



# **Zone Councilor Candidates 2019-20 National Council**

**Ballots Due: May 1, 2019**

**For more details, visit:**

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

**Zone:** Zone-2

**Position:** Zone Councilor (ZC)

**Name:** Colleen Countryman

**Chapter:** Ithaca College

**Biography:** Colleen Countryman is an Assistant Professor in Physics at Ithaca College. She graduated with her Ph.D. in Physics, specializing in Physics Education Research, from North Carolina State University in 2015. She has also obtained a Masters in Applied Mathematics from Virginia Polytechnic Institute (2010) as well as a B.A. in Mathematics and a B.S. in Physics from Canisius College (2008). Colleen is interested in educational technologies, and her dissertation project involved the development, implementation and assessment of an app that utilized smartphones' internal sensors in introductory physics labs. At Ithaca College, Colleen teaches introductory and advanced physics courses in active learning formats and coordinates and trains undergraduate Learning Assistants. She is a member of the Ithaca College Teaching, Learning and Technology Advisory Board, and serves as an advisory member of an NSF grant on Mapping Fields in Augmented Reality with Personal Mobile Devices. She was also part of a team that was awarded a President's Grant at Ithaca College for the use of technology in supplemental resource videos.

**Candidate Statement:** I have spoken to Bodhi Rogers, the current Zone 2 Councilor about the exciting opportunity that Zone Councilor provides. I would relish the opportunity to serve the Society of Physics Students, while simultaneously learning more about the services that SPS offers undergraduate students. Both Bodhi and I believe I could be a great candidate for this position as I would like to continue to learn more about how I can best support physics majors -- not just those at Ithaca College, but nationwide. Thank you for this opportunity!

**Zone:** Zone-5

**Position:** Zone Councilor (ZC)

**Name:** Anthony Kuchera

**Chapter:** Davidson College

**Biography:** Anthony Kuchera received a Bachelors of Science degree in physics from the University of Wisconsin Oshkosh in 2008. Upon graduation he was accepted into the Graduate School at Florida State University where he earned a Ph.D. in physics. His dissertation was on the cluster structure of light nuclei. He then became a Postdoctoral Research Associate at the National Superconducting Cyclotron Laboratory at Michigan State University working with the Modular Neutron Array (MoNA). He is currently an Assistant Professor at Davidson College and continues to be a member of the MoNA Collaboration studying the structure of neutron-rich nuclei. He is co-advisor of his local Davidson College SPS chapter.

**Candidate Statement:** I am interested in strengthening relationships between the chapters in Zone 5. This will be achieved by hosting zone meetings and working together to support each other and sharing of ideas. I will represent Zone 5 in the national meetings to make sure the voices of the chapters are heard. I believe strengthening local chapters and our zone is a great way to make connections and develop relationships between students and faculty in North and South Carolina.

**Zone:** Zone-5

**Position:** Zone Councilor (ZC)

**Name:** Aaron Titus

**Chapter:** High Point University

**Biography:** Aaron Titus is Professor of Physics at High Point University. He has been an active member of AAPT for 20 years and was elected and served on the Board of Directors as the Four-Year College Representative for AAPT from 2013-2016. In addition, Aaron has been active in the North Carolina Section of AAPT, presenting talks (several receiving awards) and workshops as well as co-hosting several Section meetings and a SPS Zone meeting. At High Point University, Aaron collaborated with others to create the physics degree program, and in 2010 Aaron helped establish High Point University's SPS chapter. In 2013, physics faculty created the Department of Physics, and Aaron served as its first Chair. In 2011, Aaron received the Meredith Clark Slane Distinguished Teaching/Service Award. In 2019, Aaron received the Homer L. Dodge Citation for Distinguished Service to AAPT.

Aaron has a BS degree in physics from Penn State University and a PhD in physics from NC State University. As a graduate student, Aaron co-developed WebAssign with Larry Martin. Today, he collaborates with Ruth Chabay and Bruce Sherwood on future editions of Matter & Interactions and is an advocate for incorporating computation and research into the undergraduate physics curriculum starting in the first year.

**Candidate Statement:** SPS is essential to creating vibrant, thriving undergraduate physics programs. It is one of the most important resources for physics majors and physics faculty to develop community and

prepare physics majors for a breadth of professional opportunities. As SPS Zone Councilor, I will have four goals:

1. Learn about each SPS chapter, visit SPS chapters, and help SPS chapters identify ways to grow and take advantage of all the opportunities SPS offers, including the benefits of attending PhysCon. I hope to meet most of the advisors and SPS officers in the zone. I hope to learn what makes each SPS chapter unique.
2. Improve SPS Zone Meetings to include specialized sessions and social activities that will make zone meetings valuable for both networking and professional development.
3. Raise awareness and interest in attending PhysCon, AAPT, APS, and other professional meetings.
4. Raise awareness of the Career Toolbox and Phys21 and share ideas for helping physics majors prepare for diverse careers.

