

APS Forum on Graduate Student Affairs

FGSA Newsletter

The APS Forum on Graduate Student Affairs encourages a free exchange of ideas among graduate students and the greater scientific community by providing opportunities for meetings, electronic discussion, and access to a permanent archive of member ideas and programs. We are especially interested in expanding communication with the senior members of the APS, and indeed were created for that very purpose.

CONTENTS

CAM 2005 Report	1
Message from the Past Chair	2
Message from APS Director... VISA Issues.....	3
Current AIP Statistics Relevant to Graduate Students	5
A Ph.D. in any language	6
The Importance of Advocacy: The Role of the OPA	7
FGSA Officers.....	8

Physics Knows No Borders: The Second CanadianAmericanMexican (CAM) Physics Graduate Student Conference

Kyler Kuehn, CAM Organizing Committee Chair

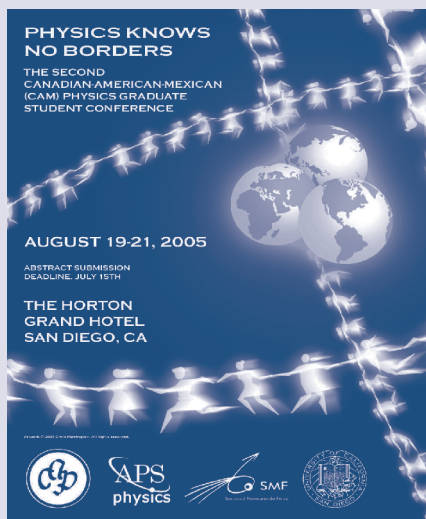
Coinciding with the World Year of Physics, the CAM Conference was the premier event of 2005 for the American Physical Society's Forum on Graduate Student Affairs. The Conference was held August 19-21 at the Horton Grand, an elegant Victorian hotel in the heart of San Diego, California. The hotel and conference center hosted approximately 100 graduate students from institutions throughout the US, Mexico, and Canada. Thanks in large part to a substantial grant from the U.S. National Science Foundation and the Canadian National Science and Engineering Research Council, travel grants were provided for every student who needed financial assistance to attend the Conference.

During the weekend of the Conference, each attendee was given the opportunity to showcase their research in either a poster or oral presentation. For many students, this was their first contribution to a scientific conference; for others, their presentation was a culmination of their entire graduate research career. In addition to the contributions of the student attendees, there were numerous plenary talks delivered by professors; each of these provided insight into part of the vast array of research being done by physicists throughout North America. One of the most

popular keynote speakers was UC President Robert Dynes, whose entertaining and informative presentation was entitled "My Life in Physics: A Long, Strange Trip (And It Ain't Over)". The snapshots he provided of his own career as a researcher, professor, and university administrator served as inspiring examples of what the future might hold for many of his audience members.

Perhaps equal in importance to the scientific content of the meeting were the plenary talks and subsequent panel discussions on ethics, education and careers. Several of our Distinguished Speakers participated in the panel discussions on each of these three topics. Of most interest to the graduate student audience were the presentations on the higher education systems of Canada and Mexico. Most U.S. participants at

the Conference were unaware of the ways in which these systems differed from the U.S. system. Likewise, the presentation from the careers session entitled "So You Want to be a Professor?" stimulated much interest among the aspiring professors in the audience that after the presentation, the speaker, Matt Anderson from San Diego State University, fielded many questions from those who were seeking to benefit from his firsthand experience of the academic job search process. The Conference



participants were also very engaged in the discussion of the ethical issues surrounding the practice of science, particularly with regard to the treatment of junior researchers by their supervisors.

Apart from the wide array of presentations, the Conference also featured many social activities. One of the highlights of the Conference for many people was the banquet served onboard a cruise around San Diego Harbor. Apart from the exquisite meal, the banquet also provided an unparalleled opportunity for the graduate students to interact informally with professors and leaders such as Distinguished Speaker Dr. Michael Turner the Assistant Director of Mathematical and Physical Sciences at the National Science Foundation.

