

From the Section Chair

Greetings! Thank you for your support of the New York State Section (NYSS) of American Physical Society (APS) and for your time in reading this newsletter. Our goal is to keep you informed on the latest happenings in your section. The NYSS has always strived to bring to you cutting edge research in physics and related fields around the state and nearby. Typically this is primarily through our two topical symposia that bring in academics, researchers, industrial scientists, educators, and students from all levels to engage with one another and take in this amazing work. Each symposium typically features a poster session to showcase work in any field by students at all levels, from high school, undergraduate and graduate students. Cash awards are given to those posters judged as the best of the symposium. In addition to our symposia, the NYSS provides grant money to support physics outreach to K-12 or a public audience. Please read more about these opportunities on our website and consider applying for one.

As you are all aware with the unprecedented pandemic affecting the world, we regrettably cancelled the spring 2020 symposium. This is only the third symposium cancelled since the section was founded in 1938. The other cancellations were during World War 2 years of 1944 and 1945 where only one symposium was held per year. We shifted into virtual symposia and in the fall of 2020, Carl Ventrice from SUNY Polytechnic Institute hosted a virtual meeting on the "Physics of the Coronavirus" where roughly 100 section members attended. In the spring of 2021, Carl Ventrice from SUNY Polytechnic Institute hosted again with a virtual meeting on the "Physics of Power Electronics."

I am pleased to tell you that our membership remains strong. The NYSS is the second largest section by only a small amount in the APS, boasting 5% of the total membership. You can support your NYS section for FREE! Make sure you add NYSS as a unit when you renew your APS membership or choose to click on the "Join a Unit" link on our section website (www.aps.org/membership/services). Check to make sure you are a member. Ask if your APS member colleagues are members and encourage them to join. The amount of financial support we receive from APS is directly related to our membership, and this is how we are able to fund the symposia at low cost



Ken Podolak (chair), speaking about the New York State Section at our fall 2020 symposium.

to the attendees and to provide the free virtual symposia this past year. So, please join today!

This year we had an election and I am proud to welcome new and returning members to the team that makes all of this possible. You may recognize some of these members. These members are: Samuel Amanuel (chair, Union College), Carl Ventrice (vice chair, SUNY Poly. Inst.), Zak Robinson (secretary/treasurer, SUNY Brockport), Christopher Bass (Le Moyne College), Pratik Dholabhai (RIT), Susie DiFranzo (Hudson Valley CC), Gen Long (St. John's U.), Erica Simoson (SUNY Fredonia), Rajesh Vaddi (Corning), Kristen Burson (Hamilton College), Abram Falk (IBM), Eric Leibensperger (Ithaca College), Jill Linz (Skidmore College), Ken Podolak (SUNY Plattsburgh) and Bonggu Shim (SUNY Binghamton).

Lastly, thanks goes out to each and every one of you for your continued support as I conclude my service as chair. If you haven't attended a meeting recently, please do come. I look forward to keeping energized with the section in the future. If you have any questions, comments, or concerns, please do not hesitate to reach out (kpodo001@plattsburgh.edu).

Sincerely,
Ken Podolak
State University of New York at Plattsburgh

Gianfranco Vidali Honored For His Service

We want to express our deepest gratitude to Gianfranco Vidali for his dedication to the Executive Committee of the New York State Section of APS. He has served continuously since the Fall of 1995 with terms as chair, APS Council representative, and secretary/treasurer. He has been a strong advocate for and has expanded our highly successful outreach grant program.

The year he started on the committee, the Fall Symposia was held at RIT and the topic was “Advances in Alternative Energy.” The hot topics of the day were: Cold Fusion, Generation and Storage, and Alternative Sources. The keynote speaker was Richard Wilson, Harvard, speaking on “Chernobyl and the Future of Nuclear Power.”

In other areas, when Gianfranco began serving on the committee, that same year Prodigy first offered access to the World Wide Web, Yahoo Search Engine was founded and Java programming language was introduced. Comet Hale-Bopp was also discovered that year and M-Theory made its debut.

Thank you Gianfranco for all your work to make the section it is today. His impact on the section will not be forgotten.



Gianfranco Vidali, from Syracuse University, retiring after 26 years of service to the New York State Section.

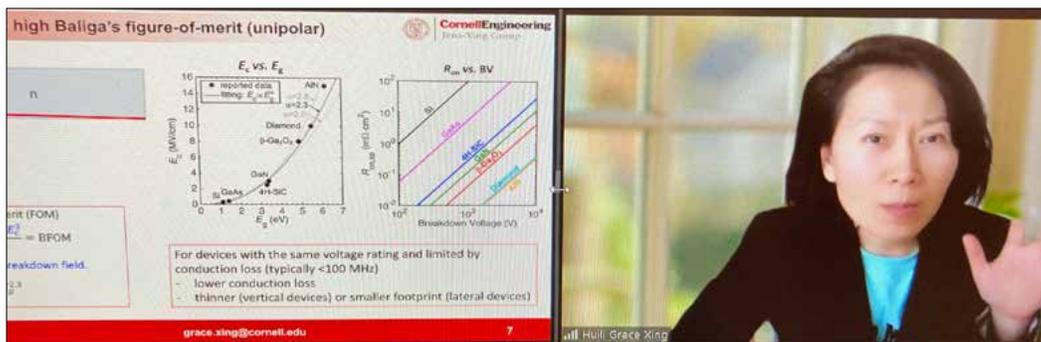
Recent Section Meetings

Spring 2021 Topical Symposium on “Physics of Power Electronics”

Our 123rd Topical Symposium took place on Friday, April 23, 2021 virtually with Carl Ventrice as our host. The meeting’s theme was the “Physics of Power Electronics.” This symposium was originally scheduled for last spring, but was cancelled due to the pandemic.

