



Spring Newsletter 2018

 **COLUMBIA** | **MAILMAN SCHOOL**
UNIVERSITY | **of PUBLIC HEALTH**

ENVIRONMENTAL HEALTH SCIENCES

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Note from Nina

Spring is a time of change and growth. I know it's cheesy, but it's true. Just when we think the semester has begun, it's already time to clear many of our students for graduation. Continuing students are digging into their research, preparing for their practicum experiences, and I'm sure all of us are eager for spring to stick around for a bit before summer whooshes in.

I could take this time to list some of the amazing things that have happened in our department this semester (our EHS Alumni Panel, successful grant submissions, exciting seminars, and so much more), but you'll get to read about that in the pages to follow. So, I'd like to take this time to address our graduating students:

For the past few years I, along with many other staff members in the School, have volunteered to help with graduation day. Stationed at the dais, I get to see each of you proudly cross the stage after your name is called and you reposition your tassel to mark the occasion. Before I direct you back to your seat, I get to cheer you on and even share a hug with you as you pass by. My hope is that this small gesture of support makes you smile and reminds you that your EHS family will always be there.

Happy spring, all!



Nina J. Kulacki, MBA
Director, Academic Programs & PrIMER

In the News

Joseph Graziano, PhD and his colleagues published “Long-Term Effects of Environmental Lead Exposure on Blood Pressure and Plasma Soluble Cell Adhesion Molecules in Young Adults: A Follow-Up Study of a Prospective Cohort in Kosovo” in the *Journal of Environmental and Public Health* on January 8th. This study prospectively analyzes the association between blood lead levels and blood pressure using data from an original prospective birth cohort in Mitrovica (a mining town) and Prishtina (a control town). The paper can be found [here](#).

This year, **Norman Kleiman, PhD** was quoted in an article on the feasibility of colonizing Mars. His paper, cowritten with colleagues from the Netherlands Cancer Institute, was cited for its identification of radioprotector molecules. The article explained the variable effects of radiation.

Grants

Diane Re, PhD was selected as a winner of the CUMC Grants Program for junior faculty who contribute to the University’s core values of inclusion and excellence. This award will support Dr. Re’s innovative project titled “Novel dual color assay to study sex-specific effects in ALS.” In this new model female and male neurons cultured in the same dish will be identified by 2 different colors to facilitate the detection of sex-specific neurotoxic or neuroprotective effects. This tool could be cutting-edge in bringing more equity in regulatory toxicity assessment and drug development.



Publications

Sen Pei, PhD, Sasikiran Kandula, Wan Yan, and Jeffrey Shaman, PhD published the paper “Forecasting the spatial transmission of influenza in the United States” in February of 2018. The paper addresses multiple outbreaks of emerging pathogens that have unexpectedly swept over the planet in the last two decades. In these public health emergencies, pathogens invade new regions in the span of just a few weeks to months, leaving a critical window of opportunity during which real-time warning could be sounded. As such, accurate prediction of the spatial spread of pathogens could provide invaluable benefits to global public health. In this paper, we develop and validate an operational forecast system that is capable of predicting the spatial transmission of influenza in the United States. In particular, the onset week of local outbreaks can be accurately predicted up to 6 weeks in advance at state level. The paper can be found [here](#).

Daniel Carrión, PhD Candidate, W. Victoria Lee, PhD, and Diana Hernández, PhD published a paper in the International Journal for Environmental Research & Public Health titled “Residual Inequity: Assessing the Unintended Consequences of New York City’s Clean Heat Transition.” In New York City, a series of policies, known as the Clean Heat Program (CHP), were designed to reduce air pollution by banning residual diesel fuel oils. While there is near-universal compliance with the ban of #6 residual diesel, a substantial number of buildings still use #4. Using GIS, researchers found that Uptown Manhattan and the Bronx now bear the burden of residual fuel burning buildings. Qualitative methods were used to interrogate potential reasons for sustained use of residual fuels, including unsuccessful outreach efforts, and the perception of price volatility for cleaner heating fuels. The paper can be found [here](#).