While the weekend offered ample time for relaxation as well as for rigorous scientific debate and informative panel discussions, the most exciting aspect of the Conference was the opportunity for participants to interact with students and professors from other universities and other countries during the coffee breaks, the meals, or on their own each evening. The sense of collegiality that developed among the CAM2005 attendees was apparent as the weekend progressed. Small groups of students gathered together over meals to share their experiences of graduate school; professors met with students individually or in groups to discuss in even greater detail the issues raised in their presentations. By the close of the Conference on Sunday afternoon, many of the participants—whether they were early in their scientific career or seasoned veterans of their profession—had become familiar with one another, and their discussions reflected the mutual respect that they had developed for one another. Whether they were deep in debate about the significance of their research results or simply sharing in the experience of San Diego's nightlife, the participants were taking important steps in forging personal and professional networks that will serve them well as their careers progress.

The CAM Physics Graduate Student Conference will be held again in 2007. The location rotates among the participating countries, so the next Conference will be sponsored by the Canadian Association of Physicists, and will be held at one of the universities of our neighbors to the north. We hope to see you there! •

Message From the Past Chair

Lindley Winslow, FGSA Past Chair

Dear FGSA Members,

Last year was the World Year of Physics marking 100 years since the publication of Einstein's three most important papers. It also marked five years since the creation of the Forum on Graduate Student Affairs (FGSA) at the APS. Our objective "... is to enhance the Society's ability to meet the needs of physics graduate students, to offer them support services, and to provide them with an opportunity for increased inclusion and participation in the activities and decisionmaking of the physics community". With these goals in mind we organized the 2005 CanadianAmericanMexican graduate student conference with the Office of International Affairs at the APS.

The Office of International Affairs at APS works on issues as diverse as sustainable physics in developing nations to visas for international researchers. I encourage you to read on to learn about their efforts on the visa issues and perhaps learn more about their work on the APS website.

In this year's newsletter we are also highlighting the APS' Office of Public Affairs which works tirelessly to educate our representatives in Washington on the importance of fundamental science funding and educate physicists on how to do

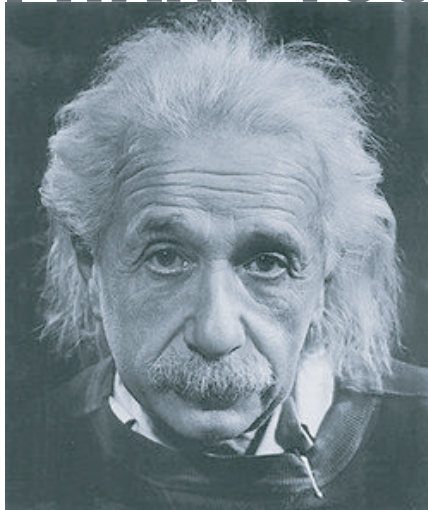
the same. The FGSA officers have had the wonderful opportunity to join the other APS officers in a day on Capitol Hill talking to the Representatives and their staff. I hope many of you took the opportunity to do this at the March meeting as well. I also hope many of you will read on and be inspired to write your representatives or even become a district advocate.

In an effort to support graduate students in their career, this year and last year we organized sessions on professional development at the spring APS meetings. In the coming months we plan to add to the collection of career development material on our website the profiles of several physicist who have left the academic track and their advice to the graduate students thinking of doing the same. We are also planning a study on the graduate admissions process to see what can be done to make the start of the graduate school experience a little smoother.

We are going to be busy so please keep your eyes open for developments on all these fronts and as always we are looking for people who have ideas and want to get involved. It's as simple as emailing the chair so please feel free to drop us a line.

Best Wishes,
Lindley •

I WANT YOU



FOR FGSA

photo by Philippe Halsman © Halsman Estate

Join the APS Forum on Graduate Student Affairs!

- ★ **The Forum depends on APS membership for its financial support.**
- ★ **Your membership makes a difference!**
- ★ **Support the Forum and its activities by becoming a member.**

Remember:

Your first two APS forums are FREE, and a third is just \$7.

Message from the APS Director of International Affairs...An Update on Visa Issues

Amy Flatten, APS Director of International Affairs

Greetings FGSA Members,

First, I'd like to thank the FGSA for giving me a chance to introduce myself to your members. It seems like just yesterday that I too was a grad student, struggling to coax my then "highspeed home computer," a zippy 386 MHz machine, to crunch data for my own dissertation. I appreciate that your challenges and responsibilities as a grad student require a "nose to the grindstone" work ethic, and I applaud your added efforts toward APS activities.

