



THE NUCLEUS

May 2018

Vol. XCVI, No.9

Monthly Meeting

*Education Night at A123 Systems
Wayne Jones, University of New
Hampshire to Speak*

2018 NESACS Election

Candidate Bios and Statements

Esselen Award Address

By Jennifer A. Doudna

The International Younger Chemists Network

By Lori Ferrins and Catherine Rawlins



The International Younger Chemists Network (IYCN): Building Connections with Our Peers Worldwide

By Lori Ferrins, IYCN Vice-Chair and Catherine Rawlins, IYCN Conference Presence Chair and NSYCC Past-Chair



The International Younger Chemists Network (IYCN) is a growing organization which began as a task force at the 2015 ACS National Meeting in Boston between a group of young chemists from the USA, Africa, Southeast Asia, and Europe. Our main goal was to create a truly unified international network for young chemists to connect and share ideas. Successful efforts lead to the official launch of IYCN as an associated organization of IUPAC in 2017 at the 46th World Chemistry Conference in Sao Paulo, Brazil. Our membership base includes chemists under the age of 35, or someone who is 5 non-continuous years from their terminal degree. We currently have members across six continents and we are looking for ways to further our reach.

Since its inception, IYCN has been active in the chemistry arena holding a student exchange with Gesellschaft Deutscher Chemiker (GDCh) in 2017, sponsoring a poster award at the annual symposium of the ACS Nigeria Student chapter, and organizing a green chemistry symposium at IUPAC 2017 to name a few examples. We have strong ties with the ACS and many of our volunteers are ACS representatives in the Younger Chemists Committee (YCC), International Affairs Committee (IAC), and Women Chemists Committee (WCC). We are continually seeking new conferences and collaborations to help achieve our vision of a network of chemists that are united, irrespective of borders. One of our main initiatives is the publi-



IYCN members at the ACS National Meeting in NOLA (Left to right) Evijola Llabani (YCC ACS Member, IYCN Chair), Felicia Lucci (IYCN Finance Committee Chair), Aliyu Akeem (Finance Team Member), Jackie O'Neil (YCC ACS Member & IYCN Founding Member), and Nnanake Offiong (Social Media Team Member).

cation of experiments, which are designed to be performed with non-specialized equipment and translated into multiple languages. Additionally, we are increasing our IYCN presence worldwide by developing online webinars and building a calendar of conference activities that facilitates the networking of younger chemists. In the long-term, we hope to have delegates from every country involved in our organization, establish more student exchanges between countries in different parts of the world, and provide professional development support for our members.

As a global network, we are working to establish a platform that fosters communication, mentorship, and collaboration between our members. Our vision is focused on empowering our members to lead positive change worldwide, and we invite all chemists to join and help make this a reality whether as a young chemist member or as a member of our advisory board.

For more information visit our website at <http://iycnglobal.wixsite.com/iycn>. We welcome volunteers of any age and

background! Contact us at IYCN@iupac.org. ◇

CAREER DEVELOPMENT

Being an active participant in NESACS activities will enable you to network with major institutions and corporations in our area and can open up new career opportunities.

The NESACS Board of Publications, which is responsible for both the *Nucleus* newsletter and the NESACS website, is looking to increase its activities in this arena.

We would like to expand our capabilities for keeping our membership informed on what is happening in our field and how to adapt to changing times and new technologies.

You can help us do that. All we ask of you is a few hours a month and a smile.

Call or email to see what opportunities are available.

contact -- Michael Filosa
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*One day symposia: Innovation in Design and Acquisition for Compound
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Sciences Symposium at the Royal Sonesta Hotel, Cambridge,
May 4, 2018. NESACS at Fenway Park, May 14th, 2018.*

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Cover: *May Speaker, Wayne Jones, Jr., Dean of Engineering and Physical Sciences, University of New Hampshire. (Photo courtesy of Dr. Jones).*

Editorial Deadlines: *Summer-September Issue: July 22, 2018*
October Issue: August 22, 2018

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Esselen Award Address

By Jennifer A. Doudna, University of California at Berkeley

For a long time, we understood that DNA controlled all living things. We learned that A, T, C, and G form our genetic code. We learned that sometimes a small typo can cause a big problem – genetic disease. For decades, we could only manipulate DNA in a few ways, in a few “model” organisms. Recently, this changed. With a technology called CRISPR-Cas9, we can now make changes quickly and easily in the lab at a small cost. This so-called “genome editing” system is opening doors in research, medicine, agriculture, and more.

So where did this technology come from? Like most transformative biotechnologies, nature provided the raw material. Back in 2012, we were studying a little-known mechanism by which prokaryotes fend off viruses. These CRISPR-Cas systems are found in half of bacteria and most archaea. They typically work by capturing a small piece of invasive viral DNA, stashing it in the host genome as a molecular “memory,” and then using an RNA copy of the original sequence to find a complementary target upon reinfection. Once the matching target site is identified, the DNA is cleaved and destroyed.

There were a few CRISPR systems that had been well-studied at the time, but my colleague Emmanuelle Charpentier and I were intrigued by one that seemed to be simpler than all the others. It appeared that a single gene, *cas9*, might be responsible for the DNA targeting and cleavage step. After a fruitful collaboration, we had our exciting answer. The Cas9 protein could be programmed with RNA to target any desired site in DNA, where it would make a double-strand break. Further, we could engineer the naturally-occurring two-piece RNA guide into a simpler one-piece version called the single-guide RNA (sgRNA). In 2012, we published our findings and described how this setup could be used to generate targeted double-strand breaks in eukaryotic genomes – an ability that would enable facile genome editing.

The next year, we and many other

labs were able to do just that. Scientists now use the CRISPR-Cas9 system to engineer DNA in dozens of different organisms, from plants to microbes to human cells. The process of genome editing starts with a break in DNA and the rest is achieved by DNA repair proteins in that cell. After Cas9 cuts the DNA, the cell must close the gap through one of two general mechanisms. It can quickly ligate the two ends back together in a sloppy process known as non-homologous end joining (NHEJ), or it can patch the break with a separate piece of DNA via homology-directed repair (HDR). NHEJ typically leads to small insertions or deletions of nucleotides (indels), which disrupt gene function, while HDR can be used to swap a faulty gene out for a healthy copy or add a new sequence altogether.

My lab and others around the globe now use CRISPR-based genome editing to tackle tough research questions. Knocking out a gene is a great way to learn about its function. We can also use dead or “dCas9” to sit tightly on a promoter and inhibit transcription of a gene, leading to knock *down* rather than complete disruption. Along with scientists at UCSF, we developed a method to knock down expression of thousands of genes in parallel, in a process called CRISPR inhibition (CRISPRi) or CRISPR screening. Gene activation (CRISPRa) can also be achieved using the same guiding principles.

I’m hopeful that this technology will be transformative not just in the laboratory, but in the clinic. Many genetic diseases have been understood for decades but we had no means to go about correcting the underlying genetic defect. Now, CRISPR engineering offers new hope for patients with diseases like sickle cell anemia, muscular dystrophy, cystic fibrosis, and more. While this is not yet an approved medical treatment, clinical trials are closer than ever. A few trials have already begun to test CRISPR-mediated editing in a new field of cancer treatment known as “im-

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Monthly Meeting

The 979th Meeting of the Northeastern Section of the American Chemical Society-Education Night

Wednesday – May 9, 2018

A123 Systems

200 West Street, Waltham, MA 02451

4:00 pm NESACS Board Meeting (Conference Room)

5:00 pm Reception and Poster Session (Atrium near Cafeteria)

6:00 pm Dinner (Cafeteria)

7:00 pm Welcome, Dr. Andrew Scholte, NESACS Chair-Elect (Cafeteria)

7:05 pm Evening program (Cafeteria)

Speaker: **Wayne Jones, Jr.**, Dean, College of Engineering and Physical Sciences, University of New Hampshire

Title: Career Pathways in the Chemical Enterprise: Things you know that just aren't so.

7:55 pm Presentation of the Education Night Awards (Cafeteria)

For those who would like to join us for dinner, register by noon, Wednesday, May 2, 2018. Reservations are to be made using Eventbrite services: www.nesacs.eventbrite.com. Select the Education Night Awards and the appropriate ticket price. Cost: Members, \$30; Non-members, \$35; Retirees, \$20; Students, \$10.

If you have any questions or require additional information, contact the Administrative Coordinator, Anna Singer, via email at secretary@nesacs.org.

THE PUBLIC IS INVITED TO THE EVENT. ATTENDEES NEED TO BE AWARE THAT THE HOST FACILITY IS A PRIVATE FACILITY WITH ITS OWN SECURITY AND GUIDELINES FOR ADMISSION. IT IS REQUIRED BY THE HOST SITE THAT ALL ATTENDEES BE REGISTERED IN ADVANCE. THOSE WHO FAIL TO REGISTER IN ADVANCE MAY NOT BE ADMITTED TO THE PROGRAM.

Directions:

From Rt 95/128 Southbound: Take exit 27B (Winter St.) and merge onto Winter St. (0.3mi). Take a left onto West St. (second set of lights), 200 West St. is 0.4mi on the left.

From Rt. 95/128 Northbound: Take exit 27A/B (Third Ave.) and keep left to exit via 27B, turn right onto Wyman St., follow signs for Winter St. Turn right onto Winter St. Cross over 95/128 and take a left at the second set of lights (0.5mi) onto West St., 200 West St. is 0.4mi on the left.

From the T: Take the red line to Alewife Station. From Alewife station a shuttle runs to 200 West St. Please contact Mrs. Anna Singer for details.

Free Parking: 200 West St. is an "L" shaped building with main entrances into the atrium where the two sides meet. Handicapped parking is available near the building. ◇

Biography:



Wayne Jones, Jr. is the dean of the College of Engineering and Physical Sciences at the University of New Hampshire.

Prior to joining UNH in 2017, Jones was professor and chair in the Department of Chemistry at Binghamton University, State University of New York where he has served in numerous leadership roles including founding director of Center for Learning and Teaching and interim dean of Harpur College of Arts and Sciences. He led the trans-disciplinary area of excellence initiative in Smart Energy. In addition to running the Center for Learning and Teaching from 1996-2008, he established the Go Green Institute in 2008 to encourage middle school students to pursue careers in science and engineering.

The recipient of several teaching awards
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Abstract:

Career Pathways in the Chemical Enterprise: Things you know that just aren't so

An undergraduate or graduate degree in the chemical sciences has long been considered a fruitful path to a productive career. Has that changed? Is higher education changing? Recent articles in the popular press might call these into question with changes in employment, corporate mergers, and shifts in higher education demographics. The ACS and others have been exploring these trends. We will explore recent data, best practices, and opportunities for career planning that may or may not be what you expect. ◇

Remembering Robert L. Lichter

October 26, 1941 to March 31, 2018

Compiled and edited by Michael P. Filosa

We were fortunate to have Bob Lichter in our section for the last ten or so years after he retired to Alford, MA in 2002 with his wife Diane Scott-Lichter. Bob has been very influential in both local and national ACS since early in his career and he fully engaged with NESACS once he moved back to Massachusetts. Bob was committed to NESACS and was willing to run as Trustee in the upcoming election despite his recent battle with prostate cancer. However, I am sad to report that Bob passed away at Dana-Farber Cancer Institute on March 31 at the age of 76.

