

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

Chemical Engineering Newsletter

Grove School of Engineering at The City College of New York 03/2019

ChE Department Receives \$1.05 M to Grow its PhD Program

The Department of Chemical Engineering has been awarded more than \$1M to train new doctoral students in the field of chemical engineering over the next three years. The successful effort was led by Prof. David Rumschitzki. It provides funding through a \$900K Graduate Assistance in Areas of National Need (GAANN) grant from the U.S. Dept. of Education with \$150K in supplementary support from CUNY. The project involves 12 researchers from Chemical Engineering and five reserachers affiliated with Biochemistry, Biology, Chemistry, and Physics. Delighted by the positive news, Prof. Rumschitzki says: "Earning the GAANN award as we celebrate our centennial is affirmation that the Grove School can compete with the best schools in the country -- It's a vote of confidence by both reviewers and the U.S. Dept. of Education that we have a first rate PhD program in chemical engineering".

The GAANN award sets up an integrated research and pedagogical program for interdisciplinary training of doctoral students. Running through Sept. 30, 2021, the program will train future PhD chemical engineers at CCNY. The grant enables the Department to double the size of our entering class for



Prof. David Rumschitzki

the next three years. The new doctoral students will be involved in research projects spanning our three major research efforts in Chemical Engineering namely energy & environment, interfaces & materials, and bioprocesses & health applications.

We are delighted about the increase of doctoral students as it supports: (i) a number of our new research efforts, for example, in novel battery design, evaporation-harvesting techniques, electrochemical conversion of biomass, and complex fluids with relevance for petroleum engineering, (ii) our ongoing research in atherosclerosis, biomembranes, catalysis, colloids, energy storage, interfacial phenomena, nanomaterials, and surfactants, and (iii) the research of our collaborators adding projects in the areas of molecular biophysics & biochemistry, environmentally-regulated protein & protein interactions, biomolecules & biomate-

rials, and molecular fluid mechanics. In addition, students will collaborate with the CUNY Energy Institute and the Benjamin Levich Institute for Physico-Chemical Hydrodynamics. The CUNY Advanced Science Research Center

(ASRC) will provide our doctoral students with cutting-edge shared scientific facilities.



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



MESSAGE FROM THE CHAIR



Prof. Ilona Kretzschmar, Chair

Dear Alumni and Friends of the Department,

A new year has started and I have been reflecting on all we accomplished in the past six months. We have again increased our alumni interactions by hosting a dinner with Scientific Design alumni and a day visit of David Blum (ChE PhD '72) with our PhD students, visiting with alumni in the Greater Houston Area (an area of particular interest to us due to its concentration of chemical industry) and celebrating our 2018 Shinnar Lecturer Arnold Stancell (ChE BE '58). We held our first ever matching challenge. Alumnus Peter Compo (ChE PhD '89) generously provided \$100,000 for the GSOE Anniversary Matching Challenge. We were able to raise nearly \$60,000 with the



3rd Place at 2018 Nationals CCNY's Chem-E-Car Team

help of alumni, students and faculty. Thank you so much to all of you who contributed! Every single dollar given made a difference and will be applied thoughtfully. I am delighted about our Chem-E-Car team's success. They placed 3rd at the 2018 AIChE National Competition with Zincotron stopping 12 cm from the line. A big THANK YOU to Prof. Biddinger for being an excellent AIChE Chapter Advisor for the past three years! CCNY's AIChE Chapter has done well hosting the 02/19/19 AIChE Metro New York Section dinner



Dean Gilda Barabino

meeting on Drinking Water Safety. On a slightly sad note, Mr. Nick Cromie, our beloved advisement manager, has move on to a new job. We wish him success with his new adventure!

Gilda Barabino, our Dean and affiliate member of the ChE faculty, has been inducted to the National Academy of Engineers for her "leadership in bioengineering research and inclusive models of bioengineering education and faculty mentoring" as her citation states. Congratulations, Dean Gilda Barabino! Prof. David Rumschitzki is on sabbatical in 2019. He is working with Prof. Yuval Shaked, a cancer biologist at the Technion, whose focus is on how anticancer treatments affect a tumor's microenvironment in ways that can foster tumor regrowth and metastasis. Prof. Rumschitzki's sabbatical will be used to test tumor persistence models developed by his group on annimal models. In addition, he will work with alumnus Prof. Amos Ullmann (ChE PhD '93) at Tel Aviv University on linear spatial and weakly nonlinear stability analysis of inclined stratified flows.