It is my pleasure to tell you a little about the APS Office of International Affairs and its involvement in an issue that has likely affected all of you, directly or indirectly, the challenges we have faced since 9/11 with U.S. visas. When I joined the staff of APS in February 2004, tackling the visa issue was one of the highest priorities of my office.

Almost all of you can recount horror stories of overseas students who could not attend meetings or begin university classes due to delays, or outright denials, of a visa application. These difficulties are usually attributed to the "Visa Mantis" review—a security clearance required for students who study any of roughly 200 scientific fields that are on the government's Technology Alert List, which is used to determine whether someone would have access to sensitive technologies. Unfortunately, since the 9/11 attacks, most fields of physics appear on the State Department's Technology Alert List, and most physicists' applications receive extra scrutiny and thus, substantial delays. Fortunately, there now appears to be some indication that the U.S. Departments of State and Homeland Security have made some progress in improving the visa process.

The May 2004 "Joint Statement"—Speaking with a Common Voice

Some of you may have read an article I wrote for the February 2005 issue of *Physics Today*, "US Visa Difficulties are Lessening, but More Must be Done" (<http://www.physicstoday.org/vol58/iss2/p49.html>). The article outlined how the APS joined more than 20 other science, higher education and engineering organizations in May 2004, to issue a Joint Statement urging the Federal government to adopt six practical recommendations for improving the current visa processing crisis. The statement received much attention, including front

page coverage by the *Financial Times*, and articles in the *Wall Street Journal*, *New York Times*, and *Science Magazine*.

Soon after the May 2004 Joint Statement, the State Department reported that streamlined procedures severely reduced the Visa Mantis processing time. As of September 2004, 98% of all Visas Mantis cases were cleared in less than 30 days, and since November 2004, the average time for a visa is less than 20 days (*The Physics Today* article provides additional data and graphs.). After reducing the processing time for mantis reviews, in February 2005 the State Department also announced extensions to the validity period of these clearances. As a result:

- 1 International students (F visas) can now receive a Visas Mantis clearance valid for up to the length of the approved academic program, to a maximum of four years.
- 2 Exchange visitors (J visas) can receive a Visas Mantis clearance valid for the duration of their approved activity to a maximum of two years.

This means that if a new visa application is filed to return to one's previous study or work program in the United States, another Visa Mantis clearance may not even be required.

The May 2005 "Progress Report"

While the signatories of that 2004 Joint Statement were pleased that the Federal government appeared to have responded to at least some of their collective concerns, one year after its release, APS again joined forces with over 40 leading academic, science and engineering associations to issue a "report card" on the progress made toward each of the statement's recommendations.

In May 2005, this "Progress Report" particularly emphasized the urgent need to dispel the "misperception that our country does not welcome international visitors, who contribute immensely to our nation's economy, national security, and higher education and scientific enterprises." While acknowledging the past improvements in the visa system, the 2005 Progress Report also recommended the following (described in more detail in *APS News*, July 2005):

- 1 Extend the validity of Visas Mantis security clearances for international scholars and scientists from the current two year limit to the duration of their academic appointment.
- 2 Allow international students, scholars, scientists, and engineers to renew their visas in the U.S.
- 3 Renegotiate visa reciprocity agreements with key sending countries to extend the duration of visas for citizens of each country and permit multiple entries on a single visa.
- 4 Amend inflexible requirements that lead to frequent student visa denials. (*i.e.*, *The Immigration and Nationality Act of 1952 should place greater emphasis on student visa applicants' academic intent and financial means to complete a course of study in the United States, instead of their ability to demonstrate evidence of a residence and employment in their home country and their intent to return home.*)
- 5 Develop a national strategy to promote academic and scientific exchange and to encourage international students, scholars, scientists, and engineers to pursue higher education and research opportunities in the U.S.

Recent Improvements

While not all of the recommendations of the 2005 Progress Report have been addressed, there is already some good news regarding #3 and #5 mentioned above. In June 2005, the U.S. State Department announced that it will issue Chinese citizen applicants multiple entry visas valid for 12 months. These include student visas (F1/F2), scholar visas (J1/J2) and vocational training visas (M1/M2). On a reciprocal basis, the Chinese Ministry of Foreign Affairs has similarly agreed to issue multiple entry visas valid for 12 months to American citizens visiting China for student, academic exchange, and vocational training.

