

Shepard Hall and Quadrangle - City College of New York (CCNY) 1904

Chemical Engineering Newsletter

The Grove School of Engineering at The City College of New York 09/2020

Chemical Engineers Lead Research and GSOE at CCNY

Rosemarie "Rose" Wesson, Associate Dean for Research in GSOE and Chemical Engineering (ChE) Professor, has been appointed as the Interim Associate Provost for Research at CCNY effective July 1, 2020. Dean Wesson joined CCNY in 2015, and has been an active and engaged member of the ChE Department even with the demands on her time and talents in the Dean's office. She received her BS degree from MIT and her PhD from U Michigan. Before coming to CCNY, Dean Wesson worked at Dow Chemical, at Louisiana State University, and most recently at the National Science Foundation Directorate for Engineering.

Dean Wesson prioritizes personnel development. Upon arriving at CCNY, she led an effort to provide institutional resources to support junior faculty in GSOE and across CUNY, and inaugurated the CUNY NSF CAREER Proposal Writing Bootcamp with a 30% success rate among eligible faculty. Dean Wesson says that in her new role in the Provost's office, she plans to "increase the visibility of research at City College and looks forward to working with the CUNY Office of Research and



Prof. Rosemarie Wesson, Interim **Associate Provost for Research** and Prof. Alexander Couzis. **Interim Dean GSOE**

other CUNY colleges to promote research collaborations throughout CUNY." Alexander "Alex" Couzis, Professor of ChE, has been appointed Interim Dean of GSOE effective July 1, 2020. Prof. Couzis has been

a faculty member at CCNY since 1994. He received his BS degree in ChE from the National Technical University in Athens, Greece and his MS and PhD degrees in ChE from U Michigan. Before joining CCNY, Prof. Couzis was a member of the research staff at International Paper developing novel polymeric materials and coatings. At CCNY, he established an internationally-recognized research program focused on the study of the dynamic phenomena at solid-liquid interfaces that to-date has produced 19 PhD students.

Prof. Couzis served as Chair of the ChE Department from 2008 to 2013. He oversaw significant renovations of teaching and laboratory space, established the CUNY Energy Institute, and hired new faculty. He is well known to his colleagues for his upbeat energy

and open door policy. Prof. Couzis says, "There will be challenges ahead, but our work at the Grove School of Engineering is now more critical than ever. I am inspired by this opportunity, and I hope you'll share your thoughts, insights, and recommendations in the days to come."

Read more at: www.ccny.cuny.edu/chemeng/news

The City

Department website: www.ccny.cuny.edu/chemeng



MESSAGE FROM THE CHAIR



Prof. Ilona Kretzschmar, Chair

Dear Alumni and Friends of the Department,

Hopefully this newsletter finds you in good health and high spirits! As I am writing this letter, I am pondering the ways in which all of our lives have changed since I last wrote to you. We are dealing with a full-blown pandemic and the unprecedented impact it has had on every individual in our community. Social interactions between people have profoundly changed over the past six months. We are also seeing social and racial unrest of a magnitude that I have not experienced in the 20 years I have been in the US.

Nonetheless, I am happy to report that the department has successfully adjusted to the "new normal" and yes, while we still mourn the loss of in-person interactions, the ChE community at CCNY is thriving and continues to move forward. The Fall 2020 semester starts on an excellent note! Prof. Elizabeth Biddinger is officially a tenured Associate Professor of ChE. Congratulations, Prof. Biddinger!

COVID-19 hit in early March. In an inconceivably short time NYC closed down, from a city that "never sleeps" to days and



Associate Professor Elizabeth Biddinger

nights filled only with the eerie sound of sirens. Students, faculty, and staff pivoted to on-line education **Elizabeth Biddinger** with grace and skill. Even our annual External Advisory Board (EAB) meeting was held on-line. The on-line nature of our interactions



Class of 2020 and Prof. Xi Chen (pre-COVID-19)

turned out to have a positive side effect. We had our first-ever on-line senior design presentations that saw participation from our EAB and international collaborators culminating in the inaugural EAB-sponsored Senior Design Prize!

