

# FORUM ON GRADUATE STUDENT AFFAIRS

AMERICAN PHYSICAL SOCIETY

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.

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The articles in this issue represent the views of the Forum on Graduate Student Affairs (FGSA) and are not necessarily those of individual FGSA members or the APS.

# NEWSLETTER

## AUGUST 2014



## Greetings from the Editor

Maria Longobardi

Dear All,

It's summer time! But the FGSA Newsletter is not in vacation!

In this number Mikele Irwin will introduce you the Omid Kokabee's case; Laura Boon will tell you about an exciting morning spent with Neil DeGrasse Tyson.

You will find an update on our FGSA Travel Grant and the names of the awarded students.

We will be also pleased to introduce you some of the FGSA Executive Committee.

What else?

Yes sure, have a very nice summer!

Finally, I hope everyone is planning to attend the 2014 APS Annual March and April meetings. While there, make sure you check out FGSA sponsored sessions! More information on these activities will be included in a special newsletter edition, which will be printed and distributed during these conferences. Also, remain informed on what's happening with updates on our Facebook page.

On behalf of the FGSA executive committee I wish you all a happy and prosperous 2014.

Thank you and kind regards.

See you on December 2014!

Maria Longobardi

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# How Seemingly Small Efforts Can Contribute to a Larger Human Rights Cause



Michele Irwin

“Do you really think that some signature from a person in the United States is going to help free someone from a prison in Iran?” This was a question that I was asked at the 2014 APS April Meeting in Savannah while trying to collect signatures for a petition to release APS member Omid Kokabee, a physics graduate student and prisoner of conscience, from prison in Iran. I was frank, “Probably not.” I explained, however, why that was beside the point.

Earlier this year, at the request of the APS’s Committee on International Freedom of Scientists (CIFS), APS co-sponsored a petition with Amnesty International, the Committee of Concerned Scientists, and United for Iran, calling on Iranian authorities to unconditionally release Kokabee from Evin prison. In 2011, Kokabee was arrested in Iran while trying to return to the University of Texas at Austin where he was pursuing graduate studies in physics. He was convicted and sentenced in 2012 to ten years for “communicating with a hostile government” (i.e., the U.S.) and “receiving illegitimate funds.” The truth was that Kokabee had refused to engage in military research for Iran. And for this he was being punished severely. In response to this tragedy, the scientific and human rights communities have been working for several years to bring attention to Kokabee’s case and to hasten his release from prison. One such endeavor was the petition, an idea and undertaking of a former colleague of Kokabee’s. seek

Going back to the discussion at the April Meeting, I acknowledged the questioner’s apprehension about what a single signature or even one petition drive could achieve. But I noted how this effort was one tool of many that are used to advocate on behalf of someone whose rights have been violated. It is rarely, if ever, one action, one person, or one event that will result in a prisoner’s release. On the contrary, an ongoing campaign of letters, op-eds, interviews, phone calls, and speeches is undertaken. Each signature or letter helps build a system that demonstrates support and brings awareness. It is the collective efforts of various people using different strategies that is most effective and that ultimately leads to the end of that persecution.

The need for these collective actions is one reason why collaborative efforts within the scientific community are so valuable and important. Organizations like the AAAS Science and Human Rights

Coalition facilitate such opportunities. The Coalition (<http://www.aaas.org/program/science-human-rights-coalition>) is a group of U.S. scientific and engineering organizations that believe science plays an important role in the realization of human rights. The Coalition fosters communication and knowledge about human rights among scientific organizations and scientists, as well as between the scientific and human rights communities. This is done, in part, through promoting knowledge of the right to the “benefits of scientific progress and its applications,” Article 15 of the International Covenant on Economic, Social and Cultural Rights (<http://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx>).

