

# FORUM ON GRADUATE STUDENT AFFAIRS

AMERICAN PHYSICAL SOCIETY

# NEWSLETTER

Summer 2018

## Welcome to the FGSA Summer 2018 Newsletter



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### About the Author:

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By co-editors Midhat Farooq and Anashe Bandari

Although we originally planned on releasing only two newsletters each year (once in the Spring and again in the Fall), we decided on a special Summer edition to cover some in-demand topics. This edition is purposefully being released right before the start of the Fall semester/quarter, and though it's a bit short, there are some great pieces for you to ponder over right before the academic year. Whether you are entering graduate school now or starting another year, we hope you will find these articles enjoyable and thought-provoking.

Inside the issue: Upon request from a reader, we asked three graduate students from different backgrounds to write about their transition from undergraduate to graduate school. Rachael, Anashe, and Dani tell us about their paths and experiences. Each story is uniquely wonderful and will leave you with hope and excitement for your own journey in grad school. Following this, we have an article from a guest author external to the FGSA Executive Committee: Cristina writes about the recently released National Academy of Sciences report on sexual harassment in academia, a topic which has recently been gaining the attention it needs.

As always, your comments are welcome! If there are any topics you'd like to see discussed in future newsletters or if you'd like to submit feedback, feel free to email FGSA at [fgsaexec@aps.org](mailto:fgsaexec@aps.org), or use our [Google Form](#).

# TRANSITIONING FROM UNDERGRADUATE TO GRADUATE SCHOOL:

*Pathways in Transition Space, Transitioning with a Masters, and Transition Upon Transition*



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By Rachael Mansbach, Anashe Bandari, and Danielle Scheff

## PATHWAYS IN TRANSITION SPACE

Transitions are times of often terrifying upheaval, and one thing I've discovered is that, while planning can be extremely useful, it's worthwhile remembering to be flexible as well. When I left undergrad, I was graduating with a major in physics and a minor in computer science, and all my senior year I was torn over which of those to pursue post graduation. My family had a very strong expectation that I would go directly to graduate school, so I did. In the end, this worked out for me, but at this point I'd like to interject as an aside that there is value to be had in spending a year or two working in industry as well, I think, and I would recommend considering it because it's important to think about what's right for you, which may not be the same as what's right for someone else.

After some consideration, I decided to pursue a PhD in robotics at Carnegie Mellon University rather than a PhD in physics at the University of Illinois at Urbana-Champaign. Unfortunately, I almost immediately regretted my decision: the PhD program in robotics was heavily industry-focused to the exclusion of teaching, there was a great deal of confusion about the requirements for my joining a research group, and, fundamentally, I missed physics. Now, as I've mentioned, transitions are especially terrifying for me, and in retrospect it's possible I could have made it work, but I ended up dropping out after a single semester and do not regret it. I distinctly remember crying in a parking garage as I called the head of graduate studies at UIUC, Lance Cooper, asking whether I'd be able to be readmitted for the following year. He was incredibly

reassuring, and the result was that I spent a semester taking classes at Iowa State in the spring (I was fortunate enough to be able to stay at my parents' for three months in the interim since my father teaches there) and then moved to Illinois over the summer, starting work at UIUC as a teaching assistant in the fall. I loved it - the teaching, the classes, the research- and six years later I have just graduated with my PhD in physics and am starting as a postdoctoral fellow at Los Alamos National Lab in a month.

One thing I want to emphasize is that I don't think this was the right decision, singular, for me; I think it was a right decision. The transition from undergraduate to graduate can be an especially weighty one, and it's different for everybody. I think there's a pretty pervasive myth floating around even still of The One Correct Path, which is nonsense. It's okay for there to be unexpected twists in the road (even after starting at UIUC I changed labs once after deciding I wanted to do computational rather than experimental physics). Think of it as following a ridge in a free energy landscape: you'd like your path to be metastable--that is, you'd like it to be at a local free energy minimum--but it doesn't have to be the global energy minimum, and, in fact, there may not be such a global energy minimum. Don't waste too much time searching for it.