In summary, I want to help SPS chapters in our zone be successful.

**Zone:** Zone-6

**Position:** Zone Councilor (ZC)

**Name:** Mel Blake

**Chapter:** University of North Alabama

**Biography:** I have been at the University of North Alabama since 2008, and the Faculty adviser for the SPS and Sigma Pi Sigma chapters here is about 2010. In that time we have received two notable chapter awards and one Outstanding Chapter awards. I have also encouraged students to apply for SPS scholarships and grants. We have received several SOCKS kits and one research grant to observe meteor impacts on the Moon. I run the UNA Planetarium, and as such believe strongly in outreach, and the SPS has participated in activities such as tables for First Fridays street festivals and Earth day. My research involves studying binary and variable stars, and I involve students in that research. My students have won state and national poster competitions, for which I am proud.

**Candidate Statement:** With our local chapter struggling for a few years, I now understand how chapters can be active for a time, and then struggle. I will attempt to identify chapters that have not sent in reports for a few years, and try to reach out to them and see what their needs are. Often it is small numbers, such as in our case. When possible I will visit chapters that need help, or contact their advisers and see what can be done. I also would like to encourage research among both our Zone 6 and other chapters. A great opportunity is coming up with the transit of Mercury on November 11th, 2019. The transits of Mercury can be used to find the distance to Mercury, if observations over sufficient latitudes can be made. We can set up a national project to have chapters across the U.S. observe the transit with video or photographically, and then use it to get the distance to Mercury. This can be made into a great lab activity for schools to see. We might also observe near Earth asteroids to get distances directly. Other ideas will be solicited from chapters and zones. We also need to have the details for Zone meetings available much sooner to facilitate funding to attend.

**Zone:** Zone-7

**Position:** Zone Councilor (ZC)

**Name:** Ronald Kumon

**Chapter:** Kettering University A & B

**Biography:** I received my B.S. in physics and mathematics from Michigan State University and my Ph.D. in physics from The University of Texas at Austin. I subsequently worked as a research physicist at the National Institutes of Standards and Technology, University of Windsor, Case Western Reserve University, and University of Michigan, and as an adjunct professor at Lawrence Technological University. I am currently an associate professor in the Physics Department at Kettering University in Flint, Michigan, where I teach introductory and upper-level physics courses and do research with undergraduates in acoustics and ultrasonics. I am also a member of Sigma Pi Sigma physics honor society and serve as our chapter's advisor.

At Kettering, students alternate between school and co-op terms, and as such, we actually have two separate A and B chapters that also alternate between quarters. I have had the pleasure to serve as the faculty advisor for both chapters since starting at Kettering in 2011. During that period, we received 2 Outstanding Chapter Awards, 10 Distinguished Chapter Awards, 2 Chapter Research Awards, and 1 Blake Lilly Award. We also have had multiple students serve as Associate Zone Councilors. Recent chapter activities have included a popular cardboard boat regatta, outreach activities at the Flint Children's Museum, and the successful construction, launch, and recovery of a weather balloon, which reached well into the stratosphere (35 km!).

**Candidate Statement:** The primary responsibilities of the Zone Councilor are to enhance communication between SPS chapters in the zone, assist in the planning of zone meetings, provide continuity from year-to-year through changes in Associate Zone Councilors, and represent the zone at the annual SPS Council meeting. As Zone Councilor, I will work to:

1. Enhance communication between chapters in the zone as well as from the zone to the chapters through the enhanced use of email newsletters and social media.
2. Promote regular zone meetings throughout the zone region, including some meetings in collaboration with the Ohio-Region and Mid-Atlantic Section meetings of the American Physical Society or other meetings of physics-related organizations, and also enable remote access via video conferencing for students who are unable to travel to the meetings.
3. Increase awareness of internships and cooperative jobs for undergraduates during their degree programs, career development skills, and the range of employment opportunities for students with an undergraduate physics degree.
4. Encourage participation in undergraduate research experiences and citizen science initiatives.
5. Enable students to learn more about entrepreneurship, intrapreneurship, and innovation using a physics-based education.
6. Support the participation of underrepresented groups in physics.

It would be an honor and privilege to serve as your Zone Councilor during the upcoming term. If you have any questions about my candidacy, please feel free to contact me at rkumon@kettering.edu.

**Zone:** Zone-7

**Position:** Zone Councilor (ZC)

**Name:** Adélé Poynor

**Chapter:** Allegheny College

**Biography:** Adélé Poynor has taught at Allegheny College since 2006 and served as SPS adviser there since 2008.

**Candidate Statement:** Adele Poynor would serve to the best of her ability

**Zone:** Zone-12

**Position:** Zone Councilor (ZC)

**Name:** Jency Sundararajan

**Chapter:** Missouri Southern State University

**Biography:** Dr. Jency Sundararajan is an Assistant Professor of Physics at Missouri Southern State University, Joplin MO since 2014. She holds a Bachelor of Science, Master of Science and Master of Philosophy in Physics from Bharathidasan University, India. She received her PhD in Physics from the University of Idaho, Moscow ID with research in charge transport in hybrid nanostructures. She completed her postdoctoral research at the University of Washington, Seattle WA on the modeling of nanodevices for photovoltaic applications.