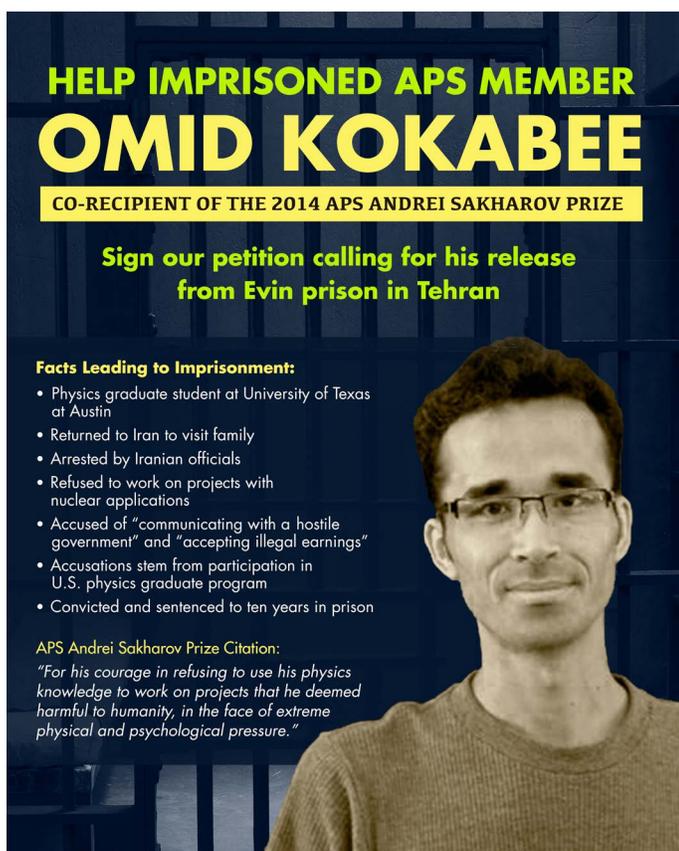
The Coalition’s programs are carried out by working groups that focus on several themes including the protection of scientists’ rights. The Welfare of Scientists Working Group aims to improve the effectiveness of professional societies in their defense of scientists and to bring awareness to the need for societies to respond to human rights violations of scientists. It is through connections in this working group, and the Coalition more generally, that has helped pool the efforts of societies and human rights groups on behalf of scientists like Omid Kokabee.

The Coalition’s efforts have been supported by CIFS as well as the APS Forum on Graduate Student Affairs. In 2013, members of the Coalition (including APS) were invited to appoint a graduate student to represent their organization in the Coalition. The goal was to raise awareness of and increase participation in the Coalition by students and young professionals within the various scientific associations. Vikram Singh Prasher, who was a member of the FGSA Executive Committee at the time, served as the APS Graduate Student Representative over the past year. While representing APS, he undertook a project to both inform members of APS about the Coalition as well as learn about those members’ concerns with respect to human rights. In a survey he conducted of some student and early career members of FGSA and the Forum on International Physics, we learned that many of these members are active in and/or concerned about human rights issues. However, most were not aware of APS’s human rights efforts, the Science and Human Rights Coalition, or the fact that an APS member and fellow graduate student was in prison. Prasher’s survey brought attention to these issues as well as the human

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## Contributing to Human Rights

FROM PAGE 2



**HELP IMPRISONED APS MEMBER**  
**OMID KOKABEE**  
**CO-RECIPIENT OF THE 2014 APS ANDREI SAKHAROV PRIZE**

**Sign our petition calling for his release from Evin prison in Tehran**

**Facts Leading to Imprisonment:**

- Physics graduate student at University of Texas at Austin
- Returned to Iran to visit family
- Arrested by Iranian officials
- Refused to work on projects with nuclear applications
- Accused of "communicating with a hostile government" and "accepting illegal earnings"
- Accusations stem from participation in U.S. physics graduate program
- Convicted and sentenced to ten years in prison

**APS Andrei Sakharov Prize Citation:**  
*"For his courage in refusing to use his physics knowledge to work on projects that he deemed harmful to humanity, in the face of extreme physical and psychological pressure."*



*These photos are from April Meeting 2014.*

rights issues of concern to these members. Given the responses to the survey, Prasher is considering follow-up activities to further educate APS members about the connection between science and human rights. (I encourage FGSA members to read more about Prasher's experience in an article that appears in the July 2014 issue of APS News.)