Sadly, all graduation ceremonies were canceled, but we still managed to graduate the Class of 2020 with 44 undergraduate students. They persevered when confronted with the impossible and will always be special to the Department. The semester ended on a good note with Silvija Skemaite being selected as the GSOE 2020 Salutatorian.

The summer brought a new crisis - social unrest. Discussions about social justice and racial bias led



Silvija Skemaite (ChE BE '20), GSOE Salutatorian 2020

we had a significant change in leadership at GSOE. Dean Gilda Barabino became the new President of Salutatorian 2020 Olin College, while Prof. Alex Couzis took over as Interim Dean of GSOE. Prof. Rose Wesson took on research for all of CCNY as the new Interim Associate Provost for Research. What a whirlwind and momentous six months! As Chair, I am grateful for the ChE CCNY community's resilience and would like to also thank our alumni for stepping up and supporting us in these tumultuous times.

Enjoy the Newsletter and I look forward to hearing from you!

to new student support initiatives starting in Fall 2020 such as the ChAMP and Buddy programs. Then,



Jae Beam You ChE BE '11

- Ilona Kretzschmar

Chair's Alumni Highlight: I am excited to share with you that alumnus Jae Beam You (ChE BE '11) will be joining Kyungpook National University in South Korea as Assistant Professor starting March 2021. Looking back, he says it has been a long, yet enjoyable journey and as a new chapter of his life opens he is delighted to take on new challenges. Jae received his BE in ChE in 2011 from the Department of Chemical Engineering at The City College of New York, then he moved on to pursue graduate studies at the Korea Advanced Institute of Science and Technology (KAIST). He reports: "The excellent education I received from CCNY really helped me get through the tough graduate courses. Also, my research experience in Prof. Tu's and Prof. Lee's groups gave me a flavor of what it is like to be part of a research group." During his time at KAIST, he mainly worked on the study of turbulent mixing in microfluidic channels as well as the develop-

ment of vapor-phase deposited functional polymer thin films and their applications to novel microfluidic systems. After receiving his PhD in Chemical and Biomolecular Engineering from KAIST in 2017, he moved to Canada for a postdoctoral fellowship at the University of Toronto and the University of Alberta to broaden his research scope. Currently, Jae works on the formation and growth of surface nanodroplets and their applications toward chemical sensors. In the next few years, he plans to integrate polymer functional thin films with surface nanodroplets for new material synthesis as well as for the development of chemical and biomedical analysis platforms. Congratulations Jae, you make your alma mater proud!

Alumni Responses & Other Memories

Responses to the 1958 ChE Faculty and Staff Picture

First of all, thank you to all of you who responded to our March 2020 Newsletter challenge! We were delighted by the many friendly and encouraging comments we received and the interesting stories you shared. Please, keep them coming! Some of you reported receiving the newsletter for the first time. If that was the case, please, make sure to sign up for the ChE Department Newsletter so that you continue receiving it. You can do so by pressing the "subscribe" button in the e-mail that you received or click here.

The alums with the best memories are Dr. Alan Peltzman (ChE BE '60, PhD '67), the second ChE PhD program graduate, and Dr. Lloyd Abrams (ChE BE '61). Dr. Peltzman managed to identify all 15 people in the photo (although there is some doubt about Andrew T. Ryan's assignment). Dr. Abrams was the fastest to respond and identified 8 of the 15 people in the photograph. He also recalled where the picture was taken: "Graff, Pfeffer, and Kowalski were all teaching assistants then and had their desks near where the picture was taken. I recalled that because there was a platform nearby that housed a plate & frame filter - we had to filter a chalk slurry. As you might imagine, we assembled the filter plates incorrectly, the pressure built up and then popped and spritzed the chalk slurry onto their desks!" Both Dr. Peltzman and Dr. Abrams will receive a little gift from us for their help in identifying the people in the photograph.

