



SOCIETY OF PHYSICS STUDENTS

Zone Councilor Candidates 2018-19 National Council

Ballots Due: May 2, 2018

For more details, visit:

<https://www.spsnational.org/about/governance/national-council/nominations-elections>

Zone: Zone-8

Name: Daniel Miller

Chapter: Millikin University

Biography: Daniel Miller is Professor of Mathematics and Director of the Requarth Observatory at Millikin University. The observatory holds the largest university operated telescope in Illinois and with the support of the SPS chapter, the observatory is open to the public every Wednesday night of the academic year. Dr. Miller routinely teaches travel course focusing on astronomy and ancient cultures and supervises undergraduate research in astro-photography.

Candidate Statement: Dr. Miller hopes to increase chapter to chapter and chapter to national communications in addition to attendance at zone and national meetings.

Zone: Zone-10

Name: Shannon Clardy

Chapter: Henderson State University

Biography: I am Associate Professor of Engineering and Physics and Adjunct Professor of Double Reeds at Henderson State University and have served at this institution for the 10 years I have been teaching full-time at the collegiate level. I have two Bachelor of Science degrees from Southern Methodist University in Music Performance and Physics and a PhD from the University of Arkansas at Little Rock in Applied Science with research in astrophysics. My current research interests are in aerodynamics and high powered rocketry. I have led several student-driven research projects in acoustics, astronomy, engineering, and optics.

I love physics now, but it wasn't always a wonderful relationship. In high school, I found physics frustrating and was told repeatedly that "girls don't think that way". When I went to college to pursue a degree in music, I took physics classes to prove to myself (and others) that girls CAN indeed think that way. By the time I felt like I had a reasonable understanding of the subject, I had my first physics degree. Because of my experience, my passion is outreach and making science accessible.

Candidate Statement: If elected as Zone Councilor, I plan to first learn as much as I can about the resources provided by the SPS national office. As a chapter adviser, I use many of these resources already. Then, I would like to further build upon the community we have developed in our zone and make other chapters aware of the resources available to them. Every year, our zone conference provides us with an opportunity to collaborate and share ideas. I would like to find more ways that we can continue those efforts throughout the year, even though great distances separate our chapters.

I know that my undergraduate SPS chapter provided wonderful opportunities for fellowship, travel, and research. To this day, I am friends with fellow chapter members. I would like to encourage that camaraderie throughout zone 10.

Zone: Zone-11

Name: Firdevs Duru

Chapter: Coe College

Biography: Prof. Firdevs Duru is originally from Turkey. She received her college education in Istanbul, at Bosphorus College in Physics. In 2001, she moved to US to pursue her graduate studies. She got her Ph.D in experimental high energy physics, and her masters simultaneously in space physics at the University of Iowa. She worked as a postdoctoral research scholar for 4 years, then as a research scientist until 2016, also at the University of Iowa. After being a teaching adjunct, in 2016, she became a full time faculty in the Coe College Physics Department. Currently, she is an assistant professor of Physics there.

Firdevs is a member of Mars Express mission and the University of Iowa Space Plasma group. Her main research interest is on the ionospheres around the planets.

She is an author of around 300 peer journal publications, both on space physics and experimental high energy physics. At present she is working with 6 students in a number of space physics projects. She has published papers and participated conferences with Coe physics students.

She has teaching experience in different universities such as University of Iowa, Mount Mercy University (Cedar Rapids) and Coe College. She teaches a variety of courses including astronomy, astrophysics, space plasmas, general relativity, first year physics and more.

Firdevs is also the founder and the advisor of the Women in STEM (WinSTEM) club at Coe College. WinSTEM is an active club with about 75 members, which organizes speakers, galas, study sessions and trips.

She is married and has two kids: One seven year old daughter and one five year old boy. She enjoys travelling, reading, and history.

Candidate Statement: I am the founder and the advisor of the Women in Stem club and a member of the Association of American University Women (AAUW). I have been a Coe College full-time physics faculty member since 2016. Coe College physics department is a very active department, which participates in Society of Physics activities with enthusiasm. It is open to challenges and spends great effort to provide the students with the opportunities.

I am actively doing research with collaborations, as well as our undergraduate students. I am doing my best to act as a role model, as well as a mentor to our own physics students in class and in our research groups. I enjoy seeing our students get the opportunities, and integrate with national research and teaching communities. I have been participating in Coe's very active SPS Chapter and I would like to contribute to the physics community on a larger scale. If elected Zone II Councillor, I am ready to take part in national projects. I believe with my background and current opportunities I can add to the Society of Physics Students and at the same time have the chance to improve and challenge myself. Working with undergraduate students from different backgrounds and communities is important and fulfilling for me.

Zone: Zone-11

Name: Robert McTaggart

Chapter: South Dakota State University

Biography: Dr. McTaggart has a BS in Physics and a BA in Mathematics from West Virginia University, and a PhD in Physics from Penn State. He has taught at South Dakota State University since 2004, and oversees the Minor in Nuclear Engineering at SDSU. He is a past-President of the North Central Chapter of the Health Physics Society, which covers much of Zone 11. As an Associate Professor of Physics he currently serves as the faculty advisor to the local chapter of the Society of Physics Students. His research interests include the effects of radiation on materials, environmental health physics, and particle physics research related to dark matter and neutrinos.