Likewise, in October 2005, the United States Senate unanimously approved a bipartisan amendment authored by Senators Norm Coleman (R-MN) and Jeff Bingaman (D-NM) to the FY2006 Labor, Health and Human Services, and Education Appropriations bill to "help America gain lost ground in attracting the

continued on page 4

Message from the APS Director of International Affairs...

Continued from page 3

world's best and brightest students." The amendment requires the development of a strategic marketing plan to encourage international students to consider American schools through international ad campaigns and innovative web-based resources. Fortunately, some on Capitol Hill share our concerns that reversing the "perception" that America is unwelcoming to foreign students is as important as fixing the glitches in the visa process.

Much Work Remains

Granted, since the original Joint Statement, the waiting time for security clearances under the Visa Mantis program has been reduced from 75 to 14 days, and those clearances are now available to students for four years at a time, instead of one. Chinese and American students now can get multiple entry visas to study in the other country, instead of being able to enter only once. Nonetheless, the APS, through its International Office, must continue to push for additional reforms. For example, the aforementioned recommendation #4 of the 2005 Progress Report addresses one commonly used rationale for denying a postdoc or graduate student a visa—Section 214(b) of the Immigration and Nationality Act (INA). It states: "Every alien shall be presumed to be an immigrant until he establishes to the satisfaction of the consular officer, at the time of application for admission, that he is entitled to a nonimmigrant status..." This law places the burden of proof on the applicant to demonstrate that they have ties abroad that would compel them to leave the United States at the end of their temporary stay. Consular officers must decide the applicant's immigration intentions in a very short time—after a brief interview and review of whatever evidence of "strong ties back home" an applicant presents. Some examples of ties can be a job, a house, a family, a bank account. Unfortunately, proving these "ties" in nearly impossible for most graduate and postdoctoral students—they do not own a home, do not have substantial bank accounts, and may not have a spouse or children in the home country.

Representatives from the U.S. Department of State provided verbal statistics to many of the organizations who were signatories on the Joint Statement. These statistics gave the student visa denials from key countries based on 214b:

China

- 2001 – 40% denied
- 2003 – 46% denied
- 2004 – 23% denied (State Dept. reexamining this figure, as apparently this lower number even seemed unusual to them)

India

- 2000 – 33% denied
- 2003 – 43% denied
- 2004 – 40% denied

Again, these denials are reportedly NOT due to security reasons—these data have been "normalized" to eliminate those denials and according to State Dept., these numbers are a fair reflection of 214(b) denial rates.

It appears there has been some recent progress, however, regarding Chinese students. In May 2004, the U.S. Embassy and four consulates in China issued 1,518 student visas (F1) and 309 exchange visitor (J1) visas. In May 2005, however, those numbers had increased and 2,314 student visas and 617 exchange visitor visas were issued. Visas to Chinese students increased by approximately 50% from 2004 to 2005. While seemingly good news, this is still not an indication of the number of visa denials—especially those due to 214b rationale.

What You Can Do: Share these Tips!!

The APS will continue to push for visa improvements. In the meantime, sharing the information below (especially with international colleagues) may help visa applicants to avoid extra headaches. Below are some suggestions for two of the most frequently reported concerns:

Delayed Visa Processing

1 Despite any reported improvements, all visa applicants should try to apply at least 3 months ahead of time.

2 Most importantly, if an applicant has not received a response/decision within 30 days since the visa application, the applicant should visit the National Academy of Sciences (NAS) visa website http://www.nationalacademies.org/visas/Visa_Questionnaire.html. Here, one should fill out the "Visa Questionnaire" (5th link down in the list on the left hand side of the page.)

At first glance, the NAS questionnaire merely appears to gather information statistical purposes, but it is actually much more. Once the questionnaire is completed, NAS staff review the information each week to identify visa applications that are still pending 30 days past the initial application date. This is quite helpful, as once each

week every case that has been pending over 30 days is now reported by the NAS to the State Department.

[Transparency in the Process: Estimating the Processing Time](#)

The Department of State has recently begun posting wait times for visa appointments and processing for Consular offices around the world at: http://www.travel.state.gov/visa/tempvisitors_wait.php). Bear in mind that these reported wait times are only "averages" not "guarantees." The following suggestions may lessen the hardship of waiting for visa processing:

BEFORE leaving the United States, students planning to temporarily return to their home country should:

1 Visit this site to estimate: 1) the average wait times to schedule the interview, and 2) the average wait times to obtain the visa at the appropriate Consulate. Likewise, a link from this same page for "Embassy's Consular Section websites" enables students to review local procedures and find instructions on how to make an interview appointment.

