including Facebook, Twitter, and YouTube. Participants will be encouraged to share their own Web and Facebook sites with the group.
Acknowledgments

Florida Statewide Symposium: Engagement in Undergraduate Research

MANY THANKS TO:

Ms. Amy Bickel
Graduate Assistant, Office of Undergraduate Research

Mr. Robert Bilic
Web Designer, Undergraduate Studies

Mr. Austin Brogle
Computer Specialist, Undergraduate Studies

Mr. Drew Fedorka
Student Assistant, Office of Undergraduate Research

Mr. Drew Guarino
Computer Specialist, Undergraduate Studies

Ms. Nicole Smith
Graphic Designer, Undergraduate Studies

Mr. Brian Strickland
Programmer, Undergraduate Studies

Burnett Honors College
Continuing Education and Martin Malpica
Office of Undergraduate Studies
Student Undergraduate Research Council
Student Union
Symposium Participants and Guests

SPECIAL THANKS TO:

for sponsoring the keynote speaker

SYMPOSIUM PLANNING COMMITTEE:

Dr. Kimberly Schneider
Director, Office of Undergraduate Research

Ms. Nancy Lynch
Senior Administrative Assistant, Undergraduate Research

Mr. Richard Harrison
Associate Librarian, UCF Libraries

Dr. Martin Dupuis
Assistant Dean, Burnett Honors College

Mr. Michael Aldarondo-Jeffries
Director, McNair and RAMP Scholars Program
2011 Statewide Symposium Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Aldarondo-Jeffries</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Elizabeth Atzberger</td>
<td>Florida Atlantic University</td>
</tr>
<tr>
<td>Linda Bacheller</td>
<td>Barry University</td>
</tr>
<tr>
<td>Mary Beck</td>
<td>Valencia College</td>
</tr>
<tr>
<td>William Beesting</td>
<td>Florida International University</td>
</tr>
<tr>
<td>Amy Bickel</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Bridgett Birmingham</td>
<td>Florida State University</td>
</tr>
<tr>
<td>Victor Bondzie</td>
<td>Valencia College</td>
</tr>
<tr>
<td>Betsy Brantley</td>
<td>Valencia College</td>
</tr>
<tr>
<td>Alejandro Brice</td>
<td>University of South Florida- St. Petersburg</td>
</tr>
<tr>
<td>Amy Broderick</td>
<td>Florida Atlantic University</td>
</tr>
<tr>
<td>Jametoria Burton</td>
<td>Florida State College at Jacksonville</td>
</tr>
<tr>
<td>Donna Chamely-Wiik</td>
<td>Florida Atlantic University</td>
</tr>
<tr>
<td>Jeff Coker</td>
<td>University of North Florida</td>
</tr>
<tr>
<td>William Coyne</td>
<td>Embry-Riddle Aeronautical University</td>
</tr>
<tr>
<td>Cindy Craig</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Denise Crisafi</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Richard Daye</td>
<td>Valencia College</td>
</tr>
<tr>
<td>Michelle Demeter</td>
<td>Florida State University</td>
</tr>
<tr>
<td>Anne Donnelly</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Martin Dupuis</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Costas Efthimiou</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Juan Carlos Espinosa</td>
<td>Florida International University</td>
</tr>
<tr>
<td>Michael Georgiopoulous</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Sandra Gregerman</td>
<td>University of Michigan</td>
</tr>
<tr>
<td>Denise Guerin</td>
<td>Santa Fe College</td>
</tr>
<tr>
<td>Charles Gunnels IV</td>
<td>Florida Gulf Coast University</td>
</tr>
<tr>
<td>Jerome Haky</td>
<td>Florida Atlantic University</td>
</tr>
<tr>
<td>Richard Harrison II</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>LouAnne Hawkins</td>
<td>University of North Florida</td>
</tr>
<tr>
<td>Bobby Hom</td>
<td>Santa Fe College</td>
</tr>
<tr>
<td>Alec Kercheval</td>
<td>Florida State University</td>
</tr>
<tr>
<td>Mary Jo Koroly</td>
<td>University of Florida</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy Lawrence</td>
<td>Embry-Riddle Aeronautical University</td>
</tr>
<tr>
<td>Christopher Leone</td>
<td>University of North Florida</td>
</tr>
<tr>
<td>Angie LeRoy</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Elisa Livengood</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Lisa Massi</td>
<td>Santa Fe College</td>
</tr>
<tr>
<td>Diana Matthews</td>
<td>Embry-Riddle Aeronautical University</td>
</tr>
<tr>
<td>Louis McNally</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Karen Mottarella</td>
<td>University of South Florida- St. Petersburg</td>
</tr>
<tr>
<td>Tina Neville</td>
<td>Florida State University</td>
</tr>
<tr>
<td>Joe O’Shea</td>
<td>Barry University</td>
</tr>
<tr>
<td>Teresa Petrino-Lin</td>
<td>University of South Florida</td>
</tr>
<tr>
<td>Richard Pollenz</td>
<td>Jacksonville University</td>
</tr>
<tr>
<td>Christopher Potratz</td>
<td>Barry University</td>
</tr>
<tr>
<td>Flona Redway</td>
<td>Stetson University</td>
</tr>
<tr>
<td>Kimberly Reiter</td>
<td>Valencia College</td>
</tr>
<tr>
<td>Elizabeth Renn</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Rick Schell</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Kimberly Schneider</td>
<td>University of South Florida- St. Petersburg</td>
</tr>
<tr>
<td>James Schnur</td>
<td>Santa Fe College</td>
</tr>
<tr>
<td>Angi Semegon</td>
<td>Embry-Riddle Aeronautical University</td>
</tr>
<tr>
<td>Mary Snow</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Richard Snow</td>
<td>University of Florida</td>
</tr>
<tr>
<td>Zixia Song</td>
<td>Florida Southern College</td>
</tr>
<tr>
<td>Laurie Taylor</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Margaret Taylor</td>
<td>University of North Florida</td>
</tr>
<tr>
<td>Kenneth Teter</td>
<td>Valencia College</td>
</tr>
<tr>
<td>Michael Toglia</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Sidra Van De Car</td>
<td>New College of Florida</td>
</tr>
<tr>
<td>Elliot Vittes</td>
<td>University of Central Florida</td>
</tr>
<tr>
<td>Jeanna Viviani</td>
<td>University of North Florida</td>
</tr>
<tr>
<td>Shannon Whitten</td>
<td>Florida Southern College</td>
</tr>
<tr>
<td>James Wirth</td>
<td>University of Central Florida</td>
</tr>
</tbody>
</table>