Candidate Statement: SPS has a role to play in encouraging the recruitment and retention of new students in physics, whether they are taking the gen ed courses, minoring in physics, majoring in physics, or double-majoring. I myself will apply some of the career information about majoring in Physics in the freshman seminar that I teach.

Zone meetings should continue to be a great venue for sharing physics activities that can engage the public, finding out what you can do with a Physics degree, sharing research activities, and connecting with other physics majors in the area.

It is also clear that not every chapter in Zone 11 regularly attends the Zone meetings. That is often difficult to do if only the officers attend any local SPS meetings, or they do not have the critical mass or support to meet on a regular basis. Furthermore, if chapters must travel a great distance to attend in February or March, then let's face facts: Time, money, and weather can be issues in Zone 11.

Thus, I would like to facilitate more attendance at Zone meetings, which may include finding ways to grow the local chapters as well.

Zone: Zone-15

Name: Tonya Triplett

Chapter: USU SPS

Biography: My name is Tonya Triplett and I am a Principal Lecturer in the Physics Department at Utah State University where I have worked for 15 years. I previously worked on the physics faculty at the Navy's Nuclear Power School. My research is in Physics Education with a focus on retention of underachieving students. I have been recognized for my work as the College of Science Teacher of the Year in 2014 and as the Retention Faculty of the Year in 2016. In addition, I am heavily involved in outreach projects including a NASA grant for educational outreach. I am the assistant advisor to the Outstanding Chapter SPS club and work to encourage student interaction with faculty and with the community.

Candidate Statement: I have been involved for my entire career in recruiting physics students and working to retain them in a difficult program through meaningful activities and mentoring. The Utah State University Chapter of SPS has been recognized as an Outstanding Chapter for the last 12 years, and while I am only the assistant faculty advisor, it is a testament to our commitment that we have more than one faculty willing to serve. I envision forming a revitalized, enthusiastic core of faculty throughout the region and country who can see the benefit of offering a physics community to students that serves their needs and offers them the chance to serve others through outreach and programs. A primary goal would be to develop and distribute lesson plans for outreach to local schools (by SPS clubs) that serve teachers by expanding on core curriculum; serve young students by promoting science; and serve SPS club members through opportunities to teach the exciting and fun parts of physics. I see the ability of SPS clubs to provide social support to students while in school, and professional development activities to help them reach academic and employment goals. I want to develop a standing calendar of professional focus activities that are timely to student needs, and are simple enough to implement that all clubs could participate. I envision SPS clubs that are so responsive to students that every engineering or education major would find that they too, are physics students.

Zone: Zone-15

Name: Tamara Young

Chapter: University of Utah Physics & Astronomy

Biography: The rumors that Tamara is a rocket scientist are greatly exaggerated. However, as Tamara did her graduate research in planet formation, she can understand your confusion. Tamara has always had a fascination with how the world works. Her interest in physics began in highschool. As an undergraduate at Utah State University, Tamara's studies focused on nuclear and particle physics. Her senior thesis was about the solar neutrino problem. This problem was solved between 2001 and 2003 when SNO observed, and Super-K confirmed that the mixing angle of neutrinos was much greater than previous measurements indicated. This was about the time that Tamara began grad school at the University of Utah. In grad school, Tamara took an interest in fluid dynamics, which led to her graduate research in planet formation. Tamara earned a Master's of Science in physics, but did not complete her

Ph.D. After her Bachelor's degree, but before grad school, Tamara taught science and math for several years in the public education system. After grad school, Tamara again taught science and math in the public education system. Tamara now is the academic advisor for the Department of Physics & Astronomy at the University of Utah, and an adjunct professor teaching astronomy at Salt Lake Community College. With Tamara's background in physics and education, Tamara is grateful for the opportunity to work with our amazing SPS students.

Candidate Statement: Last year, when the assigned SPS advisor was on maternity leave, she asked me if I would be willing to work with the group. It was important that they have an advisor that already is familiar with the students and the group, because we were hosting the Zone meeting, in conjunction with the annual AAPT conference being held at the University of Utah. As interim SPS advisor, I was given such an amazing opportunity to work with these incredible students. They turned our chapter from one that was considered inactive by the national organization to receiving the Outstanding SPS Chapter last year. In this time, I have seen the students in our local chapter do many amazing outreach events, as well as internal outreach events within our department. They have really created a welcoming community.

As Rhett Zollinger's term as Zone Councilor is ending, he reached out to our SPS president, Teddy Anderson, and asked if she thought I might be willing to run for this position. I am honored that these amazing humans considered me as an excellent candidate for this position.

If I am elected, I want to bring to the rest of the Zone some of the incredible work that my local chapter has accomplished. We are a very wide-flung zone, so it is difficult for chapters to get together. However, we have been able to have a couple of events with some other chapters. I would like for this to continue. I would also like to work with other SPS advisors on initiatives in their local chapters that can result in the kinds of positive outcomes that we have had.