Bob was born in Newton, MA to Morris and Ada Lichter. Bob graduated Boston Latin School at 16. He received his A.B. *cum laude* from Harvard Col-

lege in 1962 and his Ph.D. from the University of Wisconsin-Madison in 1967, both in chemistry. He was a NIH post-doctoral fellow at the Technische Universität Braunschweig, Germany, from 1967 to 1968, and a research fellow at the California Institute of Technology from 1968 to 1970.

After 13 years in the chemistry department at Hunter College of the City University of New York, including four years as department chair, he became regional director of grants at Research Corporation from 1983 to 1986. From 1986 to 1989 he served as vice provost for research and graduate studies at the State University of New York at Stony Brook. Before embarking on his current position in 2002, he was ex-

ecutive director of the New York City-based Camille and Henry Dreyfus Foundation from 1989, where he directed the strategies and administration of ten programs and related activities that yielded about \$6 million in grants and awards in the chemical and closely related sciences for research, education, science communication, and human resource development.

Among his professional activities, Lichter was Chair of the American Association for the Advancement of Science's (AAAS) Section on Chemistry for 2001-2002, and was Secretary of the Section for 2004-2009.

Lichter has also been a councilor of the Council on Undergraduate Research, has participated in the science-education reform effort Project Kaleidoscope, has chaired the Section on Chemical Sciences and the Committee on Science Education of the New York Academy of Sciences, and was a member of the Trustees' Advisory Council of the New York Hall of Science. A member of the Board of Governors of the National Conferences on Undergraduate Research from 1992 to 1998, he was chair of the board from 1994 to 1996, and chair of the 2001 Gordon Research Conference on Innovations in College Chemistry Teaching.

At the American Chemical Society (ACS), Lichter has been a member of the ACS Committee on Science and its Committee on Minority Affairs, and the latter's subcommittee on the ACS Scholars Program. He has served on the Advisory Board to the then-Office of Communications, and on the Graduate Education Advisory Board.

He has been Chair of the Georgia Section of ACS, and was Chair of the ACS Implementation Team on Minorities in Academia, which was created by the ACS Board of Directors to increase the numbers of underrepresented minority chemical scientists on the faculties of doctoral institutions.

Lichter was recently a member of

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NEACT Central Division Meeting and Annual Meeting May 5, 2018 • Regis College

8:30 AM Registration and Continental Breakfast (Fine Arts Center, Rm. 301)

9:15 AM Alison Livingston & Samantha Reich (Fine Arts Center, Room 301)

Innovative Teaching Methods in the High School Classroom

The first half of our meeting will be devoted to topics such as inquiry based learning of stoichiometry through s'mores as well as an atomic model project involving peer feedback.

10:45 AM Alison Livingston & Samantha Reich (Watson-Hubbard Science Building, Room TBA)

Connecting Organic Chemistry with Biochemistry

The workshop is geared to meet the needs of science educators working to design an organic chemistry course at the high school level. Different stations will be available to see what kind of lab exercises can be performed by the students.

12:00 PM NEACT Annual (Business) Meeting (Fine Arts Center, Rm 301)

Brief bio: Alison Livingston is the Upper School Science Department Head at Beaver Country Day School in Chestnut Hill, MA. She is also a lecturer of Chemistry at Regis College. Samantha Reich is in her first year teaching in the Upper School Science Department at Beaver Country Day School. Prior to this position, she taught high school physics in Washington, DC.

If planning to attend, please RSVP to Leslie Bishop (leslie.bishop@regiscollege.edu) by May 1, 2018. Please note if you have any food allergies.

Link for campus map: <http://www.regiscollege.edu/about/campus-map.cfm>

Link for directions to Regis College: http://www.regiscollege.edu/about_regis/directions.cfm ◇



**The Seventh Annual
Advances in Chemical Sciences Symposium
Royal Sonesta Hotel
Cambridge, MA: May 4th, 2018**



A day long symposium focused on Medicinal Chemistry, Organic Synthesis, and Methodology, featuring eminent scientists from industry and academia.

Speakers:

Professor Richard R. Schrock (MIT): “TBA”

Professor Dale L. Boger (Scripps Research Institute): “Redesign of Vancomycin for Resistant Bacteria”

Professor Laura Kiessling (MIT): “TBA”

Dr. Sue Ashwell (Forma Therapeutics): “Discovery and Optimization of a Novel Series of Inhibitors of mt-IDH1”

Dr. Michael Hoemann (Abbvie): “Discovery and Optimization of Spleen Tyrosine Kinase Inhibitors for Immunological Diseases”

Dr. Frank Salituro (Sage Therapeutics): “Discovery and Clinical Development of SAGE-217: A Next Generation Neuroactive Steroid Positive Allosteric Modulator of the (GABA) Receptor”

Plus:

Vendor Exhibition Hall and Networking Reception

Registration: Regular fee: \$50 || Students: \$25

On-line registration and payment: <http://fourwav.es/ACSS2018>

Alternatively send your full contact information and a check for \$50 made payable to NESACS care of Dr. Ashish Saha, Treasurer, 67 Bow Street, Arlington, MA 02474

For additional details, please contact any of the Organizing Committee:

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Phone:(617) 806-4200

Supporting Organizations: ACS, NESACS, RSC (US) and IUPAC

2018 NESACS Election

Chair Elect

Anna W. Sromek



Education: BS in Chemistry, University of Chicago, 1996; PhD in Organic Chemistry, University of Illinois at Chicago, 2005.

Professional Experience: Associate Chemist, Technical Coatings, 1996-1998; teaching assistant, 1998-2001; postdoctoral researcher, University of Illinois at Chicago, 2005-2006; chemist, JCL Bioassay, 2006-2008; NIDA Research Fellow, Alcohol and Drug Abuse Research Center, McLean Hospital, 2008-2010; Instructor in Psychiatry, Harvard Medical School 2010-2016; Medicinal Chemist, Alcohol and Drug Abuse Research Center, McLean Hospital, 2010-2016; Research Fellow/Associated Personnel, Boston Children's Hospital, 2012-present; Assistant Professor of Psychiatry, Harvard Medical School, 2016-present; Associate Director, Medicinal Chemistry Program, McLean Hospital, 2016-present.

ACS Service: Member since 1997; currently member of Organic Division, Medicinal Chemistry Division, and Northeast Section; Committee on Chemistry and Public Affairs, Associate, 2016.

NESACS Service: Member as of 2009; member, Esselen Award Committee, 2009-2013; chair, Esselen Award Committee, 2013; Alternate Councilor, 2015-2017; Nominating Committee, 2015-2016; Councilor, 2018-2020.

Other professional organizations: Society for Neuroscience, member, 2011-2012, 2015-present; American Association for the Advancement of Science, member, 2011-2013, 2015-present

Position Statement: I am honored to

be nominated for election as the chair-elect for NESACS. I was honored to serve on the Esselen Award Committee, as an Alternate Councilor, and as a member of the Nominating Committee. I wish to continue my service to the ACS and NESACS. If elected, I will serve the Northeast Section faithfully to the fullest of my abilities.

My service to the scientific community began when I was an undergraduate, when I volunteered as a judge at a local high school science fair, and as a graduate student, when I served on the chemistry graduate student association. I was introduced to NESACS ten years ago by my mentor, Dr. John Neumeyer, when he nominated me for the Esselen Award committee. Since this initiation, I had the privilege of serving as an alternate councilor, a member of the nominating committee, and my current service as councilor. I wish to continue my service to NESACS in every capacity I am able to. If I am chosen as Chair-Elect, I will actively work to promote monthly meetings, special events, and symposia to our constituents, and to foster greater participation, membership, and outreach across the spectrum. I recognize the importance of building and maintaining relationships within and outside of our community, and adapting to the constantly changing landscape which affects our profession. We need to be more cognizant of the overarching factors which influence our profession, and we need to be more proactive both in the short term and long term plans for the promotion of science and scientific literacy to the public, the importance of federal and private funding to the scientific community, and the impact our laws and economic climate have on science and our livelihood. Finally, I believe it is vitally important to promote safety and responsible behavior in chemistry. It is closely intertwined with the positive promotion of science to the general public and greatly impacts the public's opinion of science. If elected, I will draw on my experiences in industry, academia, and professional society service to serve as Chair-Elect. Thank you for

your consideration and for your support.

Sofia Santos



Education: Master's in Pharmaceutical Sciences, 2011, University of Lisbon- Faculty of Pharmacy, Lisbon, Portugal; Ph. D. in Pharmaceutical Sciences with specialty in Medicinal Chemistry, 2016, University of Lisbon-Faculty of Pharmacy, Lisbon, Portugal/Massachusetts General Hospital, Boston- Massachusetts.

Professional Experience: Research Scientist at Harvard T.H. Chan School of Public Health, 2017-present; Postdoctoral fellow at Center for Systems Biology, 2016, Massachusetts General Hospital; Graduate researcher at Center for Systems Biology, 2012-2016, Massachusetts General Hospital.

Honors/Professional Activity: Fundação para a Ciência e Tecnologia, Research Predoctoral Fellowship, 2012-2016; Merck Women in Chemistry Symposium, Best Poster Award, 2015.

ACS Service: Councilor at NESACS (2017-2019), Alternate councilor at NESACS (2016-2017), Member of Organic and Medicinal Chemistry Divisions of the ACS; Career Chair of the Younger Chemists Committee within NESACS (NSYCC-2016); Active member of the executive board of NSYCC since 2015.

Memberships: American Chemical Society (ACS), Northeastern Section of the American Chemical Society (NESACS), Younger Chemists Committee (YCC), Portuguese Chemical Society (SPQ), Association for Women in Science (AWIS), Massachusetts Chapter of Association for Women in Science

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NESACS Election

Election of Candidates

In the interest of providing maximum information and expression of opinion by the candidates for election in 2017, the Nominating Committee has prepared this section of the NUCLEUS to help broadly disseminate the information about each candidate. The included statements will also be available for review with the electronic ballot. All candidates were asked to submit biographical material and, with the exception of committee member nominees, position statements. To attain uniformity of format, the biographical data have been rearranged, and, where the text exceeded the allotted space, abbreviated. The 2018 election will be conducted electronically in conformance with 2018 Bylaws of the Northeastern Section. The order of candidates for each office in the election will be determined by lot. Comments regarding the election may be addressed to the Nominating Committee Chair, Leland L. Johnson, Jr. (address on p.3). The deadline for the election will be May 31, 2018. ◇

(AWIS), Mass General Postdoc Association (MGPA), Portuguese Board of Pharmacists.

Statement: I am honored to be nominated for election as chair-elect of NESACS. As chair I would bring my experiences as a scientist, pharmacist, collaborator and networker to bring members together and provide members numerous opportunities to get involved in the chemistry community. My areas of focus are: 1) to increase engagement and participation among NESACS members, especially younger chemists, in our local community, through support of diverse scientific talks, better communication of volunteer opportunities, and special events; 2) to provide career-oriented programming and networking opportunities for the NESACS community; and 3) to support novel technical and social programming for NESACS members to offer alternative ways for

traditional NESACS members to become involved.

