

St. John's University ΣΠΣ Chapter Induction Ceremony

What Physicists Can Do to Solve Emerging Issues in
Our Environment?



St. John's University
Jamaica, NY
April 6, 2016

St. John's University Chapter of Sigma Pi Sigma held its annual Induction Ceremony on Wednesday, April 6th of 2016 in Marillac Terrace. A total of nine new members were inducted to Sigma Pi Sigma. As the public is becoming increasingly aware of environmental issues like climate change, the event also invited Dr. Stephen Schwartz of the Brookhaven National Laboratory to give a plenary talk on climate change. Dr. Schwartz is a renowned atmospheric scientist in particular in the area of atmospheric sulfur and acid rain, and served as the Chief Scientist of the Atmospheric Science Program of the United States Department of Energy from 2004 to 2009. We also invited our physics alumni whose careers are related to energy and environment to share their stories of using physics to solve various environmental issues. In addition, the event connected physics alumni with current students and local high school students through a water filtration project competition. Around sixty-five people attended this year's induction ceremony including: three local high school students, one special guest speaker, six physics alumni, around twenty-five current students of St. John's University including the inductees, more than twenty family members and friends of students and alumni, and ten faculty and staff members.

The six alumni attendees of the event were: Mr. Kenneth Armellino (B.S., '89), Director of Environmental Science and Community Affairs at Covanta Energy; Mr. John Gienau (B.S., '09), teacher at the Queens School of Inquiry; Mr. Shadab Hassan (B.S., '15), graduate student at NYU-Poly; Mr. Bill Lauto, Environmental Scientist, Energy & Sustainability Consultant and President of his own consulting firm, Going True Green; Mr. Orlando Lopez (B.S., '15), research assistant at Brookhaven National Laboratory; Mr. Damon Urso, P.E. (B.S., '73), Project Manager at Nassau County Department of Public Works.



Special guest speakers of the event were (from left to right): Mr. Bill auto; Mr. Kenneth Armellino, P.E.; Dr. Stephen Schwartz; and Mr. Damon Urso.

Also attending the event were three local high school students and two administrators of the St. John's University Science and Technology Entry Program (STEP), and family members of the high school students. Teaming with the STEP program, the St. John's University Chapter of SPS has been conducting a total of thirteen physics workshops for the students in the STEP program since fall 2009 and such outreach activities have provided us opportunities to connect with local high school students. Having some of these high school students to attend our Sigma Pi Sigma induction ceremony would allow us to enhance this connection and inspire them to pursue STEM careers.



The local high school students of the St. John's University Science and Technology Entry Program (STEP) and their family members, and the program's administrators were invited to attend the event.

The event began with an announcement from Mr. Thomas Campbell, the 2015-2016 president of St. John's chapter of Society of Physics Students, about the project competition. Teams are required to build a water-filtration apparatus using supplied materials including sand grains of different size, char coals, wood chips, and straws. The completed water-filtration apparatus will be judged from three aspects: creativity, efficiency, and technicality. Specifically, technicality is judged by the cleanness of the filtered water, measured using a spectrometer. The teams will have around thirty minutes to build the apparatus during the dinner buffet break.

The induction ceremony was officially opened at 6:00 pm by Dr. Mostafa Sadoqi, chair of the Physics Department at St. John's University, who welcomed physics alumni, high school students, current students, faculty and staff, and family members and friends of alumni and students to the event. In addition to inducting the new members, said Dr. Sadoqi, the goal of the

Sigma Pi Sigma induction ceremony is to form a strong bond between students, alumni, and faculty and staff. He said we were very fortunate to have Dr. Stephen Schwartz, a senior scientist at Brookhaven National Laboratory and an expert on climate change research, to share with us some of the important challenges in this field. He acknowledged the alumni who were joining us tonight to share their stories in solving the energy and environment problems facing our society.

Following the opening remarks by Dr. Sadoqi, Mr. Thomas Campbell, the president of St. John's University chapter of SPS, presented the mission and history of Sigma Pi Sigma and emphasized the various roles that Sigma Pi Sigma plays in servicing our society. In fact, as pictures of St. John's University SPS helping high school students from the STEP program were shown on the power point, the audience gave a big applause to the students and administrators of the STEP program attending the event.



Mr. Thomas Campbell, the 2015-2016 president of the St. John's University chapter of SPS, was presenting the mission and history of Sigma Pi Sigma.

Dr. Huizhong Xu conducted the induction of new members. As the inductees' names were called, each inductee came forward to receive his or her membership certificate and ID card. The new inductees were congratulated by the audience with a big applause for their outstanding achievements. With the induction of nine new members this year, St. John's Sigma Pi sigma Chapter has inducted 65 members in the last seven years and a total of 78 members since its establishment in 1973. Dr. Xu congratulated all inductees and conducted the charge to new members, and encouraged them to continue their commitment to honorable scholarship, to assist the development of interest in physics at all possible levels, to provide fellowship as traditional physicists or 'hidden physicists' to his or her professional community, and to offer their collective wisdom and perspective in the service of the larger society. In particular, he encouraged the new inductees with his personal motto: with physics, you can do anything!



Vincent W. Pizzuto, a physics senior at St. John's University, was inducted to Sigma Pi Sigma.