Barabino A number of our alumni have received recognitions. For example, Prof. Israel Wachs (ChE BE '73) has been inducted in the National Academy of Inventors for his contributions to heterogenous catalysis and Paul Farber (ChE BE '68) contributed as an editor to the 9th edition of Perry's Chemical Engineers' handbook (see special alumni highlight below).

Last but not least, we had Prof. Paula T. Hammond from MIT visit us as the 2018 Katz lecturer. Her lecture on "Electrostatic Assembly for Controlled and Tissue Targeted Release" was spectacular!



Paul Farber ChE BE '68

More details and news from our alumni, student/departmental activities, and Grove 100th anniversary events in the Newsletter. Enjoy and I look forward to hearing from you!

- Ilona Kretzschmar



2018 Katz Lecturer Prof. P.T. Hammond

Chair's Alumni Highlight: Paul Farber reports "When I was a Chemical Engineering student at CCNY (1963 – 1968) we used the 4th Edition of Perry's Chemical Engineers' Handbook. McGraw Hill updates Perry's every 10 years and I was honored to be asked to help edit, along with my friend and colleague Prof. Lou Theodore, Section 22 (Waste Management) in the new 9th Edition that was just released. Prof. Theodore and I assembled a group of highly qualified contributors for each of the areas of Section 22. Since I have been working in the area of Air Pollution Control Technology for many years, with over 50 papers and presentations, I also contributed to the update of the section "Air Pollution Management of Stationary Sources"."

HIGHLIGHTING RECENT ALUMNI



Dane Christie (ChE BE '13)



Charlie Corredor (ChE BE '09)



Julius Edson (ChE BE '12) Every year, we have graduates of our undergrdauate program enter PhD programs around the country (and the world!). Here, we highlight nine of them who recently received their PhDs.

CONGRATULATIONS ON THEIR SUCCESS!

Dane Christie, PhD, 12/2018 Princeton University, Thesis: "The spatial distribution of local glass transition temperatures in nanostructured block copolymers", Advisors: Drs. Rodney D. Priestley and Richard A. Register, Current Job: Material Scientist at Corning Inc., NY.

Charlie Corredor, PhD, 12/2015 U Washington, Thesis: "Methods to assess presence and biological impact of engineered nanoparticles", Advisor: Dr. Jonathan D. Posner, Current Job: Vice-President, Operations at OtoNexus Medical Technologies, Inc., WA.

Julius Edson, PhD, 11/2017 UC Irvine, Thesis: "Engineering physically active and genetically specific nanoantibiotics", Advisor: Dr. Young J. Kwon, Current Job: Business Development Associate at Zymo Research Corp; Co-Founder & CEO of Responsive Polymers Therapeutics, Inc., CA.

Rahul Jay, PhD, 12/2018 UC Riverside, Thesis: "Understanding the electrode/electrolyte interphase in magnesium-ion electrolytes with simple Mg salts", Advisor: Dr. Juchen Guo, Current Job: Postdoctral Fellow with Dr. R. Messinger at CCNY, NY.

Philip Liu, PhD, 12/2017 UT Austin, Thesis: "Next generation materials for microelectronics: I. Boron nitride nanotubes for thermally conductive insulators & II. block copolymer directed self assembly", Advisors: Drs. C. Grant Willson and Brian A. Korgel, Current Job: PTD Module and Device Yield Engineer at Intel Corporation, OR.

Stephen Ma, PhD, 05/2018 U Delaware, Thesis: "Controlling surface properties of polymer materials through photodirected thiol-ene wrinkle systems", Advisor: Dr. Christopher J. Kloxin, Current Job: TD Module and Integration Yield Engineer at Intel Corporation, OR.

Jude Phillip, PhD, 05/2016 Johns Hopkins University, Thesis: "Emergent patterns of cellular phenotypes in health and disease", Advisor: Dr. Denis Wirtz, Current Job: Postdoctoral Associate at Weill Cornell Medicine, NY.

Aleksey Ruditskiy, PhD, 06/2017 Georgia Tech, Thesis: "Nucleation, growth, and etching of noble-metal nanocrystals", Advisor: Younan Xia, Current Job: Looking, NY.