2 If possible, students should schedule an interview at the appropriate consulate BEFORE ever departing the United States. Students should request that the interview occur as soon as possible upon their arrival in their home county.

3 If possible, arrange a "backup" for food and housing in the event of delayed visas. Students may also wish to arrange a way to continue communicating with U.S. academic advisors while stranded outside of the United States.

Conclusion

It appears that the U.S. Departments of State and Homeland Security are working with the scientific and higher educational societies toward some improvement in the transparency, efficiency, and predictability of the visa process. Nonetheless, it is only natural that many remain skeptical about the reported improvements—given the considerable number of students who have had bad experiences with visa applications, it will take some time period of better results before many have faith that the system is working well. The APS, through its the Office of International Affairs, will press on for continued reforms in visa processes and I encourage you to share the above hints and do your part to assure international scholars and students feel welcomed and valued in the United States. •

Review of Current AIP Statistics Relevant to Graduate Students

Amber L. Stuver, FGSA Member at Large

Graduate school can be a time of uncertainty for every student. Sometimes, while we are busily pursuing our scholarly endeavors in the ivory tower, we can lose touch with the “real world.” In order to take a look at who we are as graduate students and where we are headed, the following is a review of the most recent statistics release from the American Institute of Physics (AIP) Statistical Research Center. All of the information described below can be found on the web at: <http://www.aip.org/statistics/>.

Graduate Student Statistics

In 2002-2003, there were 5,652 new graduate students, of whom 79% were male, 51% were U.S. citizens and these students had a median age of 24 years. Most of these students expected to receive a Ph.D. (86%), while only 6% expected to receive terminal masters degrees. In 2001, there were an estimated 11,000 students enrolled in U.S. physics graduate programs, so this may be the beginning of an upward trend in enrollment from the recent minimum of about 10,750 students in 2000 and the recent maximum of slightly over 14,000 in 1993.

During 2000-2001, the greatest percentage of graduate students with 3 or more years of study in physics Ph.D. granting departments were studying condensed matter physics (24%), particles and fields (15%) and astronomy and astrophysics (10%). During this same time, most first-year [second-year] graduate students were supported on teaching assistantships 50% [60%] while only 15% [30%] were supported on research assistantships and 10% [20%] on fellowships. As years in graduate study increase, so does the percentage of students supported by research assistantships. Looking at the source of support for students, more foreign students receive teaching assistantships (42% of foreign students compared to 27% of U.S. students), while U.S. citizen students are more likely to be supported on fellowships (19% of U.S. students compared to 7% of foreign students) and both are equally likely to be supported through a research assistantship

(49% of U.S. students and 48% of foreign students).

Also during this time period, very few physics Ph.D.'s were earned in 4 or fewer years (7%). Most students earned their Ph.D. by the end of their sixth year of study, while 18% took 8 years or more.

Recent Physics Ph.D. Employment Statistics

Between 2001 and 2002, the percentage of physics Ph.D.'s initially obtaining potentially permanent positions dropped from about 47% to 32% and the percentage in postdoctoral positions rose from about 47% to 61%. Other temporary positions have remained steady at about 7%.

During this same time, the initial employment of physics Ph.D.'s was about 47% in academia, 20% in government positions, 27% in the private sector and the rest in other temporary positions. Most of those Ph.D.'s who found potentially permanent positions found them in the private sector, while most postdocs and other temporary positions were found in academia.

In 2002-2003, physics Ph.D.'s that found potentially permanent positions found the greatest pay in federally funded research and development centers like the Los Alamos National Lab and in industry, earning between \$75,000–\$95,000 and \$68,000–\$90,000 respectively. Potentially permanent university and college positions earned substantially less at between \$45,000–\$55,000 and \$41,000–\$46,000 respectively. Postdocs found the greatest salaries in government positions (earning between \$48,000–\$61,000) while earning less in the university setting (\$35,000–\$42,000).