Solution:



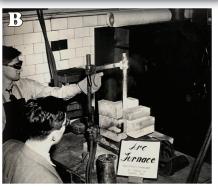
Back Row: John Foth (Technician), Prof. Robert Graff. Prof. Minocher K. N. Patel, Gabe Kousou-(Technician). rou Middle Row: Prof. Seymour C. Hyman (Assistant Dean), Chick Charles Cherubin (Technician), Prof. Robert Pfeffer, Prof.

Ronald Kowalski, Prof. S. S. Lichtblau, Prof. Harvey List. **Front Row:** Prof. Henry Myers, Andrew T. Ryan (Technician) (?), Prof. Alois
X. Schmidt, Sally Abrian (Secretary), Prof. Morris Kolodney

Another Walk Down Memory Lane

We found a few more pictures that we thought would be interesting to share with you. Some have rather curious notes and descriptions written on the back of them and maybe some of you recall the stories accompanying them. If you do, please e-mail (ikretzschmar@ccny.cuny.edu) with your information and help us learn about the events that led to these photos!









A) Warren Steward of BSL and Tom Hanratty, B) Tech Day, Jan 27. The Arc Furnace, one of the exhibits on display for the public in the chemistry building at CCNY, C) 1954, and D) Alberto LaCava "explains" to Tom Fitzgerald with "Rex" Reklaititis in back (Dean Marston approves).

Those captions are all we have. The food looks delicious in A, but what was celebrated? Who remembers the Arc Furnace and what it was used for? For C, all we have is the date. What are the guys doing? And what is Alberto explaining to Tom in D?

Persevering and Helping Amid COVID-19

Spring 2020 proved to be a very trying semester for students, faculty and staff. Around the second week of March, the COVID-19 case-load in NYC skyrocketed and CUNY gave the order to discontinue in-person courses. Within a two week span, we went from in-person on campus teaching and research to fully on-line with all research laboratories shutdown.

Distance Learning in the Age of COVID-19

While it was challenging at times, we adapted and managed, as expected of engineers. First, CUNY gave faculty and students a one-week recess to pivot to remote education with a NYC shutdown imminent. Faculty had to learn how to operate platforms such as Blackboard Collaborate Ultra, Microsoft Teams, Zoom, or Webex before continuing to teach their courses in an on-line format. Students, in turn, scrambled to adjust to this new reality of at-home learning. Some students were in the unfortunate position of having to change their entire living situations, for example, moving out of on-campus dorms or breaking their apartment leases, moving back into to their parents' homes, and, in a few cases, leaving the US to return to their home countries.

Faculty not only had to learn how to use on-line platforms, but also how to present their lectures (and labs!) in a way that did not compromise the course material or learning experience, and continued to hold up the high standards of education expected at The City College of New York. Students, on the other hand, had to deal with many technical issues ranging from unstable connectivity to not having Internet access at all. Some students reported having to share a single computer with several other members of their household. These hasty arrangements were compounded by economic realities that (literally and figuratively) hit uncomfortably home for our students. Many students reported having lost their jobs, or having other members of their household suffer unemployment. Other students worried about bringing home the virus or being stressed because a family member exhibited COVID-19 symptoms. A number of students experienced the heart-breaking loss of friends and family members.

Students in general, expressed nervousness about on-line learning and bemoaned the fact that on-line teaching was just not the same as in-person teaching, partly because the social and physical interaction between peers, instructors, and teaching assistants was gone. Emotionally, many felt incredibly isolated and unable to focus or stay motivated to do their coursework. While the College did help by giving out free laptops, tablets, and wi-fi hotspots to students in need, and kept a well-stocked food pantry for

those with food insecurity, it was still a very difficult transition for most.

Nevertheless, our students and faculty persevered and rose up in creative ways to the challenges of learning on-line and dealing with the new realities of COVID-19. 44 UG, 1 MS and 10 PhD students graduated as the Class of 2020 in June. COVID-19 and the lock-down of NYC made an in-person graduation impossible. However, the Department organized an on-line celebration that brought together a group (60+) of graduates, their families and faculty. While it was not the same thing as a "real" graduation, students overall appreciated the effort and support. On a very positive note, Silvija Skemaite (ChE BE '20) seen in the last column bottom most picture was chosen as the 2020 Grove School of Engineering Salutatorian.



