



# Department Newsletter Spring 2019



**COLUMBIA**  
UNIVERSITY

**MAILMAN SCHOOL**  
of **PUBLIC HEALTH**

**ENVIRONMENTAL  
HEALTH SCIENCES**



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# Letter from the Chair

Dear EHS Family,

Together, we welcome spring to our Department. In this season of growth, we are flourishing, with much to celebrate: The blooming of new scientists, the blossoming of achievements, and the continually burgeoning growth of our wonderful Department of Environmental Health Sciences community.

Our boundless enthusiasms and remarkable gifts continue to inspire me. We have cultivated a soil that sows wonder in plant biologists and population scientists alike, while also feeding state-of-the-art research on experimental models. As an interdisciplinary discipline, we span so much of what comprises our world, and we cannot thrive without the inclusion and fostering of immeasurable talent. This is reflected very well in the newest additions to our faculty. Indeed, how lucky we are to welcome several newly appointed faculty members: Associate Professor Lewis Ziska, Plant Physiologist, will join us from the USDA as an expert in climate change and food security. Assistant Professor Joan Casey will be welcomed from Berkeley, with expertise spanning from unconventional natural gas and oil development to electronic health records and spatial statistics. We are also thrilled to announce that one of our former trainees, Tiffany Sanchez, has recently begun her appointment as Assistant Professor, continuing and expanding her environmental respiratory disease research. Earlier in the year, Assistant Professor Hui-Chen Wu's also joined our Department. She is an expert on liver and breast cancer etiology and serves as Principal Investigator on the NIEHS award "DNA Repair Phenotype: The Missing Link in Breast Cancer Awareness." Last but not least, we welcome into the Assistant Professor ranks Norm Kleiman who uses animal models to investigate the effects of radiation on the eye. This collective awe, embodied by our Department's incredibly diverse research, is not just a reason to pause and be thankful to all of you who contributes to the Department's countless achievements, but it is also a reminder of life's wondrous magnitude. Please join me in wishing a warm congratulations in welcoming our new faculty members to the EHS family.

I would also like to highlight the awarding of a prestigious Junior Faculty Diversity Grant to Assistant Professor Michaela Martinez, for her research proposal entitled "Maternal Gifts: Understanding how Maternal Immunity Shapes the Development of the Infant Immune System." Finally, we are thrilled to double our SHARP Training program with new Summer 2019 workshops, including The Exposome Bootcamp, taught by Drs. Gary Miller, Dean Jones (Emory), and Doug Walker (Mt. Sinai). We hope everyone in our community will appreciate these special accomplishments and exciting new Departmental offerings.

Though many of us come from remarkably different backgrounds, it is here that we find ourselves planted, in an environment that shapes our continued growth. How beautiful that is, what fertile ground we foster with our multiplicities, and what extraordinary growth we encourage. As you have inevitably experienced, growth is not always easy. I imagine that, like me, you did not choose public health because you strived for comfort. Perhaps also, like me, you saw value in the discomfort, the growth, and in the ceaseless striving for a better world. And perhaps, like me, you still imagine one. May we nourish one another as we unfold into spring, welcoming growth, and celebrating the invitation to change, to growth, and to a healthier world.

Most sincerely yours,



Andrea A. Baccarelli, MD, PhD, MPH  
Leon Hess Professor  
Department of Environmental Health Sciences

# Congratulations

## **Columbia Center for Children's Environmental Health celebrates 20 years**

The Columbia Center for Children's Environmental Health (CCCEH) is celebrating 20 years of ground breaking work towards protecting children from environmental threats. The Center's numerous accomplishments include the [Mothers and Newborns study](#) as well as its seminal research into air pollution, PBDE's, BPA, and chlorpyrifos that have led to the phase-out of these harmful chemicals and pollutants. The Center's research has made a significant global impact and we are proud of its overwhelming accomplishments.

### **Joan Casey, PhD Assistant Professor**

We would like to welcome Dr. Joan Casey as our newest Assistant Professor coming to EHS this summer. Dr. Casey's research uses electronic health records and spatial statistics to study the relationship between emerging environmental exposures and population health. Dr. Casey also investigates the range of exposures that occur from unconventional natural gas and oil development, environmental noise pollution, and concentrated animal feeding operations.