*By Rachael Mansbach*

## TRANSITIONING WITH A MASTERS

When I graduated with my bachelor's in physics from the University of California, San Diego in 2011, I was far from figuring out what I wanted to do with my life. I didn't know if graduate school was the right fit, and my struggles with my undergraduate coursework left me questioning whether I was academically prepared for more advanced study. Additionally, I hadn't been involved in very much research yet, so it was hard to definitively say whether or not this was something I was even interested in. I knew I was passionate about science education and communication, but I didn't know in what direction I wanted to take that passion, and I hadn't fully realized how that ties in with graduate school. In short, I had a lot of questions, and no good way to approach answering them.

Matters were further complicated by the fact that this all took place just shortly after the Great Recession. Recovery was only freshly underway, and my parents were struggling. I felt an obligation to my family and needed to be around in case their finances went awry, so I knew I wanted to move back home to Los Angeles after graduation.

That's when I decided that a master's program, rather than a PhD program, might be the right path for me to take. It seemed like it would be a good stepping stone if I did ultimately decide to go onto a PhD—it would give me a better taste of research, as well as strengthen my abilities academically. With the vast range of accessible public education options provided by the California State University system, a master's would also give me the opportunity to live at home for a few years. I thought California State University, Long Beach—noted for its great success in transitioning its master's graduates into PhD programs, and one of few terminal master's physics programs with a required thesis component—sounded like the perfect option for me, and I couldn't have been more right.

Initially, my decision to take the master's route made me feel like a bit of a failure—after all, we're made to believe that the only proper path to success in physics is to fly through your bachelor's, make multiple high-impact publications during your PhD while graduating as quickly as possible, and race into a tenure-track faculty position. But my master's program introduced me to some of the most inspirational people I've ever met, and some of my greatest role models. The students in my program all had their own reasons for taking the master's-before-PhD route, each one equally valid; meeting these students in similar situations as me helped me realize that our chosen path, though less direct, was as legitimate as any other.

Pursuing a master's degree gave me just the right amount of time I needed to realize that graduate school in physics was indeed right for me, and provided me with the tools I needed to apply. Additionally, the faculty in my department were supportive and encouraging, and helped me gain the confidence I needed to succeed in a PhD program. Three years later, with new friends in my heart, a new degree in my hand, and a new sense of determination, I moved across the country to continue the next leg of my journey at William & Mary.

*By Anashe Bandari*

## TRANSITION UPON TRANSITION

Two months before moving half-way across the country for grad school, I came out as a trans woman. The timing was right for many reasons. Caitlyn Jenner was on the cover of the most recent Vanity Fair and was forcing a wider consideration of transgender experiences. The LGBTQ community had just won nationwide marriage equality with Obergefell v. Hodges, which led to an outpouring of public displays of pride and acceptance. But most importantly, the move provided an opportunity for what felt like a clean transition. I could finally be open about my gender identity to a group of people who did not know me differently.

It is difficult to talk about the benefits of coming out, since they are mainly emotional and therefore hard to describe. Many of them—such as going to women in physics events, wearing a bra in public, buying my first formal dress, and being referenced as 'her'—feel superficial to talk about, but they hold a significance that I can't easily explain. On the other hand, the challenges were more concrete. Honestly, being trans in a cisgender world is emotionally draining. Dealing with first-year classes while simultaneously being newly openly trans was exhausting. Challenges like navigating the overly complex world of trans-related laws and healthcare, building a new wardrobe on a graduate student budget, and experiencing being a woman in a male-dominated field for the first time, consumed time and energy. Along with gender dysphoria, these stresses compounded with the general stress of graduate school.

My biggest concern when moving was about whether I would be accepted. I did not know how both my peers and professors would respond to me being trans or whether they would use the right name and pronouns. I had scoured the University website for policy information, but everything I found was vague to the point of being mostly useless: it passively stated the university's support for trans individuals without mentioning explicit actions or publicizing concrete policies. I therefore started my program not knowing whether I would be accepted by my peers, my professors, or the university.

I want to share my story so future trans students will know they're not alone, so they'll have access to the narratives I wanted to see. And to help guide allies, I also want to highlight some of the most helpful support I received. The biggest help came from small signs of support. It came from department administrators making sure my name was correctly displayed and from friends encouraging me to go to women in physics events, where I was accepted without question. One particularly impactful experience happened when I had just moved to the city, before classes had even started. I was nervous about how people would react to me being trans and therefore worried about meeting new people. Furthermore, I would remain quiet in groups because I was self-conscious about my voice. So when I went to a bar one night with a group from my cohort, I was shy and scared to reach out. But at one point in the evening, someone in the program approached me and told me about her experiences with a trans friend in college. I don't remember exactly what she said and it wasn't more than a short statement, but it was the first time since I moved that someone had shown explicit support. In a new program in an unfamiliar city, I now knew I had an ally. Ultimately, I found a place in my program and was accepted by fellow graduate students, my labmates, and my advisor. I have made friends and built a support network throughout the city, but these early signs of support made a huge impact on me, and were essential towards me feeling accepted from the beginning of graduate school.