Class of 2020 Graduation Celebration with Family and Friends on ZOOM

Since then, several of our Class of 2020 graduates have started full-time jobs or internships (pivoted fully on-line) and are staying engaged with the ChE department by taking advantage of the many on-line gatherings the department offers. We have also reopened our research, and PhD students are back on track with their thesis work.

How can you as an alumna/us engage?

We often get requests such as "What do you need?" and "How can we help?" We appreciate any ChE alumni who can help out in any way—whether it be through a monetary contribution or volunteering to mentor a ChE senior about to embark on a journey into industry, providing opportunities for internships or full-time positions, helping the ChE department reach out to and connect with other alumni, or helping spread the word about our ChE degrees to others (BE, ME, and PhD). All monetary contributions will be put to good use, for example, purchasing necessary equipment for better on-line learning experiences, paying for a professional videographer to videotape labs, providing emergency funding for students who struggle to pay tuition, or supporting scholarships.

Interested in any of these activities? Please, contact Prof. Ilona Kretzschmar at: ikretzschmar@ccny.cuny.edu

Introducing the ChAMP and Buddy Programs

In times of a pandemic, we all have to help each other move forward. Our undergraduate students reached out to our alumni and came up with two fantastic programs that provide needed support for all students and will continue post-COVID-19.

The Chemical Engineering Alumni Mentorship Program (ChAMP)

In summer 2020, Omega Chi Epsilon (OXE) collaborated with Long Ng (ChE BE '18), a commercialization engineer at PepsiCo, to initiate an unprecedented Chemical Engineering Alumni Mentorship Program (ChAMP). The main goal of the program is to build a supportive community for ChE undergraduates and alumni in conjunction with the ChE department at CCNY. ChAMP aims to equip our graduating students with stronger soft and technical skills that will meet the ever changing challenges of the job market. With ChAMP, we strive to achieve a 50% increase in securing job offers for our newly-minted ChE BE graduates.

We conducted a pilot program that lasted for five weeks in the summer of 2020. The mentors were ChE alumni and the mentees were current seniors expected to graduate in Spring 2021. All of the conversations were mentee-driven. Student mentees learned to take initiative and take charge of their self-improvement with the guidance of their mentors.

Giancarlo Zirpolo, a senior, said, "ChAMP helped me build meaningful connections and prepared me for the process of job hunting, which sounded tedious and daunting at first." He highlighted that his mentor, Nanette Hernandez (ChE BE '19) featured on page 8, gave him really good feedback on interview, career fair, and conference strategies, which helped him feel more confident about the upcoming transition from college to industry.

The most frequent topics of discussion were related to mentees' achievements, plans after college, job search techniques, and skills related to their fields of interest. Student mentees greatly benefited from the program by having experienced professionals with first-hand experience guiding them. Mentors also gave mentees hope amidst the ongoing pandemic, which has affected everyone in the workforce and changed the landscape of the economy.

Participating alumni enjoyed their engagement with the students tremendously. Oseloka Chira (ChE BE '18) who mentored Yujie Wei

Giancarlo Zirpolo (Class of 2021) was mentored in summer 2020 by Nanette Hernandez (ChE BE '19)

and Luting Zheng, both seniors, said that his mentees' questions "inspired me to look at my past journey from a new lens and it was fulfilling to be able to share my past experience to those who are in the same shoes I was in." Alumni mentors were encouraged by how receptive and motivated their mentees were, making it an enriching experience for both mentors and mentees.

With such positive feedback from the pilot program participants, we are excited to announce the launch of ChAMP for the coming academic year. We are now actively recruiting ChE alumni who are interested in building our ChE community and extending their networks. If you are interested in serving as a mentor, please contact Long Ng at longngche[at]outlook.com as soon as possible since we are looking to kick off the program by late September.