Scientific Volunteerism: Throughout my career I have been actively involved with serving the scientific community in the United States and Portugal. During my Pharmacy studies at the University of Lisbon, I was part of the medicinal chemistry group as well as the organizing committee for our annual research conference. During my graduate school training I was part of the founding members of the MGH Graduate Student Committee and was responsible for establishing numerous educational and social events. In 2016, I was elected as career chair of the Younger Chemists Committee within NESACS (NSYCC). Within this role I lead the efforts to plan our annual research conference and annual career symposium among other initiatives.

Moving forward, if I am elected as Chair-Elect, I will continue to support and promote NESACS monthly meetings, with novel and diverse science to attract not only academic and industry professionals but also increase the participation of students. Finally, if elected, as chair I aim to continue my work with the younger chemists and promote the synergistic relationship among members of all ages and background. It is imperative for the future of NESACS and the ACS that we actively engage the younger chemists and provide a positive and productive platform to grow as a section.

I ask for your vote and thank you in advance for your support.

Treasurer

Ashis K. Saha

Education: M.S. IIT Kanpur, India, Ph.D. Univ. Michigan, Ann Arbor, Post-Doc: Univ. California, Berkeley

Professional Experience: Pharmaceutical/Biotech Industry: Sterling Winthrop, Malvern, PA 1989-94; J&J (Janssen), Spring House, PA 1995-2000; Viropharma, Exton, PA 2001-2004; Praecis, Waltham, MA 2004-05; Predix, Lexington, MA 2005-06; TCG Lifesciences, Boston & Kolkata, India 2007-2015; Dover Lifesciences, Boston 2015-to date.

Chemistry & NESACS Service: ACS Member since 1983. POCC (Philadelphia Organic Chemistry Club): Chair Elect & 2000-2002. NESACS: Organizing committee member, Process Chemistry, 2008-10.

Statement: The Treasurer chairs the Budget Committee, is responsible for all Section funds except those of the Trust Accounts, and prepares reports for the Board of Directors, National ACS, and state and federal agencies. Annual financial statements are prepared by a CPA to meet the requirements of the Massachusetts Attorney General. The Section currently operates with a budget of \$300,000 of which 30% comes from Trust Funds, 33% from local and national dues, and 37% from contributions and program revenues. About 20% of all expenditures are related to awards which recognize achievements in chemistry at all levels, from high school students to professional chemists, including programs that encourage young people to enter the profession. Administrative expenses constitute 15% of expenditures. The remaining 65% supports services to the membership such as the Nucleus; monthly meetings; symposia; educational and social activities for students, teachers, and professional chemists; professional relations services including employment services; and public relations activities such as National Chemistry Week. The quality of these programs is high, and the major budgetary problems involve setting priorities among them. I am pleased to work with the members of the Board of Directors who volunteer many hours in the service of their profession.

Trustee

Peter C Meltzer

Education: University of the Witwatersrand, South Africa, BSc. hons 1972, Chemistry; University of the Witwatersrand, South Africa, Ph.D. 1976, Organic Chemistry; Massachusetts Institute of Technology, Post-doc 1977, Organic Chemistry.

Statement: I am CEO & Founding President of Organix. Organix is engaged in discovery and research pro-

grams in all classes of compounds. I co-founded Organix Inc. in 1986 as one of the first Contract Research Organization to provide service to large, small and virtual pharma, as well as academia, in the US. Organix is widely recognized as a premier early pioneer of contract research in chemistry.

I have over 45 years of experience in the design and synthesis of organic and organometallic compounds, including the development of compounds through preclinical studies. My personal research programs, funded by the National Institutes of Health (NIH) and the National Institute on Drug Abuse (NIDA), have focused on the discovery and development of medications as addiction therapies. This work has been funded by Federal Grants as well as contracts from NIDA and the SBIR program at NIH. These studies have been widely published and have generated considerable interest.

My publication list includes over 125 papers and patents in internationally recognized journals. Two brain imaging agents, Altropane and Fluoratec have been entered into clinical trials.

General: 1971-1976 Lecturer and teaching Assistant, University of the Witwatersrand, South Africa; 1977-Present Member, American Chemical Society; 1977-1978 Research Associate, Massachusetts Institute of Technology; 1978-1983 Group Leader, Senior Scientist, Research Associate, SISA Inc.; 1981-1983 Associate Editor, The Nucleus (NESACS); 1983 Chairman, ACS Symposium: "The Pharmaceutical Industry to the Turn of the Century"; 1984 Chairman, ACS Symposium: "Chemistry and Immunology"; 1984-1985 Co-Founder and Chairman, Medicinal Chemistry Group, NESACS; 1983-1986 Vice-President, H.G. Pars Pharmaceutical Laboratories; 1986- Present President and Co-founder Organix Inc; 1987/9 Member, Nominating Committee, NESACS; 1990 Member, Long Range Planning Committee NESACS; 2010-Present Member of the Board of Trustees, NESACS; Present Co-Founder & Steering Committee Member of the New England CRO/CMO Council; Present Member of the Massachusetts Biotechnology Council; NIH:

Study Section participation: Med. Chem. Study Section (AHR); NICHD, NIDA, MDSEP

Councilor/Alternate Councilor

Ajay Purohit

Education: Ph.D., Organic Chemistry, Northeastern University, 2002; M.S., Chemistry, Indian Institute Of Technology, Bombay, 1995.

Professional Experience: Biogen , 2015-; Director, Radiochemistry, Sci-Fluor Life Sciences, 2012-2014; Sr. Scientist II, Lantheus Medical Imaging, 2010-2011; Sr. Scientist I, Lantheus Medical Imaging, 2008-2010; Research Scientist II, Bristol-Myers Squibb, 2002-2007; Research Scientist I, Bristol-Myers Squibb, 2001-2002; Research Scientist, National Chemical Laboratory, Pune, India, 1995-1996

Honors: Barnett Institute Award in excellence in advanced research, 2000; Research Assistant, 1999-2001; Teaching Assistant, 1996-1998.

NESACS Service: Member of the Board Of Publications, 2015-. Member of the ACS, 1996-.Present

Statement: As a member of the Board Of Publications (BOP) since 2015, I, along with the BOP have worked to make the Northeastern Section activities more accessible to our members. Towards this end I worked to establish a web streaming service for our monthly meetings at venues where infrastructure is available. I am proud to say that as part of these efforts the NESACS board meetings and the BOP meetings now use the dial in option, previously unavailable, on a regular basis. This however still remains work in progress and I will work towards making the web streaming service more reliable. In addition, along with Kathy Lee and our webmaster Roy Hagen, we designed a new website for NESACS which now has an updated and fresh look. The content is current and relevant!

The NESACS is a dynamic organization and I am excited and enjoy being a part of it. As a Councilor I am eager to give my time and energy into making this a better organization.

I am excited to run for Councilor! I welcome the opportunity and would appreciate your vote. Thank you very much!

Ashis Saha

(See Education and Experience under Treasurer)

June Lum

Biography: June Lum earned her B.S. in Chemistry in 2006 from California Lutheran University. She then enrolled at Boston University, receiving her Ph.D. in Chemistry in 2013.

June studied synthetic inorganic chemistry in the Doerrer group, her interests included the synthesis of late transition metal complexes and studying the dioxygen reactivity of Cu(I) complexes. She joined the Biological Science and Technology Team at the Natick Soldier Research Development and Engineering Center as a postdoctoral research associate. She was hired as a Research Chemist in October 2014. Presently, she works on the Chemical Biological Innovative Materials & Ensemble Development Team. Her projects focus on multifunctional textiles, CB protection, and test method development related to spatial repellants.

June has been a member of the ACS and NESACS since 2007. She has presented her research work at five ACS National Meetings, the Boston Women in Chemistry Symposium at Harvard University, and the Northeast Student Chemistry Research Conference. She also had the privilege of representing the NSYCC in Erlangen, Germany, when she participated in the JCFGDCh/ NESACS-YCC Germany Exchange Program in 2011 and presented internationally at the JCF-Frühjahrssymposium. Recently, she has also presented her work at the 2017 Fall Fiber Society Meeting.

She joined the NSYCC executive board and served as Career Chair from 2012-2014 and organized the Career Symposium at Boston University for 2014. She is also involved with the NESACS German Exchange Steering Committee. She currently serves as Director-At-Large and as an alternate

councilor for NESACS through 2018.

Statement: I am honored to have been nominated for Councilor for NESACS. If elected for Councilor for NESACS, I will work diligently to represent the section using experiences garnered as a graduate student member of BUWIC, YCC member, YCC executive board member and civilian employee.

I would like to extend my involvement at NESACS by promoting more women in chemistry events and involving young chemists at local section events. I look forward to promoting the growth of NESACS, organizing events, and participating in local chapter activities.

Malika Jeffries-EL

Education: B.A. Chem 1996, Wellesley College; Ph. D. 2002, The George Washington University; Post-doctoral Fellow 2002-2005, Carnegie Mellon University;

Professional Career: Associate Professor, Department of Chemistry and Division of Materials Science and Engineering, Boston University, 2016 – present; Associate Professor of Chemistry, Iowa State University, 2012 – 2016; Assistant Professor of Chemistry, Iowa State University, 2005 – 2012; **ACS Service:** ACS Women Chemist Committee Associate 2018 – present; Alternate Councilor, Northeastern Section 2017 – present; Division of Organic Chemistry Alternate Councilor 2017 – present; Division of Organic Chemistry Member-at-large 2014 – 2017; Program Chair, Division of Polymer Chemistry 2014 – 2016; Councilor- Ames Local Section 2011 – 2015; Editorial Advisory Board, *Macromolecules*, 2012 – 2014; advisory board for the ACS Women Chemist of Color Initiative 2010 – 2015; Editorial Advisory Board, *Chemical and Engineering News*, 2010 – 2012; ACS Society Committee on Education (SocEd) 2009 – 2014; ACS Younger Chemist Committee (YCC) 2002 – 2009.

Honors and other professional activities: 3M untenured faculty award 2008, the Lloyd Ferguson Award from the National Organization of Black Chemist and Chemical Engineers 2009, NSF CAREER award 2009, ACS

Women Chemist Committee Rising Star award 2012; Iota Sigma Pi Agnes Fay Morgan Award 2014; Stanley C. Israel Regional Award for Advancing Diversity in the Chemical Sciences 2015; Associate Editor, *Journal of Materials Chemistry C*, 2013-present (Royal Society of Chemistry).

Research interests: synthesis of organic semiconductors; organic electronics.

Personal statement: I have a solid track record of service to the ACS and I believe that my previous experience has prepared me to be of service to the Northeast Section. I have previously served as a local section councilor, in Ames and have held numerous ACS national committee positions. As such I have a great understanding of how the society functions and can advocate well for the interest of the NESACS.

Katherine Lee

Education: B.S., summa cum laude, with Distinction in Chemistry, Yale University, 1991; Ph.D., Organic Chemistry, MIT, 1996; postdoctoral fellow, University of Texas at Austin, 1996-1998.