In the News

Deliang Tang, MD PhD and **Frederica Perera, DrPH PhD** published “Shorter telomere length in cord blood associated with prenatal air pollution exposure: Benefits of intervention” in *Environment International* online on January 24. In this study, the authors compared telomere length (TL) in two successive birth cohorts by examining PAH levels in the umbilical cord blood of babies born before and after the local coal plant shutdown. This is the first study to provide evidence on the relationship between prenatal PAH exposure from coal burning and its adverse effects on TL, which has been associated with future risk of chronic disease. The link to the paper can be found [here](#).

Whitney Cowell, PhD, Ya Want, PhD, and Julie Herbstman, PhD collaborated with researchers at the CDC to publish “Temporal Trends and Developmental Patterns of Plasma Polybrominated Diphenyl Ether Concentrations over a 15-year Period between 1998 and 2013.” In this study, researchers examined the temporal changes in plasma PBDE concentration, which is found in furniture flame retardants, in order to characterize patterns of exposure over the early life course. This paper can be found [here](#).

Faculty Highlight

GREG FREYER, PhD **Professor, Baker, Beekeeper**

You probably know Greg as an amazing professor, friend, or colleague, and it's true – his love of teaching makes him an approachable and trustworthy resource. Since joining the EHS Department 20 years ago, Greg has become an invaluable part of Mailman. Besides the number of courses he teaches in the Department, Greg is also one of the primary faculty for the CORE's Environmental and Biological Determinants modules. Greg's open-door policy makes him a great teacher, as does his eagerness to address current events to foster relevant discussions, such as gun violence and Hurricane Maria.



When asked what advice he would give students, Greg emphasized the value in taking the time to get to know those around you by providing that much-needed listening ear. He also explained the value of adapting the skills you learn to subjects you love.

Student Testimonials

“Greg is a wonderful professor who does so much for this department and the school as a whole. He’s the most honest and upfront professor I’ve met, and his care for his students really shines through his persona. His willingness to get to know you is motivation for our continued success in and of itself. I hope to stay in touch with him as I begin the next step in my journey!”

– Kyle Colonna

“Dr. Freyer is the best student advocate we could ask for. He always goes the extra mile or more – like hundreds of miles to help students. A Freyer lecture is always an experience and we so appreciate all the time and effort he puts into making EHS a supportive environment.”

– Rachel Locke

“Dr. Freyer is an amazing person that is not afraid to be himself. I will always remember everything he has done for my classmates and me.”

– Jamal Lewis

Alumni Highlight

Meghan Kiernan, MPH '16

Environmental Health Policy Certificate

Meghan recently began a new position at NY Presbyterian as a Safety Specialist. She is responsible for the hospital's accordance with local, state, and federal regulations, including maintaining Environment of Care regulatory compliance. Prior to this position, Meghan worked as a Health and Safety Specialist at NYC Department of Environmental Protection, where she supervised the injury and illness, and hearing conservation programs, as well as provided health and safety guidance to NYC DEP personnel in Manhattan. Meghan first became interested in the field through the John D. Solomon fellowship. There she worked at NYC Emergency Management and learned about the extent of interconnections between EHS and emergency management principles. Meghan encourages current EHS students to seek out opportunities, such as networking, even if it doesn't come easily. These opportunities are the perfect practice for interviews and to learn more about the industry you hope to enter.



Alumni Panel

Christina Olbrantz McNeil, MPH '17

Climate and Health Certificate

Christina is an Environmental Health & Safety Consultant at Triumvirate Environmental. There, she primarily assists major healthcare clients to ensure compliance with occupational safety and environmental regulations. Christina's current projects take place at Mount Sinai, where she works as both the Lab Safety Program Manager and the EH&S Manager for clinic locations. In these roles, she manages compliance for clinics and research labs, writes organizational policies, and advises on sustainability practices.