The Chemical Engineering AIChE Buddy Program

AIChE President Connie Aleman, Class of 2021, and Vice President Rabbi Alam, Class of 2022, had equally difficult experiences as transfer students in the Chemical Engineering (ChE) program and decided to do something about it. Together with other AIChE members, they envisioned the AIChE Buddy Program.

AlChE's Buddy Program has officially opened its applications to help facilitate students' transition into the new Fall 2020 semester. The Buddy Program is a peer mentoring program designed to help incoming freshmen and transfer students successfully navigate their first semester as ChEs. Students new to the Chemical Engineering Department are paired with upperclassmen and women who can offer advice, guidance, and support. Although this is NOT a tutoring service, mentors and mentees will be able to discuss course scheduling, share important knowledge about conferences and scholarships, and provide an overall picture of ChE life at CCNY.

Department Dialogue About Systemic Racism

As the murder of George Floyd earlier this year galvanized the country and brought Black Lives Matter (BLM) to the forefront of the daily news, it was hard for anyone not to be affected. The ChE Department as a whole felt it was important for the ChE community to address the issue of systemic racism. In an effort to foster a greater sense of community and show support for the BLM movement, the ChE Department initiated a dialogue with ChE department students, staff, faculty, and alumni about systemic racism and underlying biases and behaviors. For 11 consecutive weeks over the summer from early June to late August, the Department held once-a-week "Tea Times" on Wednesday afternoons via Zoom and invited guest speakers such as GSOE's Associate Dean Prof. Ardie Walser and various ChE alumni to help facilitate the discussion of topics related to systemic racism.

Department Tea Times

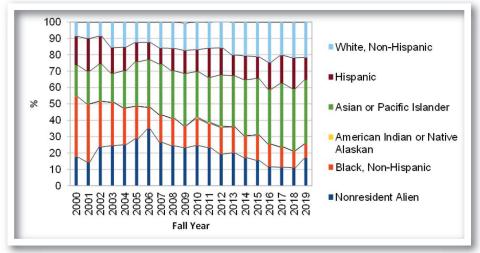
June 10th, 2020 was declared #ShutDownSTEM day by a coalition of STEM professionals and academics to support and take action for Black lives. The Department organized a special tea time with the topic: "Racial Injustice in STEM and How Can We Engage?" The goal of the discussion was to identify ways the Department and its constituents could spot unconscious bias, create a respectful and supportive professional environment, and build a highly inclusive group of scholars in the department.

The spirited discussions that ensued were interesting, eye-opening, and sometimes painful. Several students (both minority and non-minority) expressed how they felt with the country on edge and how the situation impacted them. Some shared their own personal experiences of being on the receiving end of racial biases and racist behavior. Most importantly, ChE students felt "disconnected" from ChE faculty, partly because there "wasn't anyone who looked like them," and made a point of comparing the ChE faculty to the more racially diverse Math department faculty they encountered at CCNY. Students were pleasantly surprised to meet for the first time on Zoom, the GSOE Associate Dean of Student Affairs, Prof. Ardie Walser, a Black alumnus of CCNY who spoke of his own experiences and offered plenty of insight. It became clear that more discussions were needed, thus the Department Tea Times were born!

Weekly topics for the Department Tea Times were chosen with the students' input and included:

- Racial Composition of the ChE Department
- Student Attrition, Retention, and Success
- "10 Signs of Institutionalized Racism"
- MLK's 'Letter from Birmingham'
- The concept of 'meritocracy as harmful'
- The 'Impostor Phenomenon'
- 'Professional Interactions in the Workplace and the Impact of Gossip'

Chair Prof. Ilona Kretzschmar acknowledged the students' concerns that the Department needed to be more diverse and reaffirmed the Department's commitment to diversification of its faculty. She discussed difficulties and barriers toward attracting a diverse faculty and shared statistics of the percentage of minorities in the ChE field and student body at CCNY—both very slim. In Fall



Undergraduate Enrollment in ChE at CCNY by Ethnicity. Data provided by A. Alting, PhD, GSOE's Director of Planning, Reporting and Assessment.