Professional Experience: Medicinal Chemist, Pfizer, Inc., 2009-present, current position: Associate Research Fellow, Wyeth Research, 2000-2009. Mitotix Inc. (now Agennix), 1998-2000.

ACS Service: *Organic Chemistry Division:* Chair, 2018; Chair-Elect, 2017; Chair, Nominating Committee, 2017; Member at Large 2011-16; Chair, Technical Achievements in Organic Chemistry Award Committee, 2015, 2013; Co-Chair, Summer Undergraduate Research Fellowship Committee, 2016, 2013, 2012. *Committee on Economic and Professional Affairs:* Member, 2017-2018, 2014, Committee Associate, 2013.

NESACS Service: Immediate Past Chair, 2016; Chair, 2015; Chair-Elect, 2014; Councilor, 2016-18; 2012-14; Chair, Nominating Committee, 2016; Program Chair, 2014; Member, Board of Publications, 2016-present; Member, NESACS Process Chemistry Symposium Committee, 2014-present; Chair, Host Local Section Committee, 2010.

Member: ACS Member since 1992. ACS Divisions: Medicinal Chemistry;

Organic Chemistry.

Honors: ACS Fellow, 2017; Invited Speaker, ACS MEDI First-Time Disclosures, 2016; Recipient, ACS ChemLuminary Award for Best Industry Event, for NESACS Process Chemistry Symposium, 2015; Recipient, Department of Defense, Office of Naval Research Pre-doctoral Fellowship, 1991-94.

Personal Statement: It is an honor to be an active member of the Northeastern Section of the American Chemical Society. As a NESACS Councilor for several years and in the three years that I served in the Chair-Elect, Chair, Past-Chair succession, I have focused my energy on two areas: 1) delivering innovative programming; and 2) improving our NESACS communication to our members as well as the broader community.

Innovative programming: I have brought diverse, top-notch speakers to our NESACS monthly meetings and worked on committees to organize special daylong symposia such as the now annual NESACS Process Chemistry Symposium. Two of the special programs of which I am most proud are the panel discussions that I organized at NESACS monthly meetings, on **Alternate Careers for Chemists** in 2014 and **Life after Restructuring** in 2015.

NESACS communication: With the help of many NESACS members, we made *The Nucleus* “go green” in 2015, making electronic delivery the default option for delivery. We also instituted the *NESACS Newsflash* through Constant Contact, with great help from NESACS Administrative Coordinator Anna Singer, for timely communication of short bursts of information. Working with fellow members of the NESACS Board of Publications, we unveiled a boldly updated NESACS website in 2017 (<http://www.nesacs.org>)

With your support, I would continue my work in NESACS, particularly in the area of communication. As a leader in the ACS Division of Organic Chemistry, I have gained broader experience that I would like to bring to our local section. Thank you for your vote!

Catherine Costello

Catherine E. Costello is William F.

Warren Distinguished Professor at Boston University with appointments in Biochemistry, Biophysics and Chemistry. The Center for Biomedical Mass Spectrometry, which she founded and directs, is located on the Medical School campus.

Education: A.B. (Chemistry), Emmanuel College; M.S. and Ph.D. (Organic Chemistry), Georgetown University. Postdoctoral fellow, MIT.

Professional Experience: Associate Director of MIT Mass Spectrometry Resource >20 y; Professor at BUSM (1994-). Research interests in determination of structures and functions of biopolymers, with particular emphasis on glycobiology, post-translational modifications of proteins and protein folding disorders, as well as scientific education and fostering of international collaborations. Author/coauthor of about 370 scientific papers.

ACS Service: ACS Councilor representing Northeastern Section since 1989. Current member of the Senior Chemists Committee and board member of Malta Foundation for Research and Education in the Middle East. Past member and chair of the International Activities Committee; past member of the Constitution and Bylaws and Ethics Committees and numerous ACS award committees. Active reviewer for many ACS journals; past special issue editor and editorial board member.

NESACS Service: NESACS Chair (2014); chair-elect (2013); Chair of NESACS Bylaws Committee (1997-2017); served multiple terms on Publications, Budget and Nominating Committees.

Relevant Memberships: Current President of International Mass Spectrometry Foundation (2014-). Past President of Human Proteome Organization (2011-12) and American Society for Mass Spectrometry (2002-04). Board member of US-HUPO and Human Proteomics/Glycomics Initiative. Editorial boards of four journals; member of academic and institutional advisory committees in US, Canada and Europe.

Honors: ACS Fellow, ACS Field and Franklin Award, NESACS Henry A. Hill Award, Emmanuel College PhD (h.c.), ASMS Distinguished Contributions to Mass Spectrometry, IMSF

Thomson Medal, HUPO Distinguished Achievement in Proteomics.

Statement: I would like to continue to bring my interests in basic research, education and international activities to the Council on behalf of the members of NESACS. NESACS is one of the largest sections within the Society and has a long record of innovation and leadership. To carry this proud record forward, the section needs to preserve its strong foundation and to incorporate new approaches and activities into its programs. As a Councilor, I will continue to advance the interests of the NESACS at the national level and will remain an active Board member at the local level. I will be very attentive to the employment needs of members and will encourage career-related activities at the national and local level. For senior members, I will look for ways that help them to remain financially secure and to contribute their expertise to younger members and to the community, through workshops, one-on-one counseling, and the involvement of local industrial partners. At the college and high school levels (and even earlier), I will support expanded NESACS efforts on both curriculum development and extracurricular activities that encourage and aid the next generation of science students and develop science-aware citizens. I will support and participate in NESACS efforts to engage elected representatives to pass laws and establish policies that further scientific interests and educational opportunities.

Ruth Tanner

Education: B.S. Purdue University, PhD (Organic Chemistry) University of Cincinnati

Professional Experience: Research Fellow, Duke University (C. R. Hauser) (1965); Massachusetts State College at Lowell, Chair, Chemistry Department (1966-1974); University of Massachusetts Lowell, Professor (1975-2012); President of the University Faculty (1975); Representative for the Joint Council on Food and Agricultural Sciences of USDA (1979-1985); Visiting Scientist, MIT (1978-1980); Director of Women in Science and Engineering

(WISE) Program (1996 – 2005); Professor Emeritus, University of Massachusetts Lowell (2007 – Present)

NESACS Service: NESACS Chair, 2012; Councilor (2009 – 2018); Member of the NESACS Board of Directors (1996 – Present); Trustee (2014-2016); Chair, Board of Trustees (2009 -2016-2018); Chair of the Education Committee (1996-2009); Acting Chair, Committee on Education 2017; Chair of Connections to Chemistry program, (1998 – 2009); On-Site Coordinator, ACS TV Satellite Seminar Series: Teaching Chemistry, National Chemistry Week, UMass Lowell (1996 – 1999); Committee Member, NESACS–JCF/GDCh Chemistry Student Exchange Program to Germany (2001 – Present); Co-Chair for High School/College Interface Symposium, CHED Division, 2007 National ACS meeting Relevant Memberships: ACS Divisions: Organic Chemistry, Chemical Education; New England Association of Chemistry Teachers; American Association for the Advancement of Science; American Association of University Professors; ACS, American Association of Chemistry Teachers, AACT.

Honors: Department of Chemistry Teaching Award (1998); Council on Diversity and Pluralism Award (1999); The Boston Club Advancement Award for the Women in Science and Engineering (WISE) Program (2000); Henry A. Hill Memorial Award (2007) for Outstanding Service to NESACS, the ACS, and the Profession of Chemistry

Statement: I am honored to be nominated to the position of Councilor for the Northeastern Section. I have had the privilege of serving the Northeastern Section as the Chair for 2012, and as a member of the Board of Directors since 1996. The role of Councilor is an important one to the Section. The Councilors represent the Section to the National Council which is the governance body of the Society and communicate decisions by the Council back to their local sections. The position of Councilor affords me the opportunity to represent the Section at national meetings. In addition, Councilors become members of one of the Committees of the Governance Council and participate in their

discussions and decisions. I have been a member of the ACS national Committee on Membership Affairs, MAC (2009 – 2017), Committee on Economic and Professional Development, CEPA (2018), and have represented our Section at the ACS Council meetings. As a member of MAC, I was the Liaison to the Advisory Board for the recently established ACS American Association of Chemistry Teachers (AACT). Your vote will permit me to continue to be an active voice for the Northeastern Section, and to work for policies that represent the interests of our broad and diverse membership

Kenneth Mattes

Education: University of Wisconsin School of Pharmacy, Madison, WI, (1974-75), Postdoctoral work with Dr. C.R. Hutchinson Synthesis of indole alkaloids, iridoids, and antitumor agents. Determined the biomimetic mechanism of Camptothecin biosynthesis. Iowa State University, Ames, IA (1972-1974), Ph.D. in Organic Chemistry with Dr. Orville Chapman Iowa State University, Ames, IA, (1969- 1972), MS in Organic Chemistry with Dr. Glenn Russell. University of Illinois at Chicago, Chicago, IL (1965-1969), BA in Chemistry

Professional Experience: MattesK Consulting (2014-Present); ASTRAZENECA, Waltham, MA (2000-2014); ASTRAZENECA, Worcester, MA (1999-2000); ASTRA ARCUS USA, Worcester, MA (1998- 1999); EASTMAN KODAK COMPANY, Rochester, NY (1976 1998).

ACS Service: National ACS, Local Section Activities Committee (1996-1998); Rochester Section Councilor, 1995-1998); Rochester Section: Creator and Chairman Science Saturdays at RMSC (1994-1998); Rochester Section, Past-chairman 1994; Rochester Section, Chairman 1993; Rochester Section, Chairman-elect 1992. Rochester Section, ROCi/ACS Golf Tournament Chairman (1993-1998); Rochester Section Committees: National Chemistry Week, (1990-1998); Publicity (1990-91); Long Range Planning (1992-94); Nominations and Elections, 1993; Harrison Howe, 1993; Professional Rela-

tions, 1993-94; Finance, 1994, Minority Affairs, 1997; Rochester Section, Member-at-large (1990-91) Medicinal Chemistry Section, Organic Chemistry Section, Agrochemical Section

ACS Speaker Service: Inside Story of Color Photography (1977-1998), over 100 invited lectures. **AICHE Speaker Service:** Inside Story of Color Photography (1980-1998), over 20 invited lectures.

Relevant Memberships: Boston Area Group for Informatics and Modeling, American Chemical Society, American Association for the Advancement of Science, International QSAR and Molecular Modeling Society

Honors: Massachusetts State Referee Committee Soccer Referee Instructor of the Year, 2008; Rochester Section Award Recipient, 1995; Phoenix Award Winner, ROCi/ACS National Chemistry Week, Malls Chairman, 1990-91.

Statement: If elected to this position of councilor for NESACS, I would strive to represent at the national level those issue of most importance to NESACS. I would also strive to support the changes and challenges faced by the American Chemical Society to enhance the information sharing capabilities of ACS, raise the image of chemistry in the community and stress the importance of chemistry to solve the problems of the future. Specific goals would be to support the Local Section Activities Committee programs, build bridges between local section Archives and CAS and contribute to the National Chemistry Week program. As scientific and professional problem solvers, members of the ACS need to help improve the educational and professional opportunities afforded by one of the largest professional societies.