*By Danielle Scheff*

# Sexual Harassment in Academia



## About the Author:

Cristina Schlesier is a physics graduate student at the University of Illinois at Urbana-Champaign. She is a collaborator on the Muon g-2 experiment at Fermilab. Outside of work, she likes to dance.

By Cristina Schlesier

Preventing and effectively addressing sexual harassment of women in colleges and universities has remained a challenge for decades, but over that time a strong research base has been developed that reveals the true nature of sexual harassment and its impacts on women's careers—and also reveals what can be done to successfully address it. The National Academies of Science, Engineering, and Medicine developed the idea for a study on the impacts of sexual harassment in academia more than 2 years ago, and proposed that a special study committee be appointed to examine the research on sexual harassment to determine what could be done to prevent it in academic settings in science, engineering, and medicine. Their study committee of scientists, engineers, physicians, and experts in sexual harassment research, legal studies, and psychology undertook a deep analysis of the literature to gather and synthesize information for the benefit of the broader community. This year they published [Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine](#), which contains a thorough breakdown of the mechanisms and consequences of sexual harassment and a multifaceted set of recommendations for institutions plagued with this problem.

Studies on sexual harassment from the 1980s through today continue to show that sexual harassment of women is widespread in workplaces and that the rates of sexual harassment have not significantly decreased. The report makes clear that sexual harassment is a serious issue for women at all levels in academic science, engineering, and medicine, and that these fields create conditions that make harassment more likely to occur.

Central to the report's findings is the cultural misconception that harassment of a strictly sexual nature (i.e. quid pro quo or unwanted sexual attention) is the only way in which sexual harassment can manifest and wreak havoc. In fact, the most pervasive form of sexual harassment comes as gender harassment, referring to a broad range of verbal and nonverbal behaviors not aimed at sexual cooperation but that convey insulting, hostile, and degrading attitudes about members of one gender. As a mundane and seemingly less nefarious form of sexual harassment, gender harassment often avoids reporting and can go on indefinitely unchecked even though it produces similar negative effects in victims and on the workplace.

Since reactive complaint mechanisms are often the only route to intervention in an institution, most of the sexual harassment that occurs can fly under the radar. These mechanisms are absolutely necessary, and can be powerful when correctly utilized but they should be supplemented with proactive efforts to fix the organizational climate that is tolerating and facilitating sexual harassment, particularly gender harassment.

Perhaps not surprisingly, the research suggests that the most potent predictor of sexual harassment is organizational climate—the degree to which those in the organization perceive that sexual harassment is or is not tolerated. The report found that academic science exhibits at least

four characteristics that contribute to a negative organizational climate, including a male-dominated environment with high concentrations of men in positions of power, perceived lax response to sexually harassing behavior, hierarchical power structures, and isolating environments.

The report also commented on the tendency of organizations to interpret Title IX and Title VII as a liability to be avoided, incentivizing institutions to create policies and training on sexual harassment that focus on symbolic compliance with current law, as opposed to actually preventing sexual harassment and making the climate more equitable for women.

As the topic of sexual harassment gains more attention in the national discourse, we see not only how pervasive it is but also how damaging it is to the careers and lives of those affected. Outside of the research studies and meta-analyses, we can follow real stories playing out in our broader communities and hold the main actors accountable.

In 2015, four UC Berkeley students filed complaints with widespread support from the community against well-known astronomer and professor Geoffrey Marcy. The university did not fire Marcy, who was considered to be a candidate for a Nobel Prize. As the scandal unfolded, it came out that at least three additional allegations were made against Marcy as early as 1995 while he was at San Francisco State University, as corroborated by SFSU's then sexual harassment officer. Marcy resigned later in 2015.