Ru (Chen) Xie, PhD, 05/2018 U Delaware, Thesis: "Toward hierarchical material design via block copolymers in a protic ionic liquid: self-assembly, functionalization, device fabrication, and commercialization", Advisor: Dr. Norman J. Wagner, Current Job: Senior Research Engineer at ExxonMobil Chemical Company, TX.



Rahul Jay (ChE BE '12)



Jude Phillip (ChE BE '10)



Philip Liu

(ChE BE '12)

Aleksey Ruditskiy (ChE BE '12)



Stephen Ma

(ChE BE '11)

Ru Xie (form. Chen) (ChE BE '13)

ALUMNI CHAPTERS & GUEST SPEAKERS

City College of New York Delegation Visits Alumni From Greater Houston Area



Dinner at the Post Oak Grill with (clockwise from bottom left): Alfred Chiu (ChE BE '78), Marc Helsinger (BS '70), President Vincent Boudreau, Gabe Gelb, Jack Cinque (ChE BE '51), Martin Van Sickels (ChE BE '65), Dee Dee Mozeleski, Prof. Ilona Kretzschmar, Robert Schlein (EE BE '72), Joel Kaufman (BS '64, Arch '65), Allen Buchner (ChE BE '64, ChE MS '66) and Fitzroy Graham (BS '90). In September 2018, CCNY President Vincent Boudreau, CCNY Executive Director of Combined Foundations and Communications Dee Dee Mozeleski, and ChE Chair Ilona Kretzschmar met with nine CCNY alumni at the Post Oak Grill Uptown in Houston to discuss a possible revival of the Greater Houston Area Alumni Association (GHAAA) Chapter. The event was a unique opportunity to learn about the Chapter's history and to also discuss plans for future events. We found our alumni in good spirit and eager to revive the Chapter with the help of the President, Dee Dee and the CCNY Alumni Association. Crucial aspects that were immediately identified were (i) support by CCNY's Alumni Association in providing valid contact information, (ii) the need for new members, and (iii) the organization of an alumni event in Houston to enable interaction with interested CCNY alumni in and those new to the Houston area. Let's help them with this endeavor!!!

The group of alumni is planning an event in June '19. Various event venues and locations in which to have a CCNY Alumni Happy-Hour Networking Social have been discussed. Are you new to the greater Houston area, planning to relocate to the greater Houston area this year, or interested in connecting with other CCNY alumni as well as job and internship opportunities in the greater Houston area? Contact Alfred Chiu, an alumnus of our Department.

The Greater Houston Area Alumni Association, open to all CCNY alumni, has a long history of alumni work. The Chapter was founded in the early 30's, went through a slow period in the 80's and 90's to be revived by Gerry Gafka (Math BS '62) in 2005. Currently, the Chapter is in hiatus due to dwindling

membership. Under Chapter President Gafka, the Chapter orgaized regular Fall and Spring Saturday Chapter meetings from 2005 until 2015 with guest speakers from various backgrounds. In addition, the GHAAA has fund raised for the Greater Houston Chapter Scholarship Fund given out annually to a CCNY student.

Interested in getting involved? Please, contact: Alfred Chiu (ChE BE '78) alfred2307@gmail.com

Arnold Stancell (ChE BE '58) Gives 2018 Reuel Shinnar Lecture

Dr. Arnold F. Stancell, ChE BE '58, was the 2018 Reuel Shinnar Lecturer at City College on December 10, 2018. In his talk, "Plasma Reactions at Surfaces and Natural Gas Production in the Persian Gulf," Dr. Stancell shared his accomplishments from his time on the faculty at MIT and from his 31 year career at Mobil. This ranged from his efforts to use biaxially oriented polypropylene (BOPP) to replace cellophane, to his role in developing the 900 trillion cubic foot Qatar natural gas fields that Mobil was able to make \$8 billion/year from. Dr. Stancell also shared with the audience his experiences walking to CCNY for class from his childhood home on 131st St.

Dr. Stancell was inducted into the National Academy of Engineering in 1997. He also served on the chemical engineering faculty at Georgia Tech after his retirement from Mobil.