www.researchsymposium.ucf.edu | 14
Maps & Locations

UNIVERSITY OF CENTRAL FLORIDA MAP
Student Union (52), Burnett Honors College (95), and Parking Garage I (formerly H) (78)

STUDENT UNION
First Floor
Pegasus Ballroom

Third Floor
Room 316 ABCD

BURNETT HONORS COLLEGE
Rooms 126, 128, and 130
Maps & Locations

Vicinity Map and Dinner Suggestions

UCF Student Union (#1 on map)
Wackadoo’s (Sports Bar and Grill)

UCF Restaurants (#2 on map)
Gemini Blvd. + N. Orion Blvd.
- Balagan (Eastern Mediterranean Cuisine)
- Domino’s Pizza (Italian)
- HighFive Froyo (Frozen Yogurt)
- Jimmy John’s (Sandwiches)
- Kyoto Sushi and Grill (Chinese)
- Subway (Sandwiches)
- Tailgaters (Sports Bar and Grill)

University Shoppes (#3 on map)
Alafaya Tr. + University Blvd.
- Anmol Indian Cuisine (Indian)
- Bangkok Square (Thai, Sushi)
- El Cerro (Mexican)
- Fusian (Japanese, Sushi)
- Millie’s Jamaican Cafe (Jamaican)
- Underground Blues (Pub)

University Palms Shopping Center (#4 on map)
Alafaya Tr. + McCulloch Rd.
- Dragon Court (Chinese)
- Giovanni’s (Italian)