Jeremy Brooks, MPH '17

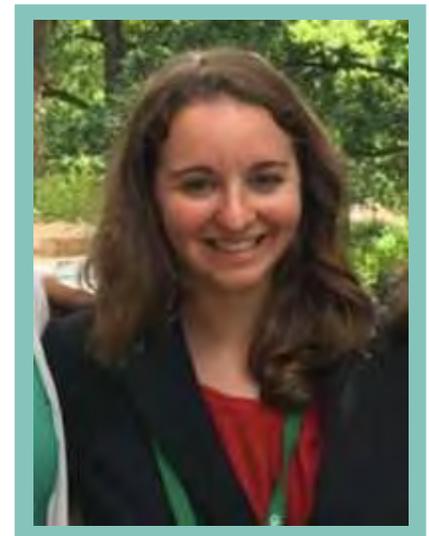
Environmental Health Policy Certificate

Jeremy is a Project Manager at the National Center for Disaster Preparedness at the Earth Institute at Columbia University. His current projects include a FEMA grant creating in-person and online training courses on post-disaster housing and economic recovery. He also manages data for the Resilient Children, Youth, and works on the Communities project, which is examining the physical and mental health effects of the Deepwater Horizon oil spill on children.

Sasha Berns, MPH '17

Toxicology Certificate

Sasha is currently an Industrial Hygienist for the New York City Department of Environmental Protection in the Bureau of Water and Sewer Operations. She works with water repairs and sewer maintenance crews based in Brooklyn to coordinate and assist with all aspects of environmental health and safety. She conducts environmental health and safety inspections at the base facility and in the field, in order to assess compliance with federal, state, and local policies. She helps to bring NYC water every day and keeps the NYC DEP employees safe in the process.



Alumni Panel

Fatima Riaz, MPH '17

Global Health Certificate

Fatima is the Program Coordinator for Research and Data Analytics at AVAC, a global nonprofit focused on the advocacy and delivery of innovative HIV prevention options. Fatima has over seven years of diverse organizational and thematic public health experience, including founding and spearheading a national polio advocacy campaign in her home country of Pakistan.

As a Consultant for the World Bank, Fatima informed post-MDG policy recommendations in the areas of water and sanitation, education and gender empowerment. She also collaborated with the International Rescue Committee on a project to prevent gender-based violence against adolescent girls in humanitarian emergencies and with UNICEF on the Public Advocacy Section in maternal child health. She recently completed her certification in Global Health Delivery from Harvard Medical School in February 2018.



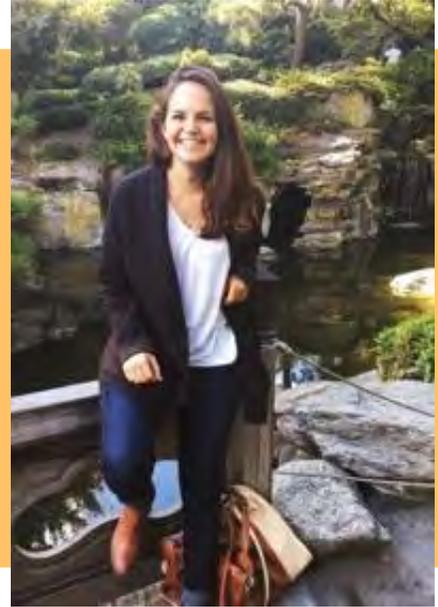
Kathleen Crowley, PA-C, '91 MSPH '13 DrPH

Dr. Crowley is the Associate Vice President of Environmental Health and Safety for Columbia University. An active member of the Mailman community, Dr. Crowley is the immediate past president of the Mailman School of Public Health Alumni Board of Directors. Learn more about Dr. Crowley's invaluable role in the Columbia community in the [Fall 2017 Newsletter](#).

Student Highlights

Alex Moscovitz, MPH & MS Urban Planning Student

Alex is a dual degree student in Urban Planning and Public Health and a former Fulbright Scholar. She recently completed a year and a half internship in health and spatial planning at the Regional Plan Association. There she researched and wrote recommendations for the Fourth Regional Plan, and helped create the Metropolitan Health Index among other projects. She is now working with Professor Joyce Klein Rosenthal at the Earth Institute on her Ford Foundation research surrounding FEMA home buyouts post disaster, a topic that she will also address in her thesis. In her spare time, Alex enjoys exploring New York and cooking dinner with her friends. She hopes to work in built environment planning for climate health when she graduates.