Statistics on Women and Minorities in Physics

While there has been an overall increase in the percentage of women and minorities earning physics degrees at every level, there is still a persistent gap in the percent-

age of women earning Ph.D.'s. The earliest AIP statistics are from 1978 when between 9%–11% of physics baccalaureate and master degrees were conferred to women, compared to only about 6%–7% of physics Ph.D.'s. In 2003, about 22% of baccalaureate and master degrees were awarded to women and only about 18% of physics Ph.D.'s. This does represent a steep increase in the percentage from 2000 where 12% of Ph.D.'s were awarded to women. This drop in the percentage of women from undergraduate to graduate degrees is not the only percentage drop. In 2001-2002, slightly more than 45% of high school physics students were women, about 20% of physics baccalaureate degrees went to women, about 15% of Ph.D.'s and about 15%, 10% and 5% of assistant, associate and full professorships, respectively, were held by women.

For the class of 2003, the majority of physics degrees granted to U.S. citizens were conferred to white students (87% at the baccalaureate level, 83% at the terminal master level and 88% at the Ph.D. level). The percentage of African-American degree recipients drops from 4% at the baccalaureate and terminal master level to 2% at the Ph.D. level, while the percentage of Asian-American degree earners increases at every degree level (4% at the baccalaureate level, 5% at the terminal master level and 6% at the Ph.D. level). Hispanic-American degree earners are among the most under-represented ethnicities at 3% at the baccalaureate level, 4% at the terminal master level and 2% at the Ph.D. level.

To give these figures a reference frame, the U.S. Census Bureau estimates (based on the 2000 census data), that there are 96.3 males for every 100 females in the U.S. and 75.1% of the total U.S. population is white, 12.3% African American, 3.6% Asian American and 12.5% Hispanic American. •

A Ph.D. in Any Language

by Ben Brown, Member at Large

So what does it take to be called “Doctor” the world over? Is a D.Phil. the same as a Ph.D.? Do students in China receive government support for a terminal degree in physics? How is the traditional path to professorship in Germany being challenged?

These questions (and many others) are addressed in an extended effort by FGSA to uncover the often overlooked contrasts among graduate education systems between the U.S. and other countries.

To honor the World Year of Physics in 2005, FGSA embarked on a yearlong project to learn more about physics graduate study in countries around the world. Young scientists in a number of countries gave generously of their time to prepare short articles summarizing their path to a Ph.D. (or equivalent degree), as well as describing some of the notable physics research currently undertaken in their native country. These country profiles can be read in their entirety on the FGSA website at [<http://www.aps.org/units/fgsa/worldyearprofiles.cfm>].

Physics is an inherently international endeavor. Historically, the diversity of physics research programs in the U.S. has attracted students and researchers from numerous countries. When I first joined my doctoral research group at the University of Rochester, I was one of only two Americans in a group that included citizens from Argentina, Brazil, France, Mexico, the United Kingdom, and Poland. Yet aside from lunchtime conversations, we students were relatively ignorant regarding the variety of graduate research experiences in countries outside our own.

Across Europe, there is significant variety in the path to the Ph.D. In Germany, students seeking a doctorate first must complete a Diploma Thesis—essentially a research thesis masters degree. In the U.K. and France, a Ph.D. (D.Phil. in the U.K.) is nominally three years in length—extremely short compared to the six to seven-year average length of a Ph.D. obtained in the U.S. This difference is in part a result of

the broadly differing philosophies of the American and European undergraduate and school age educational systems. The European system tends to emphasize academic specialization at an earlier age, while the American system stresses exposure to a wide variety of subjects. For example, British undergraduates typically take courses exclusively in their major subject, permitting a reduced emphasis on formal coursework at the graduate level as compared to the American system.

In the rising technical powers of India and China, governments are rapidly increasing the resources devoted to science and engineering, with clear benefits to students. In the span of two decades, literally hundreds of new physics and engineering doctoral programs have blossomed, producing graduates eager to contribute to their country’s increasingly vital role in international research and development efforts. Recent publications such as Thomas Friedman’s *The World Is Flat* have stressed the rising influence of India and China as budding technological powers. Clearly the number of opportunities for physics graduate study in these countries is in the ascendance.

Around the world, the influence of the close cultural and governmental ties persisting after colonialism are manifest in the similarities of various graduate courses to the British and French systems. Canada and South Africa, for instance, allow entry to a Ph.D. course (nominally three years in length) only after completion of an M.Sc. or equivalent degree—essentially the same academic path required in the U.K. Both of these countries have witnessed impressive recent growth in research opportunities for physics students.

