

UNIVERSITY CHAPTERS

University of Florida Chapter Mentors Undergraduate Students

"If I have seen further, it is by standing upon the shoulders of giants."

—Isaac Newton

In an academic field traditionally dominated by graduate students, the Materials Research Society's University of Florida (UF) Chapter strives to encourage and facilitate the involvement of undergraduate students in the ever-changing world of materials research. Led by both graduate and undergraduate officers, the Chapter has a primary goal of exposing undergraduate students to research as we help them obtain laboratory positions and demonstrating, on multiple levels, what it means to be a scientific "researcher."

The University of Florida, currently home to the largest PhD program in materials in the United States (based on the University Materials Council survey in 2003), is expecting to produce more than 10% of the country's total PhD graduates this year, approximately 42 students. However, the strength and involvement of the undergraduate population within materials research remains a primary directive. We feel that our University Chapter serves as a direct link between graduate and undergraduate materials students. Each year, our members help undergraduate students obtain positions as laboratory assistants as well as industrial internships and co-ops. We sponsor an annual kick-off ice cream social, introducing new and returning students to one another and faculty members. Here, we provide information on how students can get involved with different professional societies and be immersed within diverse areas of materials research. By supporting campus events such as the annual Engineering Fair, Engineering Day, and Engineering Week, our members interact with the academic engineering and research communities at large. Tours of Florida-based companies—such as Intersil Corporation, a semiconductor company based in Palm Bay—offer students the chance to assess which industries and employment positions are best suited for them. The development of annual projects, such as the organization of the departmental library or the implementation of a new student lounge, provides students with venues where they can emerge as task leaders and meet collective goals as a team.

Since the University Chapter's resurrection in spring 2001 after a few years of inactivity, almost two dozen of our under-

graduate members have attended and participated in MRS meetings. In order to cover travel expenses, we obtained funds from a variety of sources. Our members submit funding requests directly to the Benton Engineering Council, the executive and legislative coordinating body for the students in the College of Engineering, and the MS&E department at UF. We also utilize the travel reimbursements available through the MRS University Chapter Program, as well as hold various fundraising events. To generate funds for the 2004 MRS Spring Meeting in San Francisco, our members have designed a 2004 desk calendar titled "Microscopy Imaging." The calendars comprise images

from graduate students and faculty within the Materials Department, illustrating the diverse research efforts currently under way and the range of microscopy techniques available.

Each of our student representatives is encouraged to participate in MRS meeting activities. At the Student Mixer, our Chapter advisor and department chair, Kevin S. Jones, as well as the graduate attendees, introduce the undergraduates to graduate students from all over the country. The unique environment enables them to network and gain insight into what graduate school is really like at other institutions. Our students have learned which advisors to contact and



MRS University of Florida Chapter Meeting, February 2004.



Left: MRS University of Florida Chapter members at the 2001 MRS Spring Meeting in San Francisco.

Right: Students (left to right) Carrie Ross, Nina Burbure, Jeannette Jacques, Debra Lush, and Andrea Onstine meet David Turnbull at the 2003 MRS Fall Meeting in Boston.



were often invited to visit and tour other respective campuses. At the Fall Meeting last year in Boston, graduate students from Stanford University invited undergraduate Nina Burbure to contact them about their experiences at different institutions for their undergraduate and graduate studies, as well as to discuss advisors and research avenues and to visit Stanford and the surrounding areas.

Our members, women and men alike, always attend the annual Women in Materials Science and Engineering Breakfast. As academia and industry continue to evolve, we think it is important for students to acknowledge and understand the collective points of view of different minority groups. The forum enables attendees to interact with the speakers and offer their personal stories, opinions, and anecdotes. Millie Dresselhaus of the Massachusetts Institute of Technology (MIT) presented an eye-opening talk at the 2001 Spring Meeting regarding the emergence and evolution of women as tenured faculty members within the United States. As upcoming members of the academic community, many of our members gained a heightened awareness of the slowly fading glass ceiling encountered by women in faculty tenure and leadership positions. On the other hand, Lura Powell, director of Pacific Northwest National Laboratory (PNNL), gave a more focused talk on her personal story. We found it interesting to learn how

the seemingly smallest choices regarding our hobbies or personal lives may indeed impact our overall career paths.

At each meeting, a myriad of topics are covered by the session speakers and poster presenters. Our undergraduate members are able to learn first-hand how to prepare posters and presentations, gaining vital tips on how to discuss and feature their results. Equally as important, students with no prior research experience or exposure find themselves in an endless sea of information. Many of our members comment each year on how they were unaware of the true scope and depth of the field of materials research, gaining inspiration for their own foray into graduate school. By understanding the "big picture" of how materials influence and shape our everyday lives, our student representatives often renew their childlike fascination of and excitement for science.

Our representatives also gained invaluable information on preparing resumes, interviewing, and networking by assisting in the MRS Career Center for the past four Meetings. When Jacqueline Frazier worked at the Career Center in Spring 2002, she met corporate recruiters and learned how to polish her resume and accentuate her uncommon skill sets. By knowing what recruiters really look for within candidate resumes and during interviews, Jacqueline was able to secure

a position with the Army Core of Engineers in Savannah, Ga., upon receiving her BS degree. Our student attendees also meet industry representatives at various social events held during the MRS Meetings, paving the way toward internships and co-op opportunities.

From time to time, we also meet celebrities and pioneers within the field of materials research. At the Fall Meeting last year, our chapter advisor took us to the Harvard Party, where we met David Turnbull, famous for the Frank-Turnbull diffusion mechanism. Several of our members also attended Robert W. Cahn's book signing and purchased an autographed copy of *The Coming of Materials Science* (Pergamon/Elsevier, Oxford, 2001) for our department library.

During the University Chapters Luncheon, officers from across the country discuss their activities, successes, and challenges. Each year, our officers highlight our ongoing success with spawning undergraduate involvement throughout every level of our organization. Collectively, we feel that our ability to attract students and stimulate not only their sense of community, but their intrigue into the wide world of materials science, continues to be our greatest achievement.

JEANNETTE M. JACQUES

Chapter Vice President, 2004
Past Chapter President, 2001–2003



And don't miss the interactive Web site:
www.strangematterexhibit.com

Experience the interactive materials science exhibit:

May 29–September 6, 2004 at:
Virginia Air & Space Center, Hampton, VA

June 5–September 6, 2004 at:
Museum of Discovery and Science, Ft. Lauderdale, FL

October 2, 2004–January 3, 2005 at:
Museum of Science, Boston, MA

January 26–May 6, 2005 at:
Discovery Center of Idaho, Boise, ID

June 4–September 5, 2005 at:
Cranbrook Institute of Science, Bloomfield Hills, MI

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