Next, Dr. Xu introduced the event's special guest speaker, Dr. Stephen Schwartz, to give a plenary talk on climate change. Dr. Schwartz is a senior scientist at the Brookhaven National Laboratory. His current research interest centers on the influence of energy related emissions on climate, with a focus on the role of atmospheric aerosols. Dr. Schwartz served as chief scientist

of the Department of Energy's Atmospheric Science Program from 2004 to 2009, and has been a contributing author to the 1992, 1995, 2001, and 2007 assessment reports of the Intergovernmental Panel on Climate Change. Dr. Schwartz first congratulated all inductees, and then presented a very interesting talk titled “The Greenhouse Effect, Climate, and Climate Change”. In his talk he challenged the audience with a riddle which is about the balance between the energy intake and the energy radiated by a person. Dr. Schwartz then used the riddle to introduce energy received and radiated by the planet Earth and discussed the role the atmosphere layer plays in balancing the Earth’s energy and setting its temperature. He then discussed how increase of the greenhouse gas in the atmosphere has disrupted this balance and caused climate change in the last 150 years. Dr. Schwartz interacted a lot with the students throughout his talk, and answered many questions from the audience following his talk.



Dr. Stephen Schwartz, senior scientist at the Brookhaven National Laboratory, was presenting a plenary talk titled “The Greenhouse Effect, Climate, and Climate Change”.

Following Dr. Schwartz's talk, all attendees were invited to enjoy a buffet dinner. During the buffet reception, some of the students and the alumni guests held conversations in small groups to get to know each other and exchange thoughts on the topic of climate change and career options for physics majors. The conversations were very friendly, positive, and stimulating. During the buffet reception, teams were also working on their water-filtration apparatuses. Upon completion, the apparatuses were judged based on creativity, efficiency, and technicality. The filtered water coming out of most apparatuses was quite clean and comparable, thus the cleanness of the water had to be determined by measuring absorbance with a spectrometer. In the end, the apparatus made by the high school students team produced the cleanest water and won the top prize (32 GB USB drives)!

Around 8:00 pm, our alumni guests were introduced by Dr. Xu to share their education and career experiences with our students. The event's first alumni speaker was Mr. Kenneth Armellino (B.S., '89), Director of Environmental Science and Community Affairs at Covanta Energy. He recalled his education experience at St. John's, and was grateful to our physics professors for giving him a challenging yet rewarding St. John's experience! He talked about his over twenty years of career experience in the business of waste recycle: from knowing nothing about the field to realizing how resourceful waste really is. At the end of his talk, Mr. Armellino congratulated all inductees and asked them to feel free to contact him if they have any questions or are interested in having a tour of Covanta Energy.



Mr. Kenneth Armellino (B.S., '89), Director of Environmental Science and Community Affairs at Covanta Energy, was speaking about his over twenty years of career experience in the business of waste recycle.

Following Mr. Armellino's talk, Mr. Bill Lauto, Environmental Scientist, Energy & Sustainability Consultant and President of his own consulting firm, Going True Green, shared with the audience his views on various energy and environment issues. Mr. Lauto first congratulated all inductees and then discussed examples in our everyday life such as the number of garbage bins we take out every day and the power of air conditioner needed to match the size of a house to illustrate some of the basic points in energy conservation. He ended his talk with a power point illustrating that everything is connected through a giant web of network, and inspired our students to prepare themselves as much as they can today in order to tackle the world's most challenging problems tomorrow!



Mr. Bill Lauto, Environmental Scientist, Energy & Sustainability Consultant, was sharing with the audience his views on various energy and environment issues.

Our last guest speaker was Mr. Damon Urso (B.S., '73), Project Manager at Nassau County Department of Public Works. Mr. Urso shared his education and career development experience with students, and talked about the huge amount of engineering knowledge involved in the project he was currently working on. Specifically, he discussed the engineering challenges in building “a giant bathtub” surrounding the waste water treatment plant to protect it from fierce storms such as Sandy.



Mr. Damon Urso, P.E. (B.S., '73), Project Manager at Nassau County Department of Public Works, was sharing his career experience in the field of waste water treatment.

At the end of each presentation, Dr. Xu presented the guest speaker a Certificate of Appreciation and a gift to thank them for taking time out of their busy schedule to come to St. John's and to inspire our physics students. Around 9:00 pm, Dr. Xu concluded the ceremony by encouraging all students to get the most out of their education and be open about what they can do with a physics degree! He also thanked everyone who came to the induction ceremony and acknowledged the generous support from the SPS National Office and St. John's University that made the event possible and a great success!

Expenses:

Food, Beverage, and Utensils:	\$901.40
Gifts for Alumni:	\$65.00
Materials for the Project Competition:	\$83.33
Prizes for the Project Competition:	\$147.60

Total: \$1197.33



Attendees at the 2016 St. John's University Sigma Pi Sigma Induction Ceremony!



Dr. Schwartz challenges the audience with a riddle!



Students pose for a nice photo!



Students and recent alumni pose for a nice photo!



Students and faculty pose for a nice photo!



Students pose for a nice photo!



Faculty and staff pose for a nice photo!



Students and family members pose for a nice photo!



Alumni pose for a nice photo!



Students and family members pose for a nice photo!



Students are working on their water-filtration apparatus!



Teams are displaying their water-filtration apparatuses!



Happy to be a new inductee of Sigma Pi Sigma!



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St. John's University physics students pose for a nice photo!



A group photo of the 2016 inductees (from left to right): Michael R. Beattie, Sahar Khan, Vincent W. Pizzuto, Mitchell A. Sofletea, Rachel R. Tyo, and Steven M. Dimaris. Inductees Dante A. Addona, Natalie M. Macdonald, and Alexander Huang were absent from the photo.