Morton Z. Hoffman

Education: Hunter College, A.B., 1955; University of Michigan, M.S., 1957; University of Michigan, Ph.D., 1960.

Professional Experience: *Sheffield University, England:* Postdoctoral Research Associate, 1960-61; *Boston University:* Assistant Professor, 1961-67; Associate Professor, 1967-71; Professor,

1971-2005; Professor Emeritus, 2005-present.

ACS Service: Society Committee on Education (SOCED) Task Force on Undergraduate Programming, 1991-2002; College Chemistry Consultants Service, 1995-2009; Editorial Advisory Board, ACS General Chemistry Project, 1999-2004; SOCED, 2002-11; Senior Chemists Task Force, 2008-12; Senior Chemists Committee, 2013-2014; International Activities Committee, 2015-present. *Division of Chemical Education (CHED):* Program Committee, 1992-2004; International Activities Committee, 1993-2013; Regional Meetings Committee, 2000-09; Chair-Elect, Chair, Immediate Past Chair, 2004-06; CHED representative to IUPAC, 2005-14. *Malta Conferences:* Organizing Committee, Malta Conferences on Science and Education in the Middle East, 2002-present; Treasurer, Malta Conferences Foundation, 2011-present.

NESACS Service: Board of Directors, 1993-present; Education Committee, 1993-present; German Exchange Steering Committee, 2001-present; Alternate Councilor, 1994-97, 1999-2002, 2018-present; Councilor, 1997-98, 2003-2017; Chair-Elect, Chair, Immediate Past Chair, 2001-03; Associate Editor and Photographer, *The NUCLEUS*, 2005-present; Norris Award Committee 2007-10; NERM Committee, 2007-present; NESACS representative, Board of Directors, Northeast Region (NER-ACS), 2010-present; IYC Committee, 2011; Subsection Task Force, 2013-2015; Richards Medal Committee, 2013-17.

Relevant Memberships: American Association for the Advancement of Science (AAAS); New England Association of Chemistry Teachers (NEACT). *ACS Divisions:* Inorganic Chemistry; Physical Chemistry; Chemical Education; History of Chemistry.

Honors: Phi Beta Kappa, 1955; Senior Postdoctoral Research Associate, National Academy of Sciences, 1969-70; Associate, Danforth Foundation, 1970; Fellow, AAAS, 1992; Metcalf Cup and Prize for Excellence in Teaching, Boston University, 1994; Hill Award for Outstanding Service, NESACS, 1999; Responsible Care® Cata-

lyst Award, American Chemistry Council, 2002; Timm Award, NEACT, 2003; Arthur Sweeny, Jr., Memorial Lecturer, Lehman College, 2003; U.S. National Representative, Committee on Chemistry Education, IUPAC, 2004-2014; Leavy Family Lecturer, St. Michael's College, 2005; James Flack Norris Award, NESACS, 2005; Professional Achievement Award, Alumni Association of Hunter College, 2006; ACS National Award for Volunteer Service, 2007; Visiting Scientist Award, Western Connecticut ACS Local Section, 2007; ACS Fellow, 2009; Chemistry Education Award, IUPAC, 2014; Fellow, IUPAC, 2014; Arno Heyn Memorial Book Prize for Distinguished Service to Publications of NESACS, 2014.

Statement: I have served as a Councilor or Alternate to the ACS Council for more than 20 years, and I ask for your vote for re-election in order for me to continue to be one of the representatives of NESACS on the policy-making body of the Society. I intend to continue to work forcefully on Council and within my committee assignments to create stronger bonds between the Society and local sections, regions, younger chemists, senior chemists, high school teachers, and underrepresented minorities. Given my involvement with the NESACS German Exchange, the Malta Conferences, IUPAC, and the ACS International Activities Committee, I pledge to continue to support the expansion of the Society's international efforts. I promise to be an active and experienced voice for NESACS, representing the interests of our broad and increasingly diverse membership.

Andrew Scholte

Education: B. Sc. (Biochemistry; 1st Class Honors) Simon Fraser University, 2000; Ph.D. (Chemistry) University of Alberta, 2006;

Professional Experience: Sanofi Genzyme, Integrated Drug Discovery, Senior Scientist, Genzyme, 2016-present; a Sanofi Company, Medicinal Chemistry Department, Staff Scientist II, 2012-2016; Genzyme, a Sanofi Company, Medicinal Chemistry Department, Staff Scientist I, 2008-2012; Boston College, Chemistry Depart-

ment, NSERC Postdoctoral fellow with Prof. Marc Snapper, 2006-2008.

Honors/Awards: ACS Leadership Development Award (2010); Natural Sciences and Engineering Research Council of Canada (NSERC) PDF (2006-2008); Outstanding Oral Presentation-Canadian Society for Chemistry (2005); Canada Graduate Scholarship (2003-2005); NSERC Postgraduate Scholarship A (2001-2003); Alberta Heritage Studentship (2000-2005); Faculty of Science Graduate Entrance Scholarship (2000); Department of Chemistry Entrance Scholarship (2000); Walter H. John Scholarship (2001-2005); Mary Louise Imrie Graduate Student Award (2004); Alfred Bader Scholarship-Canadian Society for Chemistry (2000).

Service to the Chemistry Community (USA and Canada): Member of the ACS since 2006; President of the 1st Banff Symposium on Organic Chemistry Organizing Committee; Member of the Canadian Institute of Chemistry since 2000.

NESACS Service: Chair-Elect (2018); Alternate Councilor (Jan. 2012-present), Member of the Nominating Committee (2015); Member of the German Exchange Program (2014-present); Member of the German Exchange (GEX) steering committee (2013-present); Member of the Medicinal Chemistry Committee (2012-present) Vice Chair of the NSYCC (2010-2011). Member on the NESACS committee for the 2010 ACS meeting in Boston, MA (Katherine Lee-Chair).

Statement: I am honored to be nominated for election as a NESACS councilor. For the past 20 years I have been actively involved with serving the scientific community in the United States and Canada. During my undergraduate studies at Simon Fraser University, I was the President of the Biochemistry and Chemistry Undergraduate Student Union. As president I initiated a career symposium program where students could learn more about potential career opportunities in both academic and industrial fields. During my graduate school training at the University of Alberta I established a new conference for graduate students in Chemistry. The

Banff Symposium on Organic Chemistry is held every two years in Banff, Alberta and aims to highlight graduate student's research while providing an opportunity to discuss their work with industrial, post-doctoral, and faculty researchers.

For the past few years I have been involved with NESACS. In the winter of 2010 I was a member of the NESACS committee for the 2010 ACS meeting in Boston. On this committee I was responsible for recruiting student volunteers working during the national meeting. More recently, I was elected as vice chair of the Younger Chemists Committee within NESACS (NSYCC) for year of 2011. With-in this role I was involved in planning of events hosted by the NSYCC and acted as a moderator and scientific judge for the annual graduate research conference (2011). In 2016, I was fortunate enough to be re-elected as an alternate councilor for the NESACS and I am running again to be elected as a councilor on the NESACS board.

I am looking forward to build upon my role with NESACS as its chair-elect and to take our concerns to the national level as a councilor. If elected as a councilor, I will continue to my work with the younger chemists. Younger chemists can learn from the experiences of our members and bring fresh and new ideas to the section. It is imperative for the future of NESACS and the ACS that we actively engage the younger chemists of our society. I ask for your vote and thank you in advance for your support.

Patrick Cappillino

Position Statement: I seek a position as Councilor in NESACS to contribute to this organization's estimable mission and strengthen my ties to New England's chemistry community. I began my relationship with NESACS as a graduate student more than a decade ago, becoming a member (and eventually board member) of the NSYCC. Since then I have continued to participate by serving on several German Exchange Steering committees and by participating in NESACS meetings. I

recognize the importance of professional service and I've reached a point in my career where I hope, in some small way, I can help guide the trajectory of our professional community.

Biographical Data: Dr. Cappillino is an inorganic and materials chemist and an Assistant Professor in the Chemistry and Biochemistry Department at the University of Massachusetts Dartmouth. He joined the faculty there in Fall, 2014 after a postdoctoral stint in the Energy Nanomaterials Department at Sandia National Laboratories in Livermore, Ca. Prior to that, Dr. Cappillino obtained his PhD in Chemistry from Boston University. Dr. Cappillino maintains professional memberships in the Inorganic Division of ACS, the Electrochemical Society, the International Society of Electrochemistry and the Materials Research Society. He received the 2015-16 ECS/Toyota Young Investigator Fellowship and was profiled as a 2017 Emerging Investigator by the Journal of Materials Chemistry.

Raj (SB) Rajur

Education: Ph.D. in Organic/Medicinal Chemistry, Karnataka University, Dharwad, India (1988); Postdoctoral Fellow, University of Texas Southwestern Medical Center, Dallas (1988-1990); and Boston College, Chestnut Hill, MA (1990-1992)

Professional Experience: Instructor, Massachusetts General Hospital, Harvard Medical School, and Shriners Burns Institute (Boston, MA). Adjunct assistant professor, Northeastern University (Boston), Group leader Millipore Corporation (Bedford, MA), Project leader, ArQule, Inc. (Woburn, MA). Founding member and co-chair of Massachusetts Biotechnology Council CRO CMO forum. Presently, Founder, Chairman and CEO CreaGen Biosciences, Inc. (Woburn, MA), (Founded 2002) and CreaGen Life Science Incubator (Founded 2013)

ACS/NESACS Service: Program Chair, Medicinal Chemistry Division, NESACS (2003-present); Alternate Councilor, NESACS (2005-present); NESACS Nominating Committee (2008); NESACS election committee

(2014), member of Organizing Committee, NESACS, IUPAC and RSC-US-Sponsored Advances in Chemical Sciences Symposium Series (2007-2018). ACS Carrier consultant (2013-present)

Membership/Honors: ACS Organic Chemistry Division, ACS Medicinal Chemistry Division AAAS, and Indian Chemical Society. Reviewer, journal of pharmaceutical sciences (ACS journal), Reviewer, BU ignition award, Listed in Who's Who in Science and Engineering. Invited speaker at several international conferences. Serving on advisory board of many Indian cultural and community organizations.

Position Statement: It would be an honor to serve as councilor to our local section. As an entrepreneur, scientist, educator and active collaborator I would bring an impressive amount of expertise and leadership to our section.

I have been serving as the program chair for the medicinal chemistry section of NESACS since 2001. In my tenure as program chair, my mission has been to bring quality drug discovery science to our May, September and December annual symposia. The purpose of bringing good pharmaceutical science to our very active local section audiences is multifaceted. Our territory now houses the biotech hub of the world and has become a location where every multinational pharmaceutical company wants to collaborate, headquarter or establish a Center of Excellence. We, as a section, need to be exposed to a cross section of the science that is ongoing in the industry. Our meetings are venues for the exchange of ideas between industrial and academic participants. And, most importantly, our meetings are places where students from our many prestigious colleges and universities can network with professionals and learn from the symposia topics that feature cutting edge science.