2018, for example, the percentage of Black ChE Students at CCNY was 11% (down from 37% in 2000). The national percentages of Black Chemical Engineers and Black women and men in the workforce in 2018 were listed as 3.55% and 11.7%, respectively, on https://datausa.oi. Finding a rather substantial decrease in the percentage of Black students in ChE at CCNY segued into a discussion of the rates of attrition, retention, and graduation of minority students in the ChE program that facilitated ideas for new programs and approaches to increase the number of minority students over the next few years.

The outcomes of the Tea Times were sobering and greatly effective in creating a much-needed sense of community in the department during an incredibly stressful time with the twin issues of COVID-19 and racial unrest embroiling the country. One outcome was a revision of recruitment strategies for new students, especially those from underrepresented minority groups. Another outcome was the creation of a "New Student Orientation Mixer" led by ChE students and club officers to introduce incoming freshmen and transfer students to the ChE Department. The mixer, in turn, led to the formulation of a pilot "Freshmen and Transfer Student Seminar," a proposed weekly course that will cover various topics throughout the semester and keep new students engaged by preparing them to become a vibrant part of the ChE community.

ChE Research Highlights

Contact Angle Measurements on Cyclopentane Hydrates

Clathrate hydrates, also called gas hydrates, are crystalline compounds with a hydrogen-bonded structure that can 'cage' various organic molecules, such as methane, propane or cyclopentane, or other small molecules such as hydrogen. It has been shown that the wetting characteristics of clathrate hydrates strongly influence their behavior in flow assurance situations, but these properties are not well-characterized. In this work, Fanny Thomas and co-authors developed a method to measure the contact angle of various liquids on cyclopentane hydrate, a structure II clathrate hydrate that



Fanny Thomas (ChE PhD '20) and Prof. Morris

forms at atmospheric pressure. The method includes a protocol to obtain a smooth hydrate surface, followed by image-based contact angle measurements.

Fanny Thomas (ChE PhD '20) recently completed her degree via the Department's first Zoom-based defense on

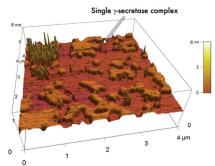
April 24, 2020. Taking advantage of the benefits of the web-based platform, attendees from locations spanning at least seven time zones gathered from several US cities and as far away as France!

Journal Reference: Fanny Thomas, Didier Dalmazzone, Jeffrey F. Morris in *Chemical Engineering Science* 229, 116022 (2021).

(3) Chloroform / Brine CP hydrate

A mm-scale chloroform drop in brine formed by "freeze-thaw" steps.

γ-Secretase Partitioning into Lipid Bilayers Remodels Membrane Microdomains after Direct Insertion



AFM image of γ-secretase

Since 2008, a collaboration between Yue-Ming Li's Lab at Memorial Sloan Kettering Cancer Center (MSKCC) and the Gilchrist Lab at CCNY has been directed at probing the β -amyloid-plaque forming enzyme, γ -secretase, a pivotal protease with roles in Alzheimer's disease and cancer. In this study, to directly visualize the distribution of γ -secretase and its substrates in raft-containing membranes, the team utilized AFM to study the enzyme and its substrates at the single-molecule level in planar membrane models



Prof. Gilchrist and William Houlihan (ChE PhD '19)

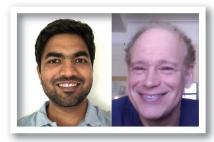
for the first time. The method enables studies of large numbers of enzymes over variable

temperatures in large regions at a single-molecule resolution over hours in intact lipid bilayers. The work was carried out by Bill Houlihan (ChE PhD '19) and Marilia Barros, a postdoctoral researcher in the Li Lab who is now at Bristol Myers Squibb. Bill is currently a postdoctoral researcher in the Biomedical Engineering (BME) Department at the University of Rochester, where he is in the McGrath Lab, and has been working to set-up the BME Department's core microscopy facility.

Journal Reference: Marilia Barros, William J. Houlihan, Chelsea J. Paresi, Matthew Brendel, Kevin D. Rynearson, Chang-Wook Lee, Olga Prikhodko, Cristina Cregger, Geoffrey Chang, Steven L. Wagner, M. Lane Gilchrist, and Yue-Ming Li in *Langmuir* 36, 6569-6579 (2020).