In bringing together the scientific community around the topic of human rights—whether it be through FGSA or the Coalition—we can have more impact than we do alone. We learn new strategies. We learn from others' mistakes. We learn about issues and problems of which we were unaware and recognize that we may have something valuable to bring to that cause. When a fellow scientist is persecuted, we all lose and science loses, too. The scientist is taken from his or her research, and science suffers from the loss of their contributions. Many physicists pursue a life of science because they delight in the quest for truth and discovery and relish in learning and educating others about our universe. That same attitude can be applied to ensuring that science is used to benefit society and that the rights of scientists are not infringed.

Consider that petition for Omid Kokabee again: While adding a signature to a piece of paper may seem insignificant, the effort means many things. It is not solely for demanding that someone's rights be reinstated by some state actor. It is also used to inform people about their colleague's plight. It is a way to demonstrate to a prisoner and his family that people are concerned and aware of their situation. It also draws attention to the oppressor's actions. The oppressor realizes that people are monitoring their behavior and are motivated to take action. During my time working at APS, I have heard stories of how letters on a prisoner's behalf have resulted in better living conditions such as receiving a pillow from a guard for their cell bunk. While not equivalent to the ultimate goal of the prisoner's release, it is important nonetheless. And when that pillow is given to a prisoner, it becomes clear that someone in a position of power is paying attention to the efforts to help the prisoner. Hence, those efforts can have influence. All of us can play a role—even small ones—and collectively send a more powerful message.

Thus, I encourage FGSA members to learn more about the AAAS Science and Human Rights Coalition and APS's other human rights activities and consider how they might become involved. Each of us can and should support the rights of fellow scientists as well as our right to benefit from science.

*Michele Irwin is the International Programs Administrator at the American Physical Society where she works with the APS Committee on International Freedom of Scientists. She also represents APS in the AAAS Science and Human Rights Coalition. She is active in the Coalition's Working Group on the Welfare of Scientists and serves on the Coalition steering committee.*

# The morning I got to hang out with Neil DeGrasse Tyson, and why you should join the FGSA Executive Committee



Laura Boon

The 2014 APS April Meeting featured Neil as a plenary speaker, creating an opportunity, which FGSA and the Office of Public Affairs took, to organize a Q&A lunch for students with the famous astrophysicist.

As the lunch was held on the opposite side of the river from the conference center Jodi Leiberman and I were given a chance to volunteer to be Neil's 'handlers' to get him where he needed to be. This ended up being an experience in itself. Everyone around us wanted to shake his hand, or get an autograph and picture, but we needed to keep moving to catch a ferry to make it to the hotel in time for lunch. Once we arrived at the hotel, we used the time between the plenary talk and lunch to find a quiet café, grab a hot chocolate, and talk. While we didn't have enough time to cover everything I wanted to ask him, we did debate the best age to learn a new language, and I was able to explain to him my research. I will say getting to explain the scientific and technological benefits of synchrotron light sources to Neil DeGrasse Tyson is an experience I won't soon forget. The time went by quickly, so it wasn't long before we headed to lunch. I then introduced Neil DeGrasse Tyson to the students attending the lunch, and started the Q&A. If you have a chance to attend a seminar or Q&A with Neil, I highly recommend taking that opportunity. Neil is animated and excited about science, but more importantly he has great advice for anyone wanting to be more involved in communicating science with the public. He cautioned us about 'dumbing down' science when talking to the public, and instead encouraged us to use simpler, yet accurate terminology. Although I tried to end the Q&A at the scheduled time, Neil insisted on taking one more question, then one more after that. Eventually I had to put my foot down, thank Neil for his time and get him to the airport for his flight home.