The Reuel Shinnar Lecture Series was established in 2012 by friends and family in memory of Distinguished Professor of Chemical Engineering Reuel Shinnar, who



2018 Reuel Shinnar Memorial Lecture by Dr. Arnold Stancell (center with plaque) with (from left to right): Peter Compo (ChE PhD '89), Shlomo Shinnar (Prof. Shinnar's son), Meir Shinnar (Prof. Shinnar's son), Mildred Green (Prof. Shinnar's wife), Fred Krambeck (ChE BE '63, PhD '68), Dr. Steve Jaffe, Dominick Mazzone (ChE PhD '86), Amos Avidan (ChE PhD '80), Dr. Bob Hanlon, and Prof. Ilona Kretzschmar.

taught at CCNY for 40 years. Each year a lecture is given by someone who has made significant contributions to the chemical engineering industry.

STUDENT ACHIEVEMENTS & ACTIVITIES

CCNY ChE Senior Wins AIChE National Scholarship



Karlas B. Christopher (Class of '20)

Karlas B. Christopher, a senior in ChE at CCNY, was awarded the 2018 AIChE Minority Affairs Committee (MAC) Scholarship for College Students. This award of \$1000, which is given to approximately 18 college students from across the country each year, recognizes minority students who have excelled academically and been strong student leaders. Karlas served as the 2017 Chem-E-Car Co-Captain, assisting the team to take 1st place at the AIChE Mid-Atlantic Conference competition, qualifying for the international competition held at the National AIChE Meeting. They took an impressive 11th place with over 30 participating colleges at Nationals that year, having to rebuild a faulty component of the car mid-competition. Karlas' most significant technical contribution to the team was the design of a SO₂-scrubber on the car to prevent toxic gases from being emitted from the timing mechanism reaction. Karlas has taken his safety awareness to another level, serving as an assistant in CCNY's Environmental, Health and Occupational Safety Office for the last year and a half. Karlas also has been working with liquid crystals for potential use in bio-sensing as part of Prof. Tu's research group. Originally from Grenada, Karlas came to the US to study chemical engineering at CCNY. His passion is problem solving and he has an interest in process engineering and development.

(Class of '20) Of his experience at CCNY, Karlas writes, "Attending CCNY has been an incredible experience thus far. Holistically, it has allowed me to grow into a more wholesome and well-rounded individual – being able to view the world through a different lens. The friendships and mentorships I have established in the ChE Department have been phenomenal. For example, Prof. Tu has been a terrific professor, mentor and research advisor. Being under his guidance has propelled me to develop my research skills, while allowing me to seamlessly assimilate myself within the ChE culture here at the college. He always pushes me towards excelling and reaching my full potential. Also, my fellow Chem-E Car teammates have influenced my team-work skills. I have thoroughly enjoyed being able to have them as a sub-community within my engineering journey. The bonds we were able to form by working on our projects well into many nights and travelling together are unbreakable. I thank and appreciate each and everyone I have come across in this life-changing journey at CCNY, and can't wait to see what my next chapter entails..."

Chemists' Club Members Participate in Merck Tour

CCNY ChE student members of The Chemists' Club had the opportunity to tour the Merck Research Facility in Rahway, NJ, along with student members from five other schools in Fall 2018.

Students on the tour learned about many aspects of research and development including safety, research efforts, scale up and pilot plant operations, and careers in R&D at Merck. Highlights included learning that many types of crystallization are used in Merck processes – evaporative, reactive and anti-solvent, for example; that there are many types of filtration systems based upon the type of solution being processed; and getting to see how scale up from a 10 ml beaker to a 200 L tank reactor is done in the pilot plant. Students were able to relate their classroom and lab experiences to the real life examples on the tour including laboratory methods from organic chemistry, and process diagrams and modeling from process design. Attendees also had an opportunity to do a meet and greet with Merck professionals over lunch. One student noted "I have been to 4 different tours and the Merck tour

has been my favorite. The employees at Merck are very caring about their fields of study and are eager to help students with any questions that arise."

The Chemists' Club is a non-profit organization with an interest in the chemical sciences. The club promotes connectivity between professionals in the chemical field as well as it allows for professionals to mentor students about the future. Dr. Anthony Diaz-Santana from Merck and also a trustee of The Chemists' Club hosted the tour. Dr. Roland Stefandl, President of The Chemists' Club, helped make the connections between the student groups and the club. Klement Miraj, CCNY Senior and President of the CCNY Student Chapter of the Chemists' Club, contributed to this article.



Klement Miraj (Class of '20, front left) and Chemists' Club Members at Merck Facility in Fall 2018.