### **Darby Jack, PhD Associate Professor**

Congratulations to Dr. Darby Jack for his recent promotion to Associate Professor. Dr. Jack investigates the impact of environmental air pollution on human health. His current international and domestic research projects involve assessing both indoor biomass air pollution exposure in rural Ghana, as well as outdoor air pollution exposure to urban bicyclists in New York City.

### **Norman Kleiman, PhD Assistant Professor**

Congratulations to Dr. Norman Kleiman for his recent promotion to Assistant Professor. Dr. Kleiman leads the EHS Radiation Safety Officer (RSO) training. Dr. Kleiman's research is at the intersection of public health, radiation research, and ophthalmology and includes the relative risk of radiation cataracts in medical workers.

### **Tiffany Sanchez, PhD Assistant Professor**

Please welcome Dr. Tiffany Sanchez as an Assistant Professor in EHS. Dr. Sanchez was previously a postdoc under Dr. Navas-Acien and completed her doctoral training under Dr. Graziano. Her proficiency in the metal analysis and interest in lung disease allows for multidisciplinary, translational research – combining wet-lab methods, advanced approaches for population sciences, and sophisticated data analysis. Currently, Dr. Sanchez is studying the cardiovascular effects of arsenic exposure, as well as collaborating on studies of secondhand tobacco smoke and lung disease. Stay tuned for more info in our next newsletter...

## **Jeffrey Shaman, PhD** **Full Professor**

Congratulations to Dr. Jeff Shaman on his recent promotion to Full Professor. Jeffrey Shaman, PhD, is the Director of our Climate and Health Program. He teaches several climate-related courses and leads a fantastic team of researchers that contribute to his pioneering work, which is constantly recognized in media outlets. His work focuses on climate, atmospheric science and hydrology, as well as biology, and he studies the environmental determinants of infectious disease transmission and infectious disease forecast.

# Faculty

## **Marianthi-Anna Kioumourtzoglou, PhD, Andrea Baccarelli, MD, and Deliang Tang, DrPH**

**Airborne: When Pollution takes its Toll:** The [Mailman News](#) highlighted Drs. Kioumourtzoglou, Baccarelli, and Tang on their research and studies related to negative impacts of air pollution on public health.

## **Marianthi-Anna Kioumourtzoglou, PhD**

**Psychosis in teens may be linked to an unlikely culprit: air pollution:** [CNN news reported](#) on an association between psychotic experiences being more common among teens exposed to nitrogen oxide and other air pollutants. In an editorial published beside the study, Dr. Kioumourtzoglou noted: "As the global population is becoming increasingly urban, it is of utmost importance to incorporate public environmental health into urban planning decisions."

## **Jeffrey Shaman, PhD**

**The Lancet:** The [Mailman News](#) highlighted the Global Consortium on Climate and Health Education (GCCHE), directed by Dr. Shaman, for being named in the [2018 Lancet Countdown on Health and Climate Change Brief for the United States of America](#) as an example of prioritizing the training of health professionals on the impacts of climate change.

**Computer Model Finds a Better Way to Control MRSA Outbreaks:** Highlighted in [Mailman News](#), Dr. Shaman designed a new method to help health officials control outbreaks of methicillin-resistant *Staphylococcus aureus*, or MRSA, a life-threatening antibiotic-resistant infection.

**Flu Forecasting Models Consistently More Accurate Than Historical Baseline Models:** Dr. Shaman was featured in a recent [news report](#) for his [article in the Proceedings of the National Academy of Sciences](#), which detailed the improved accuracy of seasonal influenza forecasting in the U.S.

**Study on Measles Transmission in China Has Implications for Controlling the Epidemic Worldwide:** Highlighted in several [news articles](#) and the [Mailman News](#), Dr. Shaman and his team are using a new model-inference system to estimate population susceptibility and demographical characteristics in China, giving insight on the possibility of eliminating this disease globally.

## Joseph Graziano, PhD

**Water Providers Put Cost for 1,4-Dioxane Treatment Systems at \$840M:** In [Newsday](#), Dr. Graziano was noted for his work on the state water panel that is working to reduce dioxane water levels. 1,4-dioxane is an emerging contaminant that has been found in dozens of drinking water wells across Long Island.