I am proud to say that I was one of the founding members of Our annual Advances in Chemical sciences symposium and it has become the signature events and attracts more than 250 participants every year.

Moving forward, as councilor, I will continue to support and encourage NE-

SACS meetings that bring topnotch science to our audiences of academic and industrial professionals and students. I also plan on initiating the establishment of the Medicinal Chemistry Prize and also an exchange program with Indian universities similar to the German Exchange program.

The history of our section is immense and impressive. I hope to add to this legacy if elected. Thank you for your consideration and support.

Joshua Sacher

Education: B.S. in Biochemistry, University of Delaware (2005); Ph.D. in Chemistry, Penn State University (2012). **Professional Experience:** Postdoctoral Research Associate, University of Pittsburgh (2012-2014); Research Scientist, Medicinal Chemistry, Broad Institute of MIT and Harvard (2014-Present); Course Assistant, Introduction to Computer Science, Harvard (2018-Present).

NESACS Service: Chair, Project SEED committee (2017-Present); Alternate Councilor (Interim, 2018-Present)

Memberships: American Chemical Society

Statement: Mentorship from exceptional scientists has shaped who I am both personally and professionally. One of my goals is to return this favor as much as possible, making sure the next generation of scientists is even better than the current one. To that end, over the past 4 years I have formally mentored 13 young scientists, ranging from high school through early graduate school.

The immense reward of mentorship led me to ACS's Project SEED, a summer research program for economically disadvantaged high school students. It struck me as odd that the Boston area, a place filled with educational and research opportunities, was not playing a larger role in this program. On getting involved, I began to see why: many of the policies and requirements of this well-intentioned program end up excluding students who could benefit from Project SEED.

As a councilor, I will not only try to represent NESACS's interests, but will

use the position as a springboard to effect change within Project SEED. I hope to join the Committee on Project SEED so I can have a more influential voice in the program's policies. Beyond the high school program, I would like to advocate for mentorship programs across all career stages. Too often, people either don't know how or where to find a potential mentor, which can limit a scientist's perspective and opportunities. I believe ACS has an opportunity to grow in this area, and think it would be well-received by the membership.

I thank you for the nomination and hope that you will give me the chance to serve NESACS and the chemistry community.

Mariam N. Ismail

Education: B.S. Chemistry, University of Massachusetts (2006); Ph.D. Chemical Engineering, Northeastern University (2011).

Professional Experience: Assistant Professor Tenure-Track, Simmons College (2016-present); Lecturer, Simmons College (2015-2016); Adjunct Lecturer, Simmons College (2013-2015); Lead Materials Engineer, Viridis 3D (2014-2015); Senior Research & Development Engineer, 1366 Technologies (2011-2014).

NESACS service: Lead collaborator from Simmons College with WCC (2016-present); NSCRC Conference Judge (2013). YCC Career Chair (2009-2010).

Memberships: American Chemical Society.

Awards/Honors: MPAC-hosted event at The White House celebrating Muslim Woman Emerging Leaders in the field of STEM (2014). American Institute of Chemists Outstanding Graduate Student Award (2011). Recipient of the YCC/NESACS-JCF/GDCh Exchange to Germany Program (2009).

Statement: It is a great honor to be nominated for the position of Councilor and to be given the opportunity to serve NESACS and ACS at a larger extent. As an assistant professor at an all-women's primarily undergraduate institution, it is my goal to help recruit and foster the development of well-rounded

female undergraduate scientists. If elected councilor, I will continue this work towards empowering young female scientists in becoming more active within local chapters and pursuing careers in STEM. As councilor, I will also work on fostering collaborations with local and national women-serving STEM organizations and develop programs that will help engage our population at large.

My involvement with NESACS began after being elected a delegate for the 2009 Exchange to Germany Program. Having seen the impact that program had on my professional development, I decided to commit more time to NESACS and give back by providing similar opportunities for others in our field. In 2010, I was elected Career Chair of the YCC. During my tenure as Career Chair, I worked on organizing the Northeast Student Chemistry Research Conference (NSCRC), which provides an opportunity for local students to present their research, network, and attend panel discussions.

In 2013, I served as a judge at that very same conference. In 2016 (to present), I've been serving as the Women's Chemist Committee (WCC) representative for Simmons College. Since 2016, I have worked with the WCC in organizing two main events with the goal of motivating and inspiring young female students to pursue careers in STEM and highlighting public policy issues regarding Wage Gap Bill.

In April 2017, we, Simmons College and the WCC, co-hosted a panel discussion titled "STEM the Pay Gap – A Panel Discussion on How We Can Promote Pay Equity for Women in STEM". This event was attended by over 60 students from various universities and colleges in the Greater Boston Area. Not only attendees were able to engage in intellectual discussion regarding pay equity, attendees were able to also network with the panelists and ask pertinent questions related to their fields.

In January 2018, we co-hosted our second main event titled "What Can I do with a Degree in Chemistry?". The goal of this panel discussion was to help undergraduate students see the vast options they have with a degree in chemistry.

I appreciate your vote for Councilor. Thank you for your support.

Hicham Fenniri

Education: B.Sc. 1989, M.Sc. 1990, Ph.D. 1994, University of Strasbourg

Professional Experience: Scripps Research Fellow (1994-1997); Assistant Professor, Purdue University (1997-2003); Professor, University of Alberta (2003-2013); Senior Research Officer and Program Director, National Institute for Nanotechnology (2003-2013); Associate Chair for Graduate Affairs, Northeastern University (2014-2015); Professor, Northeastern University (2013-present).

Memberships (selected): American Chemical Society (since 1994); American Association for the Advancement of Science; Chemical Institute of Canada; Materials Research Society; International Society for Nanoscale Science, Computation and Engineering; American Heart and Stroke Association.

Editorial Activities (selected): *Biosensors, Nanomaterials, Journal of Nanotechnology in Chemistry, Nanotechnology Reviews, Current Bioactive Compounds, BioMed Research International, International Journal of Nanomedicine, NanoBiotechnology.*

Awards, Honors (selected): Xerox UAC Award (2006, 2007, 2008); Canada Foundation for Innovation, Leaders Award (2007); 3M Non-Tenured Faculty Award (2000-2002); Cottrell Teacher Scholar Award (2000-2005); National Science Foundation Career Award (1999-2003); Purdue University New Curriculum Development Award (1998). Gave over 200 invited lectures including 35 distinguished lectures at academic, industrial and governmental organizations.

Service (selected): General Chair NERM (2021); Member NERM Committee (2017-); NIH NANO (2017); NCI-CCNE (2015); NIH NIDCR (2015, 2012); NIH BMBI (2012, 2011); co-chair SPIE Symposium on Molecular Machines (2018); co-Organizer European Materials Society symposium U (2014, 2011), symposium G (2013), symposium M (2009); co-Organizer/chair Chemical Society of Canada symposia (2014, 2013, 2010).

Scholarship: my research group's interdisciplinary research program was reported in over 230 peer reviewed publications, 20 patents/patent applications, and over 500 conference presentations

Statement: I am a chemist, chemical engineer and bioengineer, with a rich cultural heritage spanning three continents. I was immersed in the social fabric and experienced the academic and government laboratory systems in the United States, Canada, Europe, the Middle East and African region. I chaired or served on numerous boards, panels, and committees for the evaluation of research programs, research and academic staff, and conference programs, among others. Over the past two years, I have had the privilege of participating in NESACS as a board member, NERM committee member, organizer of Nobel Laureate Professor Lehn's Lecture co-sponsored by NESACS, and was voted General Chair for NERM 202. As councilor I intend on representing you on the International Activities Committee (IAC) and the Committee on Science (ComSci). The mission of the IAC is to assist scientists and engineers worldwide to communicate and collaborate for the good of the chemical and chemically related sciences, chemical engineering, and their practitioners. ComSci plays a unique role within ACS by facilitating discussion and dissemination of information on global, multidisciplinary topics that cut across the diverse units of ACS. In addition to increasing the Society's understanding on emerging areas of chemical science and education. I humbly believe that my international experience in the academic and R&D continuum, from program development and implementation, education and outreach to service could further NESACS's vision of inclusion and growth towards sister disciplines and societies. I deeply value the opportunity of becoming an ACS Councilor to be an engine of change and to give back to our community. For this, I humbly ask for your support and vote. <Thank you>

Daljit Matharu

(Statement not received in time for Nucleus deadline)

Director-at-Large

June Lum

(See education and experience under Councilor/Alternate Councilor)

John L. Neumeyer

Education: BS Columbia University, 1952; PhD in Medicinal Chemistry, University of Wisconsin in 1961.

Professional Experience: Research Chemist, Ethicon (Division of J&J) 1952-1957; FMC Corp., Senior Research Chemist 1961-1963; Arthur D. Little Inc, Staff Scientist 1963-69; Professor of Medicinal Chemistry and Chemistry, Northeastern University 1969-1991; Visiting Professor University of Konstanz, Germany 1975-76; Scientific Director and Chairman, Research Biochemicals Int'l (RBI) 1980-96; Visiting Professor University of Groningen, Holland 1997; Director, Medicinal Chemistry Program, McLean Hospital, Harvard Medical School 1996-present.

Honors: ACS Fellow, 2011; Elected to Hall of Fame, ACS Division of Med. Chem., 2008; Henry Hill Award for Outstanding Service to NESACS, 1998; AAAS Fellow, 1984; Fulbright Fellowship, 1975-76; AAPS Fellow, 1986, Outstanding Educator Award, 2012; Northeastern University Matthews Distinguished Professor, 1980.

ACS Service: Division of Medicinal Chemistry, Councilor, Executive Comm., 1971-1981; Vice Chairman, 1981; Chairman, 1982; Councilor, 1983-1987; Board of Editors, J. Med. Chem., 1974-1995; ACS Board of Publications, 1990-93.

NESACS Service: Founder and Chair, Medicinal Chemistry Group, 1974-1995; Councilor, 1998-1995; Trustee 1989-1993; Alt. Councilor, 1995-98; Publication Comm. The Nucleus, 1976-78, 1985-87 and Chair, 1986 and 1997.

Statement: Having served the ACS in a variety of positions both nationally and locally over the past 50 years, I am very much aware of the concerns and problems of its members. If elected, I shall continue to devote my time, energy and experience in both industry and academia to further the objectives of the ACS and its members. In particular, I

shall work towards recruiting young and energetic new members to actively participate in the governance of the North-eastern Section.

John M. Burke

Education: B.A. Chemistry, M.A., Ph.D. Organic Chemistry, Brandeis University. PMP, Project Management Institute.