So, how was I chosen to spend a morning with Neil DeGrasse Tyson? As Past-Chair of FGSA, I, along with other members of the executive committee, represent graduate students at APS sponsored meetings.

All the members of the FGS Executive committee have specific responsibilities, from running committee meetings; to managing our social media presence; to organizing our travel grant program. As part of my position, I helped organize the FGSA sponsored sessions at the March and April Meetings, and am involved in other events, such as this lunch with Neil DeGrasse. This year, for the first time ever, FGSA un-officially organized a social event for students at the April Meeting. The event was a success! As a result, we are planning to continue organizing them at future meetings.

Though important, the committee doesn't just plan events for the March and April Meetings; we are part of the international organizing committee of the Canadian-American-Mexican Graduate Student Conference. Our members serve as liaisons to other units in APS and act as the voice for you, our fellow graduate students.

I initially ran for a position with FGSA to stay connected with other graduate students across the United States since my PhD research is at Argonne National Laboratory, where there are few graduate students. But over the last two and a half years, I've gotten so much more out of this experience. I have worked with many of the APS staff members and made great connections, in and out of my field, I will keep throughout my physics career.

Serving on the Executive Committee of FGSA has been a treat, and getting to spend a few hours with Neil DeGrasse Tyson has been a bonus! I encourage everyone to consider running for a position when we ask for nominations this coming October. We need people who are interested in the concerns of graduate students to be a part of our team.

*Laura Boon is currently Past-Chair of the FGSA, and a PhD student at Purdue University. She works at Argonne National Laboratory on accelerator physics.*

# Meet the FGSA Executive Committee

In this section we are pleased to introduce you some FGSA Executive Members and present their role in the FGSA unit. We asked them to reply to the following questions:

- 1 Introduce yourself! (i.e. name, school, position, field of study, interesting facts about you, etc.)
- 2 What is your position on the FGSA executive committee, and what are the general responsibilities of this position?
- 3 What's your favorite part of being involved in FGSA? Would you recommend it to others?
- 4 I know it's hard to choose, but other than FGSA, do you have a favorite APS unit?

We are always looking for motivated students willing to serve the FGSA unit. Some of you want to join us? In the next months it will be election time! Stay tuned on our FGSA webpage!

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## BROCK RUSSELL

- 1 My name is Brock Russell, and I am the chair of FGSA. I am a doctoral candidate at the University of Maryland College Park, where I study X-ray astrophysics. In particular, I study supernovae and clusters of galaxies. I also teach an introductory physics class at Gettysburg College.
- 2 I am the chair-elect of FGSA. My main responsibility is to organize the FGSA sessions at the March and April meetings. This involves chairing a committee that determines what the focus of the sessions should be and determines who should be invited to talk at the sessions.
- 3 Getting to know other graduate student physicists in fields different from my own from around the country (and world) is great. I definitely would recommend it to others.
- 4 I don't really have another favorite unit... there are many units that do great work.

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## LAURA BOON

- 1 My name is Laura Boon, I am a fifth year graduate student at Purdue University. Although I am a student at Purdue University my research has me working in the Chicago suburbs at Argonne National Laboratory. My research is in accelerator physics, specifically I am studying electron beam induced heating on a superconducting undulator at the Advanced Photon Source.

Before graduate school I was a competitive swing dancer, although I no longer compete I still enjoy dancing in my free time.