GROVE 100th ANNIVERSARY: LEVICH INSTITUTE

The Andreas Acrivos Graduate Fellowship of the Department of Chemical Engineering



Andreas Acrivos Director, Levich Institute 1988 - 2000 The Andreas Acrivos Graduate Fellowship commemorates the intellectual curiosity and academic leadership of Einstein Professor Emeritus Andreas (Andy) Acrivos, who served on the faculty of Chemical Engineering at the City College of New York and directed the Levich Institute from 1988-2000. Prof. Acrivos is a member of the National Academies of Science and Engineering and a 2001 recipient of the National Medal of Science. Each year, the Chemical Engineering Graduate Studies Committee awards a first year Ph.D. student with the Acrivos Fellowship. The criteria that we use for the selection of the Acrivos Graduate Fellow is a combination of the performance in classes, qualifying examinations, and department leadership. The Acrivos Fellows to-date

are listed in the table. Acrivos Fellows have gone on to make contributions in industry and academics. More information on a few Acrivos

Scholars' activities since graduation will appear in the Fall 2019 CCNY ChE Newsletter.

Inaugural Directors' Lectures

As part of the Grove School of Engineering's 100th Anniversary celebration, the Levich Institute and its current Director, ChE Prof. Jeff Morris, will hold the inaugural "Directors' Lectures" to celebrate its past leadership by Profs. Benjamin Levich, Andreas Acrivos, and Morton Denn. This year, the event is scheduled for April 16, in coordination with the Chemical Engineering Stanley

Acrivos Graduate Fellows				
Year	Fellow	Graduation		
2002	John Paul Bir Singh	Ph.D. 2007		
2003	Rajesh Goyal	Ph.D. 2008		
2004	Rohit Ingale	Ph.D. 2008		
2005	Pandurang Kulkarni	Ph.D. 2009		
2006	Mehrdad Langroudi	Ph.D. 2011		
2007	Prasad Karanjkar	Ph.D. 2012		
2008	Ehssan Nazockdast	Ph.D. 2013		
2009	Xiaoxiao Chen	Ph.D. 2014		
2010	Genti Zylyftari	Ph.D. 2015		
2011	Eric Fried	Ph.D. 2016		
2012	Archit Dani	Ph.D. 2017		
2013	Stéphanie Marenne	Ph.D. 2017		
2014	Sidĥant Pednekhar	Ph.D. 2018		
2015	Fanny Thomas	In residence		
2016	Michael D'Ambrose	In residence		
2017	Josephine Chen	MS 2018		
2018	Yegor Nikitin	In residence		

Katz Lecture on April 15, to be delivered by Prof. Kathleen (Kate) Stebe, Assistant Dean of Research at the University of Pennsylvania. On April 16, Prof. Stebe, a 1989 Ph.D. graduate of CCNY ChE supervised by Prof. Charles Maldarelli in the Levich Institute, will present one lecture, followed by Prof. Anubhav Tripathi of Brown University. Prof. Tripathi, a 1998 graduate of CCNY ChE under the supervision of Prof. Andy Acrivos in the Levich Institute, is the Director of Biomedical Engineering at Brown.

100th Anniversary Event: Schedule - April 15th & April 16th 2019

Katz Lecture, Monday, April 15th, 2019 Shepard Hall, SH 95 2:00 - 3:00 PM Prof. Kathleen Stebe, University of Pennsylvania, "Embedded Energy Landscapes in Soft Matter to Direct Colloid Motion"



Kathleen Stebe ChE PhD '89

Inaugral Directors' Lectures Tuesday, April 16th 2019 Steinman Hall, T 312

2:00 - 3:00 PM Prof. Kathleen Stebe, University of Pennsylvania,

3:00 - 4:00 PM Prof. Anubhav Tripathi, Brown University

Reception to follow



Anubhav Tripathi ChE PhD '98

RESEARCH UPDATE: CLEANROOM FACILITIES



Newly refurbished ChE Department cleanroom facility and instruments.

The Cleanroom Facility in the Department of Chemical Engineering at CCNY recently underwent a complete renovation to bring its specifications up to code. After nearly 20 years of operation, it was time for an upgrade. The renovations were overseen by Prof. Maldarelli and doctoral students Ankit Kanthe, Ellen Knapp, and Hao Zhou.