Professional Experience: Project and Program Manager Consultant, Takeda Pharmaceuticals (2018-Present), International Informatics Project Manager, Ipsen Bioscience Inc. (2015-2017); Project Management Consultant, Merck Research Labs (2012-2015); Director, Business Solutions, Health Advances LLC (2011-2012); Sr. Research Business Analyst, Cubist Pharmaceuticals (2009-2011); Knowledge Development Manager, Millipore Corporation (2006-2008); Scientific Informatics Applications Consultant, AstraZeneca (2005-2006); Research Software Administrator, UCB Research, Inc. (2002-2005); Technical Services Consultant, Formation Systems (2000-2002); Documentation Manager and Support Scientist, CambridgeSoft Corp. (1996-2000); Adjunct Assistant Professor of Biochemistry, MA College of Pharmacy (1995); Adjunct Assistant Professor of Chemistry, Boston College (1993-1994); Assistant Professor of Chemistry and Biochemistry, Stonehill College (1986-1993)

Memberships: American Chemical Society; Project Management Institute; Cambridge Semantic Web Meetup Group; Laboratory Robotics Interest Group; Association for Computing Machinery; American Association for the Advancement of Science

Statement: Having served two prior terms as Director-at-Large, I'd like to thank the Nominating Committee of the NESACS Board for the honor of nominating me once again for that position. Perhaps my most significant service to NESACS to date has been to serve on that committee, which gave me the opportunity to nominate a young, enthusiastic chemist who has since served the section as chair of the Women Chemists Committee.

With the growth of interdisciplinary

and multidisciplinary sciences, the frontiers of chemistry now extend significantly into biology, information technology, nanotechnology, and other emerging hybrid disciplines. This trend has taken my own career – one of lifelong learning – in unexpectedly exciting and fulfilling directions from academia to industry.

The ACS and NESACS need to continue evolving to anticipate future opportunities to realize the benefits of chemistry's wider frontiers for our members and for society. This may involve forging more active partnerships with professional organizations representing those disciplines that now intertwine with chemistry. I hope to help steer NESACS in that evolution over the coming three years to promote the growth of our section for the benefit of our members and for the greater good

Nominating Committee

Michael P. Filosa

Education: B. Sc., Massachusetts Institute of Technology (1974), Ph.D., Harvard University, (1980), Babson School of Executive Education (1988).

Honors: Phi Beta Kappa, Phi Lambda Upsilon, Merck Award (1974), Dreyfus Foundation Scholar (1975), NESACS Henry A. Hill Award (2012).

Experience: Polaroid Corporation (1979-2005); Scientist, Group Leader, Senior Manager of Chemistry; ZINK Imaging, Inc.; Senior Manager of Chemistry (2005-2013); Performance Indicator, LLC. Chemistry Manager (2014-Present).

NESACS and ACS Service: ACS Member since 1976. Alternate Councilor (1997-1999; 2005-2008), Councilor (2009-2018); Director-at-Large (2017-2019); Editor of the *Nucleus* (2005-present). Board of Publications (2005-Present), Heyn Award Committee (2006-Present). Nominating Committee (2010, 2013, 2016). Local Organizing Committee for the 2007, 2010, 2013 Boston ACS National Meetings. Committee on Chemical Abstracts Service (CCAS) Associate Member (2010) Full Committee Member (2011-18).

Statement: I appreciate this opportu-

nity to serve for a fourth time on the Nominating Committee. It is a very important function of the Board and I will take my duties seriously. Thank you for your votes.

Sonja Strah-Pleynet

Education: Ph.D. Organic Chemistry (1996); M.S. Organic Chemistry (1993); B.S. Chemistry (1990), University of Ljubljana, Slovenia; Postdoctoral Fellow, University of Florida (1997-1998); University of California, San Diego (1998-1999).

Professional Experience: RSM, Teacher (2013-Present); National Science Foundation, Reviewer (2012); Thermedical, Inc. (2012); Arena Pharmaceuticals (1999-2009); Senior Scientist, Medicinal Chemistry (2006-2009); Research Scientist (1999-2006).

ACS Service: Member since 1998; ACS Council (2004-Present); Presidential Task Force "Vision 2025", Member (2012-2013); ACS National Award Selection Committee, Member (2011-2013); Committee on Chemistry and Public Affairs, Associate (2013), Committee on Economic and Professional Affairs (CEPA), Member (2007-2012), CEPA Liaison to Committee on Minority Affairs (2008-2012); CEPA Liaison to Committee on International Activities (2011-2012); CEPA Task Force on Globalization (2008-2009), ACS Legislative Action Network, Member (2006-Present).

NESACS Service: Board of Directors (2013-Present); Chair of the NESACS Host Local Section Committee for the 2015 ACS National meeting in Boston, MA; Alternate Councilor (2013-Present), Government Affairs Committee, Member (2010-Present), STEM Outreach - Science Café and Science Fairs (2011-Present).

Membership/Honors: ACS Medicinal Chemistry Division and ACS Organic Chemistry Division, Member; ChemLuminary Award - ACS President's Award for Local Section Government Affairs (2010); American Chemical Society Certificate of Achievement, ACS San Diego Section (2008); Arena Pharmaceuticals - Outstanding Medicinal Chemistry Team

Award (2007); Postdoctoral Fellowship from Ministry of Science and Technology, Slovenia (1997); First Prize Winner at 26th KRKA Pharmaceuticals Research Awards (1996); Graduate Research Scholarship of Ministry of Science and Technology, Slovenia (1991-1996).

Norris Committee

Kuzhikalail M. Abraham

Dr. Kuzhikalail M. Abraham received his Ph.D. degree in Chemistry from Tufts University in 1973, and conducted post-doctoral research at Vanderbilt University and Massachusetts Institute of Technology.

Dr. K. M. Abraham is Research Professor at the Center for Renewable Energy Technology, Northeastern University, Boston, Massachusetts and the principal of E-KEM Sciences, a battery consulting company in Needham, MA. He was previously President of Covalent Associates, Inc, Woburn, Massachusetts, and Vice President and Director of Battery Research and development at EIC Laboratories, Inc., Norwood, Massachusetts. K.M. has over 40 years of experience in lithium battery research and development with many pioneering contributions to advance rechargeable lithium and lithium-ion batteries. His research results have been published in more than 200 papers in journals, meeting proceeding volumes and book chapters, and he authored 15 US patents (<https://scholar.google.com/citations?user=i4Ii5na93EIC>).

Dr. Abraham has been a member of the America Chemical Society since January 1972 and a member of the NESACS for the same length of time. He is a patron member of the SCHB.

He received a number of awards for his work including the Battery Research Award of the Electrochemical Society, The National Aeronautics and Space Administration Group Achievement Award for the Rechargeable Battery Team, Distinguished and Pioneering Contributions Award of the International Battery Association, and Tufts University Graduate School of Arts and Sciences Outstanding Career and Service Achievement Award (2017). He is a Fellow of the

Electrochemical Society and Fellow of The Royal Society of Chemistry.

Vasiliki Lykourinou

(Statement not received in time for Nucleus deadline)

Mark Tebbe

Atlas Venture, Entrepreneur-in-Residence

Dr. Tebbe has >24 years of experience in drug discovery and development and was most recently Vice President, Head of Drug Discovery at Quartet Medicine focusing on peripheral pain and inflammation. He is a co-inventor of Incivek (Telaprevir), an HCV protease inhibitor.

He was previously Vice President of Medicinal and Computational Chemistry at Forma therapeutics where he focused on small molecule cancer therapeutics. Prior to that, Dr. Tebbe held positions of increasing responsibility during his 16-year career at Eli Lilly including head of chemistry in Hamburg, Germany, and Research Triangle Park, North Carolina as well as Global Head of Operations for the discovery chemistry group.

He obtained his Ph.D. in organic chemistry from Stanford University and his undergraduate degree from the University of Notre Dame.

American Chemical Society: Member 1986-present

NESACS: Member, 2010-present; Fund-raising Committee Chair, 2013-2016; Councilor 2015-2017; Norris Award Committee Member 2016-2018, Chair 2017 and 2018 ◇

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Historical Note

Sandra Enrica Russo-Rodriguez

February 11, 1959 – February 17, 2018

Compiled and written by Michael P. Filosa

I was saddened to see in the most recent copy (March 30, 2018) of MIT's Chemformation newsletter that old friend and colleague Sandra Russo-Rodriguez had recently passed away from cancer at the age of 59. Sandra joined our chemistry team at Polaroid in 1984-85 reporting to Roger Boggs. She stayed with us for about five years at which time her husband, Andres, had completed his training as a psychiatrist and was assigned by the Air Force to Lowry Air Force Base in Denver. In Colorado Sandra continued to develop her career as a bench chemist at Amgen in Boulder.

As the wife of an Air Force psychiatrist, Sandra moved around and was next in El Paso before returning to Massachusetts and living on Cape Cod. At that point around 2003, I was charged with developing dyes suitable for full color direct thermal imaging. Because these dyes did not exist commercially, we launched a large synthetic effort to invent them. At the peak of this effort I had 13 synthetic chemists reporting to me.

Early in this process, I was seeking skilled synthetic chemists and was able to convince Sandra to drive from the Cape to Waltham 3-4 days a week to make dyes for me. Ultimately, our synthetic effort was successful and we developed the C, M, Y dyes which are the foundation for ZINK Imaging's direct thermal paper now used in portable printers and combination camera/printers available from manufacturers such as Polaroid, LG, Prynt and Hewlett-Packard.

Driving from the Cape to Waltham 3-4 days a week was not sustainable and Sandra next sought out teaching opportunities. I was pleased to write a recommendation for her to Brown University, and was even more pleased when she

was hired as an instructor. At Brown she had 13 successful years and was a beloved instructor and mentor.

From her obituary published by Monahan-Drabble-Sherman Funeral Home, Providence, RI: <http://www.mkds.com/obituaries/Sandra-Enrica-Russo-Rodriguez?obId=2971460#/obituaryInfo>

Dr. Russo-Rodriguez was born in Mayagüez, Puerto Rico to her parents, Consuelo Suarez and Saverio Russo. Showing exceptional academic promise from an early age, she earned a B.Sc. in Chemistry, *magna cum laude*, from the University of Puerto Rico in Rio Piedras, and at the age of 24 completed a Ph.D. in Organic Chemistry from the Massachusetts Institute of Technology with Professor William Rastetter. After postdoctoral research at MIT with Professor William Roush, her successful career as a research chemist spanned nearly two decades.

She worked as a research scientist, including positions at Amgen and Polaroid, and authored more than 20 scientific publications—including 11 patents. Before transitioning to her teaching career, she made significant contributions to the field of synthetic bioactive molecules, including the synthesis of several novel dyes and modified nucleotides.

Over the past 13 years, Dr. Russo-Rodriguez was a valued and beloved faculty member of the Brown University Community by students and colleagues alike. She joined the faculty of Brown University Department of Chemistry in 2005 to lead the tutorial program, CHEM0330T/0332, which provides students with an opportunity to study the challenging introductory chemistry course CHEM0330 in an individualized setting which focuses on guided inquiry, active learning and collaborative problem solving.

She also taught online summer tutorials and lecture courses, such as CHEM0100, to help students transition to college-level chemistry. Her innovations in each of these courses are too numerous to list here, and she her outstanding contributions shaped the development of the Chemistry tutorial curriculum.

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Robert Lichter

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the ACS Committee on Budget and Finance (B&F), in which he has served as vice chair, chaired the B&F subcommittee on Program Funding Requests, and was a member of the B&F Committee's Program Review Advisory Group, which reviews all ACS programs. He was also a member of the Advisory Board to the ACS Development Office. He has been a Councilor and Alternate Councilor for NESACS from 2008-2018.