Alique Berberian, MPH & Masters of International Affairs Student

Alique is a second-year dual degree student at Columbia University's Mailman School of Public Health and School of International and Public Affairs, where she is concentrating on Environmental Health and Policy, and Resource Management. Alique's experiences have allowed her to work in a variety of settings including the United Nations, healthcare consulting, and the international renewable energy. She is currently working on a consulting project for the United Nations Development Programme Sustainable Development Goals Innovation Lab in Armenia, to provide strategy recommendations to achieve Armenia's national SDG priorities in the fields of big data analytics for sustainable agriculture and forestry management. In her free time, Alique enjoys swimming, photography, and yoga.



Student Highlights

Cassandra Trickett, MPH Student

Cassie will attend the University of California Berkeley in the fall where she'll be working toward a MS in Environmental Engineering. She hopes to combine what she's learned at Columbia with the technical aspects of civil and environmental engineering to be a more effective advocate for improved air, water, and soil quality.

Cassie is particularly interested in addressing environmental health issues in communities vulnerable to climate change. This summer, she will participate in UNLEASH, a week-long conference dedicated to promoting the UN's Sustainable Development Goals based in Singapore. During the conference, she hopes to focus on SDG7: Affordable and Clean Energy and SDG13: Climate Action. Before starting classes in the Fall, Cassie hopes to continue her work with Dr. Jack conducting air quality modeling and enjoy NYC as much as possible before returning to the Best Coast.



Kyle Colonna, MPH Student

Kyle recently accepted a position as a PhD Candidate at Harvard T. H. Chan School of Public Health. In the Fall, he will join the Department of Population Health Sciences, where he will focus on Environmental Health. Kyle will be mentored by Dr. John Evans in Risk and Decision Sciences, as he investigates the risk associated with single and cumulative air pollution, and heavy metal exposures. He hopes to conduct applied and translational research that will inform policy, safety, and regulation. This Spring, Kyle will complete a master's thesis, investigating elevated blood lead levels in children associated with lead in residential soils in West Philadelphia. He is looking forward to passionately rooting against the Pats and the Celtics for the next few years.



PrIMER Highlight

Anisia Peters, PrIMER 2017 trainee, presented her research poster “The Effect of Traffic Conditions on Air Quality in the South Bronx” at the 2017 Annual Biomedical Research Conference for Minority Students (ABRCMS) in Phoenix, Arizona. She conducted research with Dr. Markus Hilpert to understand the association between traffic volume and the concentration of black carbon in samples of collected air in the South Bronx. Anisia found the opportunity to present at the national conference very rewarding and appreciated the chance to learn about ongoing scientific research. She also found the structure of the conference beneficial and inspiring to attendees, like herself, who want to pursue a graduate degree. This experience has increased her curiosity about public health as she intends on learning more about this discipline.



PrIMER

Program to Inspire Minority
Undergraduates in Environmental
Health Science Research

Sewell Lunch & Lecture

Named in honor of one of the Mailman's most revered and longterm faculty members, Granville H. Sewell, the annual [Sewell Lecture](#) recognizes individuals' significant achievement in environmental health sciences.

This year's honored Sewell Lecture guest speaker was Dr. Joel R. Cohen, Primary Investigator at the Laboratory of Populations at the Rockefeller University and a faculty member at Columbia University. Dr. Cohen's work focuses on the intersection between demography, epidemiology, and the social organization of humans. With a background in mathematics, Dr. Cohen's interest in world populations stems from an international fellowship that took him around the world. Witnessing the indignities that plague society on this journey helped inspire his work. Dr. Cohen uses constantly evolving methods grounded in mathematics, statistics, and computation to investigate demographic trends and identify related interactions with environmental health concerns.

Dr. Cohen's work is based on a framework of four pillars: population, environment, economics, and culture. He uses this model to direct his research on understanding present and future demographics. Impending changes include wide-scale, displaced populations, a continued trend in decreasing fertility and increasing survival, a shift in age ratios, increased urbanization and migration, and a decrease in average family size. In his book, *"How Many People Can the Earth Support?"*, Dr. Cohen discusses strategies on how we can tackle the issues of changing populations and changing demographics. His suggestions fall in line with the UN SDGs, and include food security, universal education for children, and available voluntary contraception. Throughout his talk, Dr. Cohen emphasized the importance of improving public health governance and conditions to prevent illness, instead of simply reacting to problems after the fact.