I want to shout out to some of the other chapters, without the help and guidance of the USU chapter, I don't think we would be where we are today. I also want to thank the chapters that came to the Zone meeting last year, we had a chapter travel all the way from Idaho. It was incredible. I also want to thank the folks organizing the Zone meeting this year. I have heard some of the details, and I think it will be great.

I am truly honored that I was asked to apply to this position. Thank you for your consideration.

Zone: Zone-16

Name: Angel G. Fuentes

Chapter: No chapter

Biography: Angel Gabriel Fuentes is the Physical Sciences and Engineering Division Chair, and residential lead astronomy professor at Chandler-Gilbert Community College, a Maricopa Community College. He also excelled as the Subject Matter Faculty Expert in Math, Science and Statistics at Northern Arizona University's Personalized Learning Division, and as a math and astronomy adjunct professor at the University of Advancing Technology. Born in San Juan and raised in the little town of Naranjito, Puerto Rico, Professor Fuentes completed a Bachelor of Science in Theoretical Physics at the University of Puerto Rico, Mayagüez Campus, and a Master of Science in Physics from Arizona State University in Tempe, AZ. His professional journey spans over two decades, and includes teaching undergraduate Math and Science courses at Arizona State University, University of Advancing Technology, and Mesa Community College's Red Mountain Campus. Beyond the classroom, Professor Fuentes can be found playing video games, cooking, hiking, and strength and mass training. A self proclaimed "old school gamer", his favorite games include Legend of Zelda, the Civilization game series, League of Legends, and Call of Duty. He currently resides in Tempe, AZ.

Candidate Statement: As a Zone Councilor, and astronomy professor at a community college, I would like to be more inclusive of all students seeking a physics education. Physics and Astronomy are careers that opens many doors, and are attainable by everyone. This was true for me as an undergraduate physics student. Being part of the SPS at the University of Puerto Rico, and later on part of the leadership of that chapter, provided me with the networking, resources and opportunities that made my educational life more fruitful. By being more inclusive of all students, we give opportunities to those who need it the most. One of my main goals at work is to get students involved with outreach events in the community. I would like to continue this, and get students of SPS chapters involved in activities that reach a wider audience, from P-20 to all adults. We have an incredibly diverse set of students joining SPS chapters at universities, who started at community colleges. I would like to add more SPS chapters at the community colleges in our zone. By expanding and adding these chapters, the SPS increases its visibility and support of all students in Physics and Astronomy, and begins the recruitment of those students from the start of their educational careers at higher learning institutions.

Zone: Zone-16

Name: Leandra Goldflam

Chapter: The University of New Mexico

Biography: Leandra Goldflam received a B.S. in Physics from the New Mexico Institute of Mining & Technology and a Ph.D. in Physics from the University of California, San Diego. She is now a Lecturer at the University of New Mexico, dedicated to improving the quality of lower division undergraduate physics course instruction.

Candidate Statement: As a Zone Councilor, I would work closely with local SPS chapters to encourage an inclusive atmosphere. SPS facilitates positive student-faculty interactions and introduces new students

to more senior physics majors early on in their undergraduate careers. I believe that these interactions can be invaluable to improving student retention, particularly for underrepresented minorities.

Zone: Zone-18

Name: Don Williams

Chapter: Fresno State SPS

Biography: Don Williams got his undergraduate and graduate degrees in physics from California State University, Fresno. His thesis work was on the Standard Model of elementary particle physics. Since graduating Don has been teaching a broad range of physics, chemistry and science courses at CSU Fresno. These include conceptual physics, introductory algebra-based and calculus-based physics courses, introductory astronomy, "Science and Nonsense" (a general education course on how to tell fact from fiction using science), and Natural Science 1A (the first course for future science teachers at the K-12 level). In all these courses Don instills a sense of excitement in his students toward physics and science. In the past five years Don has designed and built up a very successful service learning course called "Physics Outreach". This course trains college students how to use demonstrations to explain physics concepts in a clear and concise way to students in K-12. Through this course, Don and his students have visited hundreds of local area schools and have attended conferences to present their outreach efforts, and have been on local TV and radio stations multiple times. Currently Don has a monthly TV spot on physics outreach with the local TV station KSEE24. Don's outreach work has also started collaboration between his physics outreach class and the Kremen School of Education at CSU Fresno, which has partly supported Don's outreach effort via a MISTY grant.

Candidate Statement: I plan to continue providing enthusiastic encouragement for students and faculty to get involved in SPS. During this past cycle as Zone 18 ZC, I helped organize three zone meetings -- one at my home campus of Fresno State, one at UC Merced (the newest UC), and this year at CSU Bakersfield. I also helped to advertise and get the word out about the 2016 PhysCon which was held in San Francisco. I will continue to help organize student participation in these SPS events.

In my teaching I focus a lot on physics and science outreach. My service learning course -- Physics Outreach -- provides training for students to present science and physics topics to K-12 students and to excite students about physics and science in general. This will be my focus in my role as Zone 18 ZC -- I will encourage the SPS chapters in the zone to become active in doing outreach.

I have greatly enjoyed the past 3 years as ZC for Zone 18 and I would like to serve another term as ZC.