The World Year of Physics has come to a close. However, FGSA has an abiding interest in promoting appreciation for the diversity of experiences of physics graduate students. If you notice that your home country is absent from the collection of country profiles thus far, and would like to write a profile for inclusion on the project homep-

age, please contact the FGSA Secretary. Those interested in addressing the needs of international students and organizing the exchange of ideas between FGSA and international student organizations are encouraged to become involved in the FGSA International Affairs Committee; contact the FGSA International Affairs Officer for more information. •

Did you know FGSA sponsor’s sessions at March and April Meetings?

March 2006

-What Has Actually Changed in Physics Departments in the Situation for Women, Graduate Students and Other People? with the Forum of Physics in Society, Forum on Education and Committee on the Status of Women in Physics.

- Paths from Academics to Employment, with the Forum for Industrial and Applied Physics.

April 2006

- The Postdoctoral Experience

Look for our Sessions at March 2007 in Denver, CO and April 2007 in Jacksonville, FL and join us for the Student Reception!

APS
American Physical Society

2006 April Meeting
www.aps.org/meet/APR06

2006 April Meeting
in conjunction with
Sherwood Fusion
Theory Conference
April 22-25, 2006
Dallas, Texas

Particle Physics
Beams Physics
Nuclear Physics
Astrophysics
Plasma Physics
Gravitation
Accelerator Physics
Computational Physics
Hadronic Physics
Free Body Systems
Precision Measurements
Physics Education
History of Physics and Society
International Physics

The program will include plenary and invited sessions, oral and poster presentations and exhibits.
Abstract Deadline
January 13, 2006

The Importance of Advocacy at the Graduate Level: The Role of OPA in Your Grassroots Efforts

Kimberly Regan, Office of Public Affairs

With the need to balance classes, teaching assignments, literature review and a rigorous research program as a graduate student, there seems little room for anything else. However, advocacy should be a significant aspect of your Ph.D. experience because science policy and the proceedings of Washington can have a substantial impact on your experience as a graduate student, as well as your future as a scientist.

You might be asking yourself, “How do policy issues and the budget affect me?”. Unless you have had the experience of writing a grant, or the misfortune of an advisor losing one, these issues may seem unrelated to graduate student life. However, the proceedings of Washington, DC have a dramatic impact on federal research budgets, which in turn, impact you. Recent trends show a flattening of the federal research budget (or in some cases, a disheartening decline), which is quite different than the fruitful budget climate that physicists enjoyed forty years ago in the Sputnik Era. Currently, the competition for grant money has become much greater, while at the same time, our nation’s leadership in science and innovation is being challenged by countries abroad.

How do these issues manifest at the graduate level? The number of available research fellowships, like those offered through NSF, decreases. Because of limited funding through your advisor, you may be forced to take on a teaching assignment to pay for graduate support or pursue a field that does not match your interests. Outside the walls of your lab, facilities that you utilize depend on federal funding. The Department of Energy’s Office of Science is the largest federal supporter of the physical sciences and provides funding to all of the national labs. As the budgets decrease, so does the availability of valuable beam time at the light sources and colliders around the country that so many students rely on for their Ph.D. thesis work. In addition, these issues extend far beyond graduate school. Grant shortages created by potential federal budgetary constraints increase competition for postdoctoral research positions and assistant professors face a growing challenge as they strive for tenure. Although this picture of the budget climate seems grim, there is

an answer to this growing problem—ADVOCACY. Voicing your concern that science research funding becomes a national priority can have a dramatic impact, and your voice leads to action. There are countless examples where, by directly contacting their Congresspersons, physicists have been able to influence their Congressperson to sign onto a letter of support for science research funding. These letters of support can be quite persuasive when Congress is determining the federal research budgets: the more signatures supporting science funding, the more favorable the budgets!

There are many ways that you can get involved in advocating for science and science research funding. The easiest way your career as an advocate can begin is with just the simple click of a mouse. Throughout the year, the Office of Public Affairs (OPA) issues “Alerts” to APS members alerting them of critical policy issues that have arisen in Washington and urging them to write their Senators and Representatives concerning this issue. OPA provides the template letters so that writing to your Congressperson can be as simple as clicking on the link and filling out your name and address. Similarly, OPA conducts large letter writing campaigns, known as “Contact Congress” at both the March and April APS meetings, to ensure that the voices our membership resonate on the Hill.