She serves as the SPS Advisor of the local chapter since 2016 and have been instrumental in making the chapter active locally and nationally. She is passionate about making Physics fun for all ages and highly involved in community outreach activities, science shows and demo days.

**Candidate Statement:** I am inspired by the guidance and support SPS provides to the undergraduate physics students, alumni and the advisors through outreach activities, awards, conferences, career resources, professional networking opportunities, alumni engagement, publications and much more.

I would like to get involved intensively in SPS by serving as the Zone Councilor for SPS Zone 12 and work diligently as a member of SPS National Council. If elected, I will fulfill this role to the best of my abilities by promoting active communication among all the chapters in the zone and at the national level.

As a local chapter advisor I have played a vital role in giving a new dimension to our chapter in terms of activity and participation, worked efficiently to represent science and scientific thought to our local community. Our chapter of SPS was recognized with several awards in 2018 on campus and by SPS national office.

I am highly motivated and thrilled to represent SPS at the national level and continue to contribute more effectively in bringing together all the chapters in the zone. I will endeavor to help strengthen connections within the chapter and facilitate active participation at the national level.



**Zone:** Zone-13

**Position:** Zone Councilor (ZC)

**Name:** Larry Isenhower

**Chapter:** Abilene Christian University

**Biography:** I earned a BS degree from Abilene Christian University in 2005 and a Ph. D. from the University of Wisconsin, Madison in 2010 in atomic physics. I was part of Thad Walker and Mark Saffman's group working building a quantum computer based on highly excited atomic states (Rydberg states). We achieved the first CNOT quantum gate between individually addressed neutral atoms during this time. I then had a postdoc and a research scientist position there working on scaling up this technology to larger numbers of qubits. In 2014 I was hired as an assistant professor at Abilene Christian University. My teaching focus has been astronomy, modern, optics, and our physics capstone sequence. Student projects I helped mentor in this course have varied from computer simulations to building a 2D Ruben's tube box demonstration to building a beam monitor detector for experiment 1039 at Fermilab. I have supported our local SPS club since I came to ACU and became the faculty sponsor in 2017. I have helped our club organize a physics demonstration road show last year, and we are planning one again for this year. We have also done several shows on campus and for the local school district. I really enjoy getting to teach and mentor students as they learn about the wonders of the universe we live in.

**Candidate Statement:** As SPS Zone Councilor for zone 13, I would like to focus on improving communication among the various clubs in our zone. With PhysCon approaching, we are all interested in ways to earn income for bringing as many students as possible to this conference experience. I think if each club shared their ideas for what they are planning to do, more clubs would have greater success with their fund raising efforts and make PhysCon a more memorable experience for all involved. I am also really focused on how our club and zone 13 as a whole can do a better job with outreach in our local communities and the rural areas around Texas. I would like to try to help more clubs organize local events or even traveling road shows to reach as much of the state as possible. Through working together we can reach a broader region of the state and ensure more areas are getting to see some of the things that physics degrees have to offer, but more importantly, in my mind, these outreach efforts give these young people a chance to meet actual physics majors and that personal connection is more lasting than simply watching one of the many physics demos they could find on youtube. I think these outreach activities are an important way to improve the diversity of students choosing to study physics and other STEM fields.

**Zone:** Zone-17

**Position:** Zone Councilor (ZC)

**Name:** Deanna Marshall

**Chapter:** Central Washington University

**Biography:** Ms. Marshall joined Central Washington University as the Advising and Recruiting Specialist for the Physics department in September 2015. As the principal point of contact for college, career and academic advising for pre-college through undergraduate level students, she is instrumental in helping students pursue degrees and careers in physics, engineering and astronomy. Her outreach and recruiting duties allow her to meet with students in all levels of the K-16 pipeline throughout the state of Washington to discuss their interests, career aspirations and educational goals. Ms. Marshall also chairs the Physics scholarship committee. Prior to joining CWU, Ms. Marshall spent seven years as the Math/Science Program Coordinator for Upward Bound at the University of Hawaii at Hilo where she assisted low income, first generation, underrepresented high school students prepare for and enter postsecondary education. She volunteers for FIRST FRC events throughout the Pacific Northwest. Ms. Marshall completed her graduate program in Information Systems at Johns Hopkins University and undergraduate degree at Rutgers University.

**Candidate Statement:** I enjoy working with students as they navigate their path to success. Encouraging students to become leaders and take risks is a big step towards enhancing their personal development and growth. Outreach plays an important role in that it provides students with a chance to share their passion for science with the public at large. As the Zone Councilor, I would work to encourage chapters to take advantage of SPS events and activities, host zone meetings, grow their chapter and sponsor outreach events.