## Markus Hilpert, PhD

**MTA Says They Finally Found The Source Of The Noxious L Train Smell... Maybe:** In a recent [news article](#), Dr. Hilpert was quoted for the investigation into the concentration of toxic chemicals in the air inside the L train subway tunnels. "If you have a contaminated soil on the surface of a landscape you would excavate it, but that's not so easy in a subway environment."

## Frederica Perera, PhD

**EPA should consider children when assessing risks of burning fossil fuels:** In a recent [Mailman article](#) and on [NPR](#), The Columbia Center for Children's Environmental Health (CCCEH) was recognized for a new study that is the first comprehensive review of the associations between various fossil fuel combustion pollutants and multiple health effects in children.

**Children Suffer More from Air Pollution, but Our Policies Don't Reflect That:** In a report by [Popular Science](#), based on a [newly published review](#), Dr. Perera notes the strong evidence that "exposure to particulate matter and other airborne pollutants likely cause childhood health effects such as preterm birth, low birth weight, autism, and asthma."

## Frederica Perera, PhD and Deliang Tang, DrPH

**Air pollution to shorten telomeres in newborns:** Drs. Deliang Tang and Ricky Perera were featured in an article by [Top Health Journals](#) for a recent study featured in the *Journal Environment International*. The study observed the effects of a coal-burning plant in Tongliang, China on the lives of the inhabitants before and after it's shut down in 2004.

## Ana Navas-Acien, PhD

**What's So Bad About the Nicotine in E-Cigarettes?:** In a report by [Consumer Report](#), Ana Navas-Acien noted: "We know that nicotine is an incredibly addictive substance, and we also know the younger you are when you're exposed to that chemical, the more likely it is that you will be highly addicted to it."

**Clearing the air about e-cigarettes, vaping, nicotine and health:** In an [article](#) featured in the Washington Post by Consumer Reports, Dr. Navas-Acien discusses the role of e-cigarettes, nicotine, and vaping, “I think it’s important from a public health perspective to really — given the potential for toxicity, given the extremely addictive power of this product — think carefully before the epidemic is out of proportions.”

## Julie Herbstman, PhD

**Prenatal Exposure to Plasticizers Linked to Motor Skill Deficiencies at Age 11:** New findings reported by [Environmental Health News](#) and the [Mailman news](#) suggest that maternal exposure to phthalates in late pregnancy could adversely affect motor function in children in later childhood, particularly in girls.

## Virginia Rauh, ScD

**Trump's Environmental Policies are Putting the Health of American Children at Risk:** In a report by [New York Magazine](#), Dr. Rauh and the CCCEH discuss their work linking between higher levels of exposure to chlorpyrifos in the womb and early cognitive and behavioral deficit.

## Staff

### Haruka Morita, MPH, CPH

**Scaling Data Important for Creating Localized Influenza Forecasts:** Haruka Morita was featured, along with Climate and Health colleagues, in [MD Magazine](#) regarding influenza surveillance, specifically the importance of optimizing forecasting models through the use of historical data specific to a region or municipality.

## Alumni

**Kate Weinberger, PhD '15:** Dr. Weinberger is starting a new job as Assistant Professor of Environmental Health at the University of British Columbia's School of Population and Public Health.

**Rozan Abdulrahman, MPH '14:** Rozan was recently featured in [MALA \(Muslim American Leadership Alliance\)](#) in an article where she describes some of the obstacles she faced adjusting to life in the U.S., her career in healthcare, and the fluidity of identity.

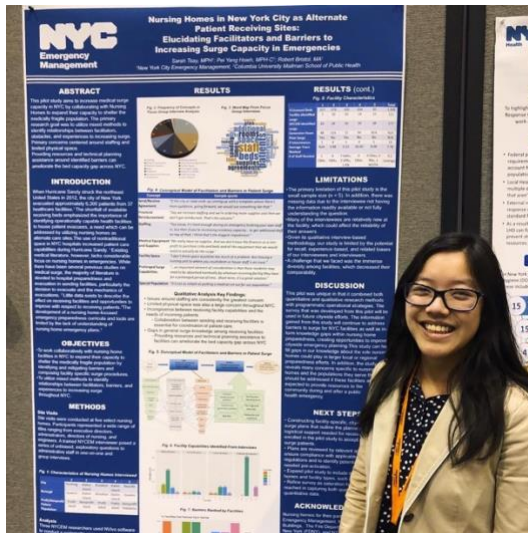
**Rachel Locke, MPH '18, CPH:** Rachel recently had an article published titled “[Unleashing the Creativity and Innovation of Our Greatest Resource – The Governmental Public Health Workforce](#)” in the Journal of Public Health Management & Practice.