Students in the department had the privilege of casually conversing with Dr. Cohen prior to the lecture, where he shared his philosophy on the values of student experiences: record current events and trends, learn from questions that arise from your observations and experiences, and search for good problems and good collaborators. Dr. Cohen also reiterated the value of travelling to meet people from diverse backgrounds and cultures to gain a better understanding of the world.

Sewell Lunch & Lecture



EHS Speed-Networking

At this year's 2nd Annual Speed-Networking event, 1st and 2nd year MPH students met with prospective employers and organizations working on Environmental Health issues. We were excited to welcome back Columbia University Environmental Health and Safety, EcoHealth Alliance, NYC Department of Health and Mental Hygiene, NYU School of Medicine Department of Pediatrics, and Weill Cornell Medicine Environmental Health and Safety. Cardno Chemrisk, Delos Living, LLC, and NYC Department of Environmental Protection Bureau of Water and Sewer Operations also joined us this year!

These New York, and in some cases, nationally or internationally focused organizations provided our students with the opportunity to learn more about different sectors within the field of Environmental Health. Last year, multiple students found practicum and employment opportunities through this event, and we are excited to see whether any of these meetings will manifest themselves into a practicum or job. Check in next fall to find out!

EHS Masters Students
Join us for the
**2nd Annual EHS
Speed-Networking Event**
11:30am - 1pm
Wednesday, April 11, 2018
Hammer Health Sciences LL203

EMPLOYERS

- Cardno Chemrisk
- Columbia University Env. Health & Safety
- Delos Living, LLC
- EcoHealth Alliance
- NYC DOHMH
- NYC EP: Bureau of Water & Sewer Operations
- NYU School of Medicine Dept. of Pediatrics
- Weill Cornell Medicine Env. Health & Safety

COLUMBIA UNIVERSITY | **MAILMAN SCHOOL OF PUBLIC HEALTH** | **ENVIRONMENTAL HEALTH SCIENCES**



Letter from SEA

Dear EHS Family,

We, the new Executive Board of Students for Environmental Action (SEA), are excited about the programming this semester. During Wellness Week, we hosted a Crafternoon event where students planted seeds into repurposed cans. Taking a break to de-stress, students decorated the old cans using a variety of upcycled craft supplies, such as bottle caps and recycled paper. At the beginning of March, we collaborated with HOME, another student organization, to host a screening of the [Climate Refugees](#) documentary. This award-winning film focuses on the human impact of climate change and features several exciting interviews with people such as House Speaker John Kerry, Newt Gingrich, and Al Gore. In April, we are continuing our tradition of hosting a SEA of Thoughts, a faculty conversation around urban agriculture and vertical farming. Also, we will host a poster-making event to support 2018 March for Science NYC, which includes a teach-in and rally to promote science. Additionally, we will spend the day gardening at [Harlem Grown](#), a local nonprofit dedicated to promoting healthy and sustainable food access to communities through urban gardening. This year, along with the support and collaboration of EHS and numerous school and campus offices, we are working to implement a composting pilot for the EHS 11th floor. At our General Body Meeting, we invited students to join the composting sub-committee this semester to ensure the success of this pilot. We are very excited to kick off the program soon!

We are always open to forming subcommittees on other sustainability related initiatives that interest our members. Please feel free to reach out to us on our [Facebook](#) or via [OrgSync](#) with your ideas, and we look forward to seeing you at our events in the Fall! Thank you all for your continued support!