In 2016, Jason Lieb resigned from the University of Chicago after making unwelcome sexual advances to several female graduate students and sexually assaulting a student who was incapacitated due to alcohol. He was hired the year prior even though the search committee knew he had faced allegations of sexual harassment and misconduct at previous jobs at Princeton and the University of North Carolina. Lieb also admitted to the search committee that he had been in a romantic relationship with a student in his lab at UNC.

In 2017, Christian Ott resigned from Caltech after harassing two female graduate students there. Earlier this year, he was offered a senior research position at the University of Turku. After considering input from the local scientific community, the rector of the university rescinded the employment offer.

These men are only a small sample of those who have behaved egregiously and been able to find some degree of protection in the scientific community. Some, such as Tim Slater and Lawrence Krauss, still have their jobs, in spite of equally troublesome allegations.

Although Ott, Marcy, and Lieb no longer have the opportunity to sexually harass with the support of comfortable employment, all three were hired after their misdeeds were already known to their colleagues on other campuses or in the academic community. Some were allowed to continue in their careers for decades without reproach or

consequence. Although further harm has been prevented by blocking these particular abusers from the field, we must acknowledge the damage done to those victims left in their wake and the collateral damage of a culture that operates on a time scale of decades when it comes to addressing sexual harassment.

The incidents have served as a wake-up call for many in the scientific community. Both NASA and the National Science Foundation issued statements that they do not tolerate sexual harassment. In Congress, Representative Jackie Speier is calling for a requirement that universities report findings of sexual harassment to federal funding agencies. The events have also prompted increased action at APS, and including a [Code of Conduct](#) for meetings which lays out specific consequences for violations and training for staff and session chairs that teaches them how to handle unprofessional behavior.

These events make clear that the problem lies not only with a few bad apples but with an organizational climate and culture that does not address sexual harassment in a satisfactory manner. Based on

their thorough research, NAS presents a list of recommendations that institutions and administrators can enact in order to improve organizational climate. In the broadest sense, they emphasize creating diverse, inclusive, and respectful environments, moving beyond legal compliance to address culture, improving transparency and accountability, and fostering strong, diverse leadership. Those interested in specific actions institutions should take can refer to the report for the full description of recommendations.

The takeaway of the NAS report and the recent events in the news is that all members of our scientific community should assume responsibility for promoting civil and respectful education, training, and work environments, and stepping up and confronting those whose behaviors and actions create sexually harassing environments. This includes educating ourselves on the problem and understanding how sexual harassment stories play out in the real world. Whether it happens on our campus or across the country, the impact is global as our communities are intertwined. It is everyone's responsibility to stop sexual harassment.

## FGSA Updates:

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### FGSA ELECTIONS: CALL FOR NOMINATIONS

It's that time of the year and we are calling for nominations of the FGSA executive committee. The executive committee is an active group of graduate students from around the world that wants to advocate for graduate students and be involved in the greater physics community.

We are looking for nominations for several positions of chair-elect, secretary, and 2 members-at-large. We are also looking for several external committee representatives. Information on the available positions is given below.

Your nomination should include a brief biography and a candidate statement, no longer than 2200 characters. All nominations must be received by 10:00 p.m. EST (7:00 p.m. PST) on Friday, September 21, 2018 (date subject to change).

We encourage you to nominate yourself or someone you know for a position with the Forum on Graduate Student Affairs. This is an excellent opportunity to meet with others interested in graduate student affairs, gain valuable experience interacting with a wide variety of both scientists and non-scientists to promote physics and science literacy, and give a voice to graduate student concerns and issues.

Please remember, attracting and serving a diverse and inclusive membership worldwide is a primary goal for APS. In calling for nominations, we wish to remind you how important it is to give full consideration to women, members of underrepresented minority groups, and scientists from outside the United States.

If you wish to nominate someone, or yourself, or if you have any questions about the time commitment, responsibilities, or nomination process, please feel free to contact us at [fgsaelection@aps.org](mailto:fgsaelection@aps.org).

### FGSA TRAVEL GRANT

Did you know that FGSA offers travel awards for our members each quarter of the year? Here are the winners from FGSA's 2nd Quarter (2018) Travel Awards:

**Kelly Malone**

**Brandon Morrison**

**Cassidy Yang**

**Joseph Hart**

**Antonio Porras**

### CONGRATULATIONS TO YOU ALL!

The next application period is now open until September 20th. For more information and to apply, visit our [webpage](#).

### HAVE FEEDBACK?

Would you like to write for us?

Let us know by filling out the [Google Form](#)