## Students

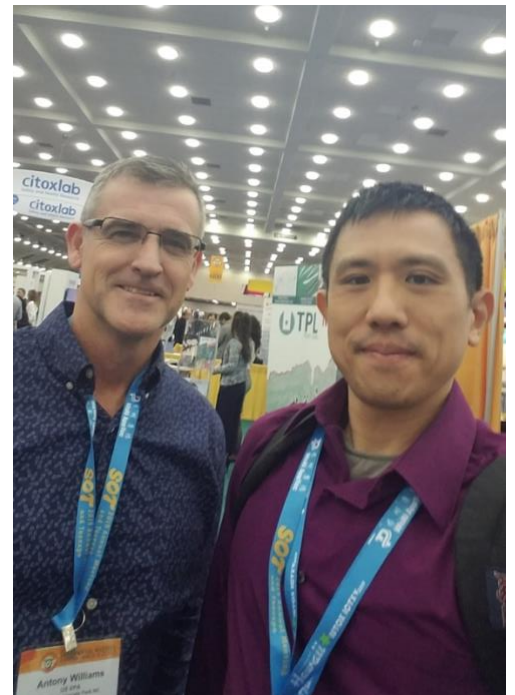
**Ahlam Abuawad, PhD Student:** Ahlam is collaborating with a team of Columbia students to summarize public-health related news from around the world that is published monthly in the [American Journal of Public Health \(AJPH\) Global News section](#). The first collaboration she was involved in will be published in March's edition of AJPH.

**Lizbeth Gomez and Grant Tore, MPH Students:** Lizbeth was selected as a Research Fellow to participate in an Interprofessional Education Service Learning Program in Puerto Rico, that took place during the 2019 Spring Break.

**Pei (Peggy) Yang Hsieh, MPH Student:** Peggy presented a poster at the Public Health Preparedness Summit in St. Louis, MO. Her presentation titled, "Nursing Homes in New York City (NYC) as Alternate Patient Receiving Sites: Elucidating Facilitators and Barriers to Increasing Surge Capacity in Emergencies." This presentation is from the qualitative and quantitative research that she's been doing as a Health and Medical Intern at NYC Emergency Management (NYCEM). This pilot study aims to increase medical surge capacity in NYC by collaborating with Nursing Homes to expand their capacity to shelter the medically fragile population. The primary research goal was to utilize mixed methods to identify relationships between facilitators, obstacles, and experiences to increasing surge throughout NYC.



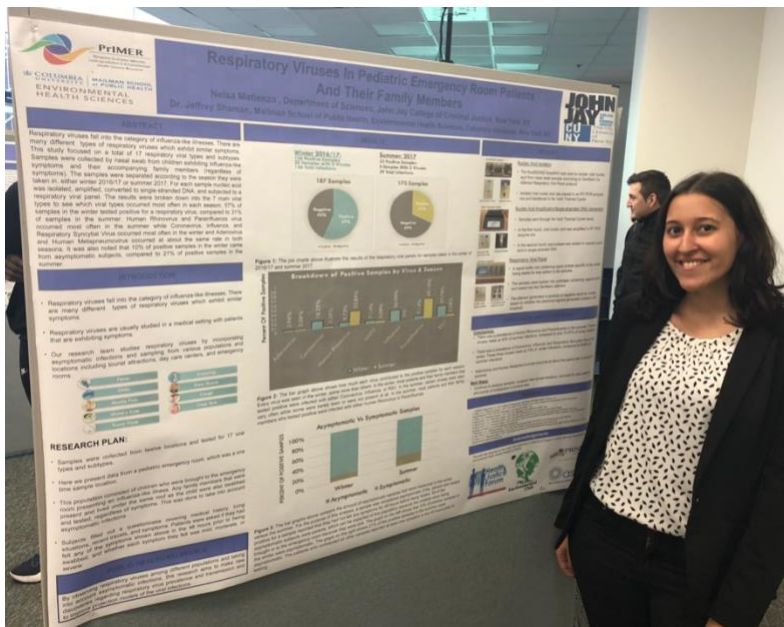