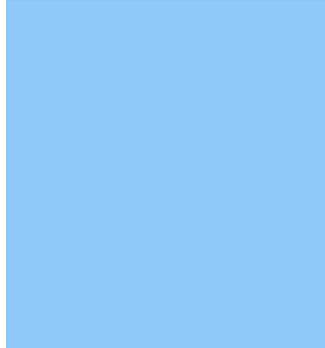
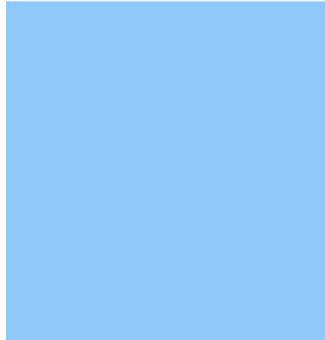
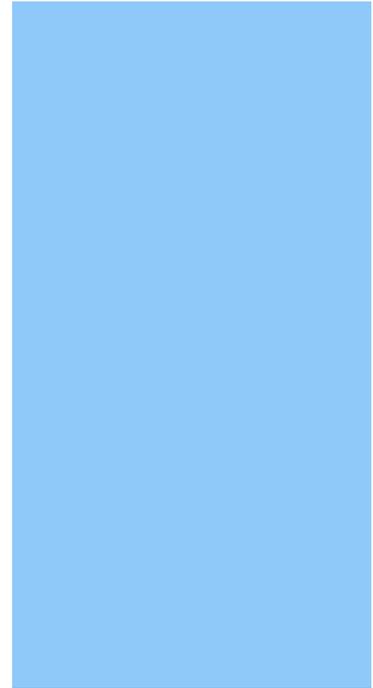
Best,

Peggy Hsieh, Stella Keck, Erin Kawazu, Casey Chun

The 2018 Executive Board of Students for Environmental Action

[Facebook](#) [OrgSync](#)

SEA Events



SEA and HOME present:

Climate Refugees

Documentary Screening



*Climate change is displacing millions.
Join us to watch the award-winning film!*

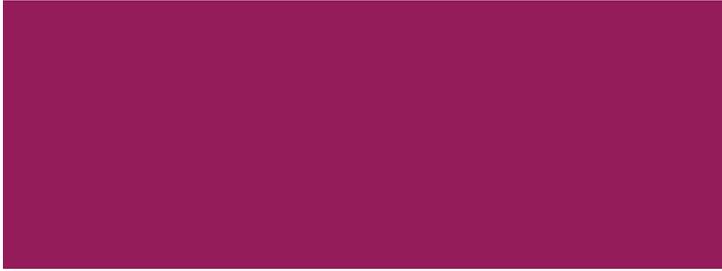
March 1, 2018 (THU)
4:30PM – 6:30PM

ARB 8th Floor Auditorium

Food provided (Bring your own Tupperware and utensils!)

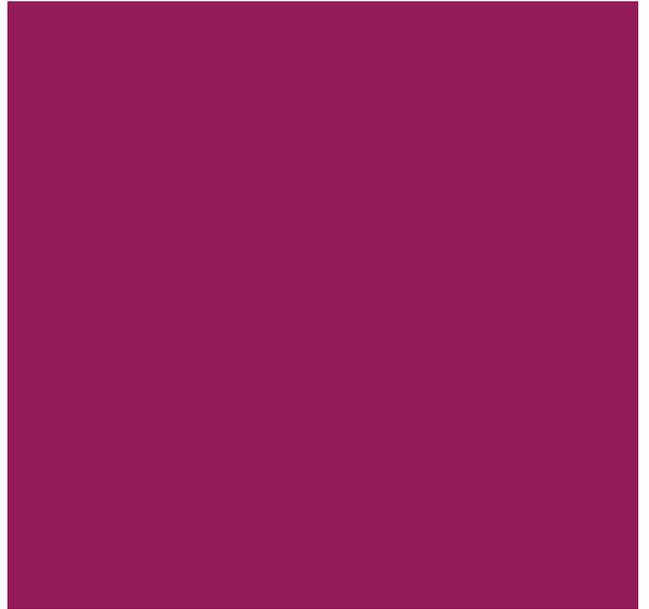


Memories



Faculty Sponsored Social; Student Lunch with Sewell Lecturer; Faculty Sponsored Social; EHS Speed Networking Events (clockwise from bottom left)

Memories



Alumni Panel (top, bottom);
Faculty Sponsored Social (middle)

Congratulations!

Congratulations to the
Class of 2018!

We're excited for your
future journey, and we
hope you stay in touch
wherever life takes you.

~ The EHS Family