The cleanroom is important because sensitive interfacial experiments that involve open air/water or air/solid surfaces are especially vulnerable to contamination from both the liquid and the air. The tap water in New York City – despite common misconceptions - is relatively clean. Its surface tension, a measure of purity, is approximately 65 mN/m, compared to 72 mN/m for ultrapure filtered water. But NYC's air quality is not as high, containing submicron particles, and atomized droplets derived principally from car and truck exhausts.

Our cleanroom facility (see picture) is a soft wall (curtained) cleanroom, which maintains a Class 100 rating (less than 105 particles/m³, 0.1 microns or larger) by filter/fan units in the ceiling. The units draw air from vents outside the cleanroom, filter the air, and deliver an air flow into the enclosed cleanroom space. The air flow returns to the outside room through the gap at the curtain bottoms, maintaining a positive pressure and allowing a flow recirculation to insure low particle concentrations.

The cleanroom is equipped with a full suite of instruments. The picture (above) shows the instruments used for the ChE Department's research in interfacial science, including a pendant drop apparatus for surface tension, contact angle and interfacial rheology measurements, Langmuir troughs for measures of the phase behavior and mechanics of insoluble interfacial layers, an integrated optical microscopy and Langmuir trough set-up for in-situ measurements of surface monolayers and micro-lithography equipment for micro-scale and nano-scale fabrication.

The cleanroom was initially conceptualized in 1999. In 2000, Profs. Couzis, Gilchirst, Maldarelli and Rumschitzki received funding for the "Acquisition of a Fourier Transform Infrared Spectrometer with a Microscope Attachment" from the National Science Foundation (NSF). Using the NSF award as leverage, they were able to obtain 1:1 matching funds from the Dormitory Authority of the State of NY (DASNY) Graduate Research Training Inititative (GRTI), which allowed the purchase of a cleanroom. After identification of a suitable space, Steinman Hall T 341, the cleaning began. Removing years of New York City dust from the floor, walls and windows in the room, a team of graduate students, postdoctoral fellows and Profs. Couzis and Maldarelli were able to put up the scaffolding, mount the ceiling fan units and also install the clear plastic curtains (see pictures below). After the clean environment was established, special cleanroom suits were needed when entering the cleanroom to prevent dust on clothig being brought into the clean space.



Profs. Alex Couzis and Charles Maldarelli scrubbing the future cleanroom space in order to remove years of New York City dust.



Prof. Charles Maldarelli, Jose Lorenzo (ChE PhD '01), Prof. Alex Couzis, Nitin Kumar(ChE PhD '01), and Ravi Palaparthi (ChE PhD '01).



Fengqiu Fan (postdoc, left) and Prof. Alex Couzis (right) in special attire to prevent dust on clothing being carried into the cleanroom.

Connect, Engage, & Contribute

Connect

Engage

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 seminar on technical and research topics (Monday 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.



Peter Compo, ChE PhD '89

the department to capture the remaining \$40,102 from the \$100,000 he was willing to match. Peter has already made connections to our current PhD students through a career workshop in summer 2018 along with fellow grads Qaizar Hassonjee (ChE PhD '87) and Dominick Mazzone (ChE PhD '86) and his generous equipment gifts to the PhD program earlier in 2018. Last but not least, Peter has reached out to the ChE PhD alumni encouraging them to connect to the department.

You may recall that Peter Compo

was interviewed for the Fall 2018 newsletter and announced his

\$100,000 matching challenge in recognition of Grove School of Engineering's 100th anniversary in

2019. Peter has matched the

students, and faculty for a total of

\$119,796 for the department that

will go toward general department funds and the graduate program.

He is currently thinking about new

ways to challenge the alumni and

raised by

alumni,

\$59,898

If you are interested in participating in the ChE PhD alumni group, Pete can be reached through our alumni email address chealumni@ccny.cuny.edu, LinkedIn or through petercompo1@gmail.com.

Contribute

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

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Contact email			<pre>"I bequeath \$% of my</pre>	
Signature		Date	estate to the Department of Chemical Engineering, CCNY, Steinman Hall, T322, 140th Street & Convent Avenue,	
\$	towards Fund for Excellence	1		
\$	towards Undergraduate Student Activities	New York, NY 10031."		
\$	towards Graduate Student Development	1	I have included the Department	
		A Gift in Kind	of Chemical Engineering (CCN) in my will.	
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Gifts to the Department of Chemical Engineering (CCNY) are tax-deductible as permitted by law.

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