- 2 I am currently the Past-Chair of FGSA. As Chair my main responsibility was to keep the forum running by planning and leading our executive committee meetings. In addition to that I represented FGSA at various meetings and events, and am one of the contacts between FGSA and other APS units. It's a great exercise in delegation and I work closely with all the executive committee members that are a part of FGSA.
- 3 My favorite part of being Chair are all the people I've gotten to work with. APS is full of great staff members who truly care about graduate students and have done everything they can to help us plan and execute our events. They also have had great advice, not just for the forum, but for me in my career as well. And the FGSA executive committee members have great ideas and dedication to making FGSA a productive and vocal forum. I would recommend becoming a part of FGSA to other graduate students. I know that the people I've met and worked with will be great resources and contacts as I continue in my physics career.
- 4 I would have to say the Forum on Education (FEd). I believe getting a strong physics education from an early age is useful for any career someone wants to go into. I was told once that physics classes teach you how to think and solve problems, the rest is just jargon.

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## MARIA LONGOBARDI

- 1 My name is Maria Longobardi (but my family and my friends call me "Marilena"). I'm currently working at the University of Geneva in Switzerland in the Department of Condensed Matter Physics as post-doc. My studies are focused on the electronic properties of 1D systems at the atomic scale. During my PhD, I investigated the local electronic and magnetic properties of superconductor, manganites and colloidal nanocrystals by means of Scanning Tunneling Microscopy and Spectroscopy (STM/STS) and Magnetic Force Microscopy (MFM), working in interdisciplinary teams of physicists and chemists. I'm member of the American Physical Society (APS), of the European Physical Society (EPS) and Italian Physical Society (SIF).
- 2 I'm serving the FGSA as International Student Affairs Officer since the beginning of 2013. and the Forum on International Physics (FIP) since the 2014 as Member at Large. I'm currently also the FGSA Newsletters Editor. The International Student

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## Meet the Executive Committee

FROM PAGE 5

Affairs Officer is the principal point of contact between the FGSA and similar organizations in countries outside the United States and act as a student advocate for international student issues to the APS.

- 3 FGSA gave me the possibility to be part of a very strong and active community of graduate students in the APS. I think that the FGSA has an outstanding potential to impact the future of the graduate students both in U.S and internationally. It helps the community by connecting the students to career resources, mentoring, and giving them networking opportunities.

I consider the FGSA not only as a resource for APS graduate students community, but also a place where students can meet, discuss, share their ideas, as rich soil where they can strengthen all of their experiences.

- 4 As international member of the APS, I'm very interested in the activities of the Forum on International Physics (FIP). The APS is a big community of physicists with high international profile and the FIP offers an unique opportunity of scientific and cultural interexchange for both the U.S. and non U.S. members. International cooperation needs to be encouraged at all levels; In particular, for graduate students the exchange opportunities offered from FIP play a key role for their scientific and human growth.

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### ALEXIS KNAUB

- 1 I'm Alexis Knaub, a doctoral student in the School of Education at Boston University. My dissertation research is on physics graduate students and the social works they form. I work on various other projects at BU, as well as mentoring undergrads through the Gates Millennium Scholars program. Prior to switching to education, I earned my bachelor's in physics (with a theater minor) from Smith College in Western Massachusetts and my MS in physics from DePaul University of Chicago.
- 2 My title is "Member-At-Large" which I sort of mold what I do to my interests. I provide feedback whenever APS looks for folks to do so, which so far has been the direction of APS. I currently am a part of the travel grant committee and serve as the graduate liaison to the Committee on the Status of Women in Physics (CSWP). For the travel grant committee, I confirm that applications are complete, participate in the selection process, and send notifications to all who have submitted applications. For CSWP, I am going out to Denver very soon and will be able to tell you more!

- 3 I have two favorite things about being involved in FGSA. The first is that I like working with others who are equally passionate and committed to a purpose. I personally find that invigorating and inspiring. Secondly, I have learned A LOT about APS/physics as field and have been able to pass along information to physics grad students I know. I absolutely would recommend participating in FGSA or any physics group, because not only do I believe in giving back, but I also believe it is beneficial to learn about the field in as a work environment.

- 4 I really like CSWP, which is why I'm very excited to be grad liaison for that. I also like the work that the Committee on Minorities (COM) does. Both happen to be areas I'm interested in, research-wise. Although not APS, the research that the AIP Statistical Center produces is always interesting to read to see trends in the field.