Pre-atherosclerotic Flow and Oncotically Active Solute Transport Across the Arterial Endothelium

Peter Agre received the Nobel Prize in Chemistry in 2003 for his discovery of a ubiquitous family of proteins - called aquaporins - that sit in hydrophobic membranes and act as hydrophilic tunnels for extremely selective gradient-driven trans-membrane water flow. Blood pressure drives water and solutes from the blood between the endothelial cells that line the vessel wall and drives pure water through endothelial cell aquaporins, both into the wall. This latter water flow can dilute the wall concentration of solutes such as the "bad" (LDL) cholesterol and thereby likely slow its kinetics of binding in the wall, the first stage of atherosclerosis or



Shripad Joshi (ChE PhD '12) and Prof. Rumschitzki

hardening of the arteries that underlies heart attacks and strokes. Shripad Joshi's paper tackles the question related to water flow and found that up-regulating the amount of endothelial aquaporins could enhance the aquaporin-facilitated dilution flow at physiological blood pressures. Such an enhancement has the potential to drastically slow the onset of atherosclerosis., i.e., artery disease, in most years the number-one killer in the US and in all Western countries.

After an initial stint at Corning Inc. as a process modeling engineer, Shripad Joshi (ChE PhD '12) is now a senior scientist at Proctor & Gamble.

Journal Reference: Shripad Joshi, Kung-Ming Jan, and David Rumschitzki in *Journal of Theoretical Biology* 499, 110275 (2020).

Connect, Engage, & Contribute

Connect

There are many ways to connect with your alma mater. Please check the boxes that interest you.

I would like to visit the campus.

I would like to speak about my experience to students.

I would like to attend departmental seminars on technical & research topics (Zoom, Mondays 2-3 PM)

I would like to connect via LinkedIn group "CCNY ChemEng Alumni."

I would like to mentor students.

You can always email us with updates or questions at: chealumni@ccny.cuny.edu

Engage



Nannette Hernandez, ChE BE '19

Nannette has supported our CCNY students by coming back to share her advice on post-graduation planning as a mentor for the CCNY Chemical Engineering Alumni Mentorship Pilot Program (ChAMP). After graduating from CCNY in 2019, Nannette began her career with the Naval Surface Warfare Center, Philadelphia Division, (NSWCPD) working as an in-service engineering agent providing technical support services for oxygen and nitrogen gas production systems onboard U.S. Navy standard ships. She worked within the organi-

zation, using her chemical engineering background to perform conditional system assessments, troubleshoot equipment failures and support investigations for repair strategies. Nannette is continuing her position with NSWC in Philadelphia, Pennsylvania, where she supports the development and implementation of life-cycle sustainment initiatives. In addition, Nannette has leadership responsibility in the integration of defense maintenance strategies for propulsion systems. If you are interested in contacting Nannette, she can be reached via LinkedIn (https://www.linkedin.com/in/nannettehernandez) or e-mailed at: nannettehz@gmail.com.

Contribute

Please fill out this form to provide an information update and/or to make a donation to the Department of Chemical Engineering at CCNY.

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Phone _____ Contact email_____ Date_____
\$ ____ towards Fund for Excellence

\$ _____ towards Undergraduate Student Activities
\$ _____ towards Graduate Student Development _____ A Gift in Kind

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To leave a gift in your will, simply share this sentence with your attorney or financial planner:

"I bequeath \$____or____% of my estate to the Department of Chemical Engineering, CCNY, Steinman Hall, T322, 140th Street & Convent Avenue, New York, NY 10031."

I have included the Department of Chemical Engineering (CCNY) in my will.

Checks may be made out to: Department of Chemical Engineering (CCNY)

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Please return information/pledge card and checks to: Department of Chemical Engineering Office, City College of New York, Steinman Hall Room 322, 140th Street & Convent Avenue, New York, NY 10031

Information-only updates may be sent to: chealumni@ccny.cuny.edu