Even though the symposium did not feature a poster session as is customary during our symposia, we had roughly half of the 70 attendees being students. Invited speakers include Charles “Chip” Eddy, Jr. with “Power Electronic Materials Research to Enable Next Generation GaN Power Switches, Huili Grace Xing with “GaN Power Electronics and Associated Fundamental Limits,” Reza Ghandi with “Silicon Carbide: Enabling a New Era for Power Electronics,” and T. Paul Chow with “Design and Fabrication of High-Voltage SiC Power Devices.”

The discussion about the talks as supported by APS went very smoothly for this virtual symposium. We are grateful for SUNY Polytechnic Institute for hosting this event virtually and for the time Carl Ventrice and the speakers put in to make this a successful symposium.



Huili Grace Xing presenting on material considerations during her talk.

Fall 2020 Topical Virtual Symposium on “Physics of Coronavirus”

Our 122nd Topical Symposium took place on Friday, November 6, 2020 virtually with Carl Ventrice as our host. The meeting’s theme was the “Physics of Coronavirus,” and featured talks by four different specialists from SUNY Polytechnic Institute.

Speakers and talks include Scott Tenenbaum with “Demystifying COVID,” Nathaniel Cady with “*Plasmonic-enhanced Fluorescence for Rapid, Multiplexed COVID-19 Diagnostic*,” Janet Paluh with “*Physiology in a Dish: Human Stem Cell Organoids Accelerate COVID-19 Discoveries*,” and Kevin Shah with “*Reusable Solid-State Field-Effect Air Filter for Protection Against Airborne Biological Agents*.”

Following these talks was a poster session with five posters of which some of these were selected as outstanding posters. We are so grateful that Carl Ventrice dedicated his time to hosting this meeting and for the time that the speakers spent discussing their research.



Speaker Scott Tenenbaum kicking off our virtual symposium with his talk on “Demystifying COVID”

Previous Symposiums

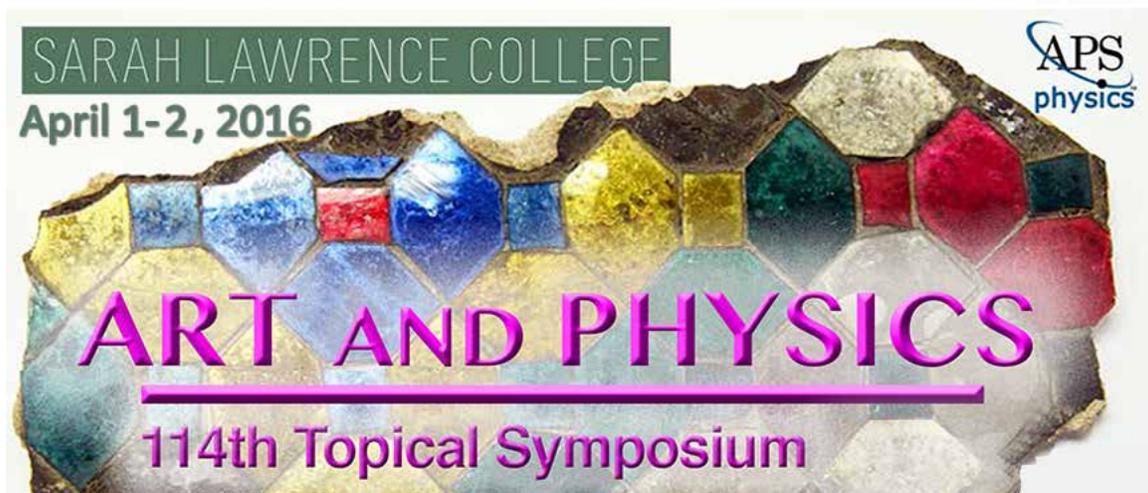
There was a many year gap in newsletters published by the section; therefore I want to feature a previous symposium in upcoming newsletters to help catch everyone up on the great experiences that have taken place.

Spring 2016

The 114th Topical Symposium of the APS New York State Section took place on April 1-2, 2016, at Sarah Lawrence College with the theme of "Art and Physics." Our keynote speaker was Kim Bernard from Harvard lecturing on "Interactive and Kinetic Sculpture."

Just like many of our other symposia, we had many great speakers on this topic as well as a great student poster session. Our host, Scott Calvin, gave out synchrotron books to all who were interested. What a great kinetic way to get across the great work done at synchrotrons.

Kudos for a great symposium!



Synchrotron books were distributed at the 114th Topical Symposium.