Lichter has served on and has chaired numerous national panels and advisory boards dealing with broad educational and scientific issues, including many for ACS, the National Science Foundation (NSF), and the National Research Council (NRC). He was a founding member of the NRC's Chemical Sciences Roundtable and served on its steering committee. From 2002 to 2008, Lichter was a member of the NSF Committee on Equal Opportunities in Science and Engineering (CEOSE), which he chaired in 2005. A Congressionally mandated committee that reports directly to Congress, CEOSE advises NSF on policies and programs directed to broadening participation of women, underrepresented minorities, and persons with disabilities in science, technology, engineering, and mathematics. Lichter has also served on the NSF Advisory Committee on the Government Performance and Results Act (GPRA) Performance Assessment, and on the NSF Advisory Committee on Environmental Research and Education.

Lichter was a member of Sigma Xi's Committee on Public Understanding of Science, and an advisor to the Carnegie Initiative on the Doctorate, a program of the Carnegie Foundation for the Advancement of Teaching that has explored ways to enhance the quality of doctoral education.

He served as Chair of the Board of Governors of the Massachusetts Academy of Sciences. He participated in a NSF-funded project exploring the status of women in chemistry, computer science, and mathematics and statistics internationally.

Lichter was a Fellow of the Associ-



Members of the Subsection Task Force: (l-r) Jerry Jasinski (Keene State College), Ruth Tanner (University of Massachusetts Lowell), Morton Hoffman (Boston University), Bob Lichter (Merrimack Consultants).



Pictured is the NESACS contingent who attended the Summerthing event at Tanglewood on August 2, 2009 hosted by Bob Lichter and Diane Scott-Lichter. Left-to-right on the Tanglewood lawn: Amie Shaw, Judy Wright, Tony Wright, Bob Lichter, Diane Scott-Lichter, James Phillips, Dorothy Phillips. Foreground, Ethan and Owen Shaw. Photo by Mike Shaw

ation for Women in Science, the American Association for the Advancement of Science, and the American Chemical Society. For his efforts in promoting diversity and inclusiveness in science, he was the 2010 recipient of the ACS Award for Encouraging Disadvantaged Students into Careers in the Chemical Sciences.

Lichter's research area was in car-

bon-13 and nitrogen-15 nuclear magnetic resonance spectroscopy, in which he published more than three dozen papers and co-authored three books. In his current position, he develops and manages strategies for providing advising and consulting services to educational, philanthropic and non-profit organizations.

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Robert Lichter

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Among other accomplishments in that role, he has organized two workshops on the postdoctorate for NSF that yielded new programs and policies, and has carried out an examination of ACS's education activities. In 2009, he served an extended appointment as a senior consultant to NSF's Division of Human Resource Development, leading a major component of the examination of NSF's Alliances for Graduate Education and the Professoriate.

He met the love of his life, Diane Scott, in 1988. In 27 years of marriage, they lived in Brooklyn, Atlanta, Philadelphia, Boston, and the Berkshires, and traveled around the world. In addition to his wife, he is survived by his sister Nancy Seebert and her husband Bill, of Gresham, Oregon; his son Derek and daughter-in-law Jude Shabry, of Cambridge, Mass.; his daughter Allison and son-in-law Greg Joseph, of Brooklyn, N.Y.; and his three remarkable grandchildren Julian, Liliana, and Nina Lee.

He was an avid hiker, climbing mountains across the U.S. and Europe, as well as in Peru, Japan, New Zealand, and on Cape Verde. He enjoyed active hikes closer to home with the Berkshire Silver Scramblers.

He was passionate about choral music, and sang with groups including the Harvard Glee Club, Collegiate Chorale, New York Choral Society, Berkshire Bach Society, and Berkshire Lyric.

In addition, Bob was an active community volunteer. One of his joys later in life was working with the collaborative and experienced team that is implementing the Alford Broadband Initiative to bring high-speed Internet to the town

Donations in Bob's name may be directed to Berkshire Lyric or the American Chemical Society Scholars Program C/O FINNERTY & STEVENS FUNERAL HOME, 426 Main Street, Great Barrington, MA 01230. To send remembrances to his family please visit <http://www.finnertyandstevens.com>

Sources: Bob's official ACS bio and his obituary at Finnerty & Stevens Funeral Home, Great Barrington, MA. ◇

Sandra Russo-Rodriguez

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Dr. Russo-Rodriguez was committed to making the STEM fields as accessible and inclusive as possible, and she provided exceptional support and teaching to students from all backgrounds. She was a freshman/sophomore adviser and mentor, a TEAM Adviser, and a Randall Adviser.

She will forever be remembered for the deep connections she made with her students and advisees, her thoughtful advising, as well as her fervent belief that success in chemistry can be achieved by anyone, regardless of previous educational background. Her office door was always open to her students and advisees, and even near the end of her life she was providing support to students from afar.

Dr. Sandra Russo-Rodriguez's commitment to student achievement and advancement was well-recognized by the University community. She was honored with a Teaching and Advising Award by the Undergraduate Council of Students, presented to faculty who "demonstrate outstanding commitment to teaching and student mentorship," in 2014; as well as the Student and Employee Accessibility Services (SEAS) Access Ambassador Award, presented annually to a faculty member who has "demonstrated exceptional awareness, inclusiveness, and support for students with disabilities," in 2017.

Outside of teaching and science, Dr. Russo-Rodriguez was a beloved wife and mother, an avid bicyclist, skier, and a hiking enthusiast. She loved walking along sun-dappled trails with her family and friends—whether through the mountains of Colorado, the oak-lined boulevards of Providence, or the beaches of Puerto Rico and Cape Cod. She also loved reading, and had a deep appreciation for visual and musical arts. When not caught up in the plot of a novel, she could often be found playing her favorite Chopin pieces on the piano or producing watercolor and pencil sketches.

She is survived by her husband, Andres Rodriguez, M.D.; her son, Carlos Rodriguez-Russo; her daughter-in-

Esselen Address

Continued from page 4

munotherapy." We can remove immune cells from a patient's body, tweak their DNA, and reinfuse them into the patient, where they'll be better able to find and destroy tumors.

These developments are exhilarating, but with any great power comes risk. Genome editing can be done in essentially any cell and for any reason. Some people fear what might happen if we choose to use this technology to edit the DNA of human embryos. Parents might determine their child's genetic future before the child is even born, and might not stop at preventing disease. Rather, it's conceivable that genome editing might be used for *enhancement*. This possibility raises a host of issues from access to ableism, and could lead to genetic discrimination and further societal inequality. Thus, it is essential that we come together as a society to determine the future we want. How should this technology be regulated? Who should decide? I encourage people from all walks of life to join the conversation, think about the tough questions, and let your voice be heard. ◇

law, Kelly Holt; her sisters, Maricarmen Russo, Lily Russo, and Ines Russo; her brother, Alejandro Russo; her parents, Consuelo Suarez and Saverio Russo; and numerous nieces and nephews.

A Memorial Service was held at 2:00 pm on Saturday, February 24th at Manning Chapel on the Brown University Campus. In lieu of flowers, her family welcomes donations in her name to the American Cancer Society and the Adenoid Cystic Carcinoma Research Foundation. ◇

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Biography

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awards, including the State University of New York Chancellor's Award for Excellence in Teaching in 2001, he is on the editorial board of the Journal of Educational Technology Systems

An inorganic chemist and materials scientist, Jones earned a bachelor's in chemistry from St. Michael's College and a doctorate in inorganic chemistry from the University of North Carolina at Chapel Hill. Jones completed post-doctoral work at the University of Texas at Austin before joining the faculty at Binghamton in 1993. His research involves the study of photo-induced electron and energy transfer processes in inorganic and polymer systems with specific research interests in polymer sensors, photovoltaics and electronic nanomaterials. He received the Chancellors Award for Excellence in Scholar-

ship and Creative activities in 2017.

He has authored more than 150 publications and articles, holds six patents and is a Fellow of the American Chemical Society. His work has been supported by over \$14 million in federal research grants from the National Science Foundation, the National Institutes of Health, the National Institute of Standards and Technology, the Department of Defense, and industrial partners. In 2015 he co-founded Chromanotech LLC, a startup company producing optical nanomaterials patented from his university research lab for use in energy, biomedical and defense related applications.

An active volunteer leader in the American Chemical Society for over 20 years, Wayne has served at the local, regional, and national level in ACS leadership roles. He currently serves on the Board of Directors helping with society strategic planning efforts as well as

Treasurer of the Northeast Region Board. He has previously served as chair of the Local Section Activities Committee (LSAC), the Committee on Committees (CONC) and the Membership Affairs Committee (MAC). He has organized numerous symposia, chaired two Northeast Regional Meetings, and served as program chair for national meetings of the Division of Chemical Education three times. In 2010, he was recognized as an ACS Fellow. In 2015, he received the E. Anne Nalley Award for Service to the ACS in the Northeast Region. ◇

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Calendar

Check the NESACS home page for late Calendar additions:
<http://www.NESACS.org>

Note also the Chemistry Department web pages for travel directions and updates. These include:

<http://www.bc.edu/schools/cas/chemistry/seminars.html>
<http://www.bu.edu/chemistry/seminars/>
<http://www.brandeis.edu/departments/chemistry/events/index.html>
<http://chemistry.harvard.edu/calendar/upcoming>
<http://www.northeastern.edu/cos/chemistry/events-2/>
<http://chemistry.mit.edu/events/all>
<http://chem.tufts.edu/seminars.html>
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<http://www.chem.umb.edu>
<http://www.umassd.edu/cas/chemistry/>
<http://www.uml.edu/Sciences/chemistry/Seminars-and-Colloquia.aspx>
<http://www.unh.edu/chemistry/events>
<https://www.wpi.edu/academics/departments/chemistry-biochemistry>

May 1

Prof. Rajeswari Kasi (Connecticut)
Tufts, Pearson, Rm. P106
12:00 pm

Prof. Anna Mapp (Michigan) & Dr. David Sandham (Novartis)
Harvard, Pfizer Lecture Hall
4:15 pm

Prof. Dominik Konkolewicz (Miami Univ.)
Univ. of New Hampshire, Parsons N104
11:10 am

May 3

Prof. Scott E. Denmark (Illinois)
MIT, Room 6-120
4:00 pm

Prof. Armen Zakarian (UCal - Santa Barbara)
Dartmouth, Steele, Rm 006
10:30 am

May 10

Prof. Alois Fürstner (Max Planck Institute)
MIT, Room 6-120
4:00 pm

Prof. Ang Li (Shanghai Institute of Organic Chemistry) & Prof. Eric Jacobsen (Harvard University)
MIT, Room 6-120
4:00 pm

Prof. Elizabeth Boon (Stony Brook)
Dartmouth, Steele, Rm 006
10:30 am

May 17

Prof. Daniel Romo (Baylor)
Dartmouth, Steele, Rm 006
10:30 am

**Notices for The Nucleus
Calendar of Seminars should be
sent to:**

Xavier Herault, email:
xherault@outlook.com ◇

**Q. Exactly, how many awards and
scholarships does NESACS sponsor?**

A) One b) Two c) Many

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