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### KATIE DAVIES

- 1 My name is Katie Davis I am currently a fifth year graduate student at Purdue University (hoping to finish up this spring). My research focuses on x-ray absorption and emission spectroscopy of natural and artificial photosynthetic systems. In particular, I investigate the catalytic cycle of photosystem II, the metalloprotein complex that splits water with high efficiency during photosynthesis. I am a dual US/UK citizen and my hometown is Louisville, KY.

- 2 My position on the FGSA executive committee is that of secretary. I take minute at every meeting and post them online so members of the committee can easily recall what occurred and what was decided during each meeting. My position allows me to volunteer for other sub-committees within the FGSA to plan events as well.

- 3 I think one of my favorite things about being involved in FGSA is hearing about the different programs APS has to offer in terms of outreach and informing the public. In addition, I enjoy interacting with other graduate students and postdocs from different schools, cities and countries that I ordinarily would never meet. I would recommend being involved in FGSA for anyone who is interested in the big picture and likes making new friends.

- 4 I think if I had to pick, I would say the Forum on Industrial and Applied Physics (FIAP). I'm really looking forward to the future interactions between our two forums. So many physicists end up in the industrial sector and yet it is rarely talked about in graduate school. It's great that the FGSA has such a resource, and I look forward to working together with FIAP as much as possible.

# Proud to be excellent!

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**T**he large community of around 20,000 post-docs and students represents the backbone and the future of APS. APS has developed many activities to help their younger members integrate into the physics community and share their different experiences, such as the CAM conferences, travel grants, and award programs.

Recognizing the key role of networking between scientists as a fundamental factor for their scientific career, the FGSA unit of APS supports the research of graduate student members who have made exceptional progress in their research with the Travel Award for Excellence in Graduate Research. The FGSA Travel Grants aim to foster young members' research by providing up to \$500 of travel expenses to high-quality students to participate in scientific meetings, conferences, or workshops. The grants are awarded quarterly and attract over one hundred applicants from around the world each year.

The application opens every three months. The next call for applications will open on August 20, 2014, for members attending events during the fourth quarter of 2014. Eligibility is reserved for graduate students who are members of both APS and FGSA. Applications are accepted online through the FGSA webpage, and require a CV, a statement of purpose, and a list of objectives. Students from non-US universities are encouraged to apply, as well as students attending international events. More information and answers to frequently asked questions can be found on the FGSA webpage.

For the third quarter of the 2014, FGSA awarded six students selected among around 40 applicants. The outstanding recipients for this quarter were:

Andrew Chang, Stanford University

Patrick Conry, University of Notre Dame

Scott Cushing, West Virginia University

Matthew Harrington, University of Maryland

Thomas Iadecola, Boston University

Sarah Reiff, University of Notre Dame

# FORUM ON GRADUATE STUDENT AFFAIRS

AMERICAN PHYSICAL SOCIETY

NEWSLETTER  
AUGUST 2014

## 2014v FGSA Executive Committee



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Maryland–  
College Park*



**Valerie Gray**  
Chair-Elect  
(01/14–12/14)  
*William & Mary  
College*



**Laura Boon**  
Past Chair  
(01/14–12/14)  
*Purdue University*



**Sara Desavage**  
Treasurer  
(01/14–12/15)



**Katherine Davis**  
Secretary  
(01/13–12/14)  
*Purdue University*



**Maria Longobardi**  
International  
Student Affairs  
Officer  
(01/13–12/15)  
*University of Geneva*



**Eric Sorte**  
Councillor  
(01/12–12/15)  
*Washington  
University*



**Alexis Knaub**  
Member-at-Large  
(01/13–12/14)  
*Boston University*



**Kelly Reidy**  
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**Richard Ruiz**  
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**Ian Stern**  
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