An effective advocacy effort must involve other methods in addition to letter writing to create a sustained voice for science on Capitol Hill. Visiting the office of your Congressman remains one of the best means of influencing a Member of Congress. In addition, it establishes rapport with the staffers in his or her office and helps to educate the Congressional offices on the importance of key science policy and funding issues. With APS Units Convocation, the 2006 APS March Meeting and Congressional visit days held by other organizations, there are a wealth of opportunities throughout the year to come to Washington, DC to meet with your Senators and Representatives. This opportunity also exists in your hometown, and OPA encourages those interested in advocacy to arrange for a meeting with their Representative in their District office, since the chance of meeting with the Member themselves is much greater in their District office.

Maintaining a relationship with your Member of Congress assures that your visit to their office is not forgotten. You can be a valuable asset to their office, whether for scientific expertise or for your unique perspective on the future of science and innovation. You can even offer a tour of your department’s facilities. Remain in regular contact with the Member’s office, via phone or email with the staffer you have met. OPA can inform you of key issues that require action to help focus your communications with the Member’s offices.

What else can OPA do to make your advocacy efforts easier? Whether you are visiting an office in Washington, DC or in your home state, OPA can provide an outline of a common message, offer advice on how to conduct an effective meeting, and cover the logistics of a congressional visit. We can also provide materials to be left with each office that will present useful talking points and have statespecific information regarding federal research funding and education. Many of these materials can be easily downloaded from our website (www.aps.org/public_affairs), under “advocacy tools” or obtained by contacting OPA at opa@aps.org.

Surely, federal funding is not the only issue in Washington that affects graduate student scientists. There are many others, such as visa policy, education standards, intellectual property laws, and student loan policy to name a few. Getting involved in advocacy offers a firsthand look at the importance of informing your elected officials about what physicists like yourselves do. If your Senators and Representatives do not hear it from you, they will not hear it from anyone!! •

FGSA Executive Officers

Chair:

Minesh Bacrania
Box 354290 NPL
Univ of Washington
Seattle, WA 98195
minesh@mailaps.org

Chair Elect:

Gavi Begtrup
University of California,
Berkeley
Department of Physics
366 LeConte Hall MC 7300
Berkeley, CA 947207300
gbegtrup@berkeley.edu

Past Chair:

Lindley Winslow
Lawrence Berkeley National
Laboratory
Bldg 50R5008
1 Cyclotron Road
Berkeley, CA 947208158
lawinslow@lbl.gov

Secretary:

Ariel Michelman Ribeiro
(Boston University)
National Institutes of Health
9 Memorial Dr.
Bldg. 9, Rm. 1E122
Bethesda, MD 208920924
michelma@mail.nih.gov

Treasurer:

Hugo Valle
Vanderbilt University
Department of Physics and
Astronomy
Box1807 Station B
Nashville, TN 37235
Hugo.e.valle@vanderbilt.edu

International Affairs Officer:

Kyler Kuehn
University of California, Irvine
Department of Physics and Astronomy
Frederick Reines Hall 3155A
Irvine, CA 926974575
kkuehn@uci.edu

Members at large

Meghan Anzels
Northwestern University
Department of Physics and Astronomy
Tech F219, Evanston Campus
2145 Sheridan Road
Evanston, IL 602083122
Meghan@northwestern.edu

Daniel Bodony
Ctr Turbulence Research
488 Escondido Mall
Stanford, CA 94305
bodony@stanford.edu

Hana Dobrovolny
Duke University
Box 90305
Physics Building, Science Drive
Durham, NC 27708
hdobrovo@phy.duke.edu

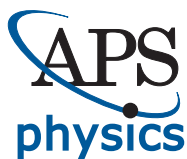
Amber L Stuver
104 Davey Lab Box 175
Pennsylvania State Univ
University Park, PA 16802
stuver@gravity.psu.edu

Interim Webmaster:

Ben Brown
National Institute of Standards and
Technology
100 Bureau Drive, Stop 8424
Gaithersburg, MD 208998424
ben.brown@nist.gov

Newsletter Editor:

Jodi Cooley
Stanford University
Varian Physics Laboratory
382 via Pueblo Mall
Stanford, CA 943054060
cooley@stanford.edu



AMERICAN PHYSICAL SOCIETY
Forum on Graduate Student Affairs
One Physics Ellipse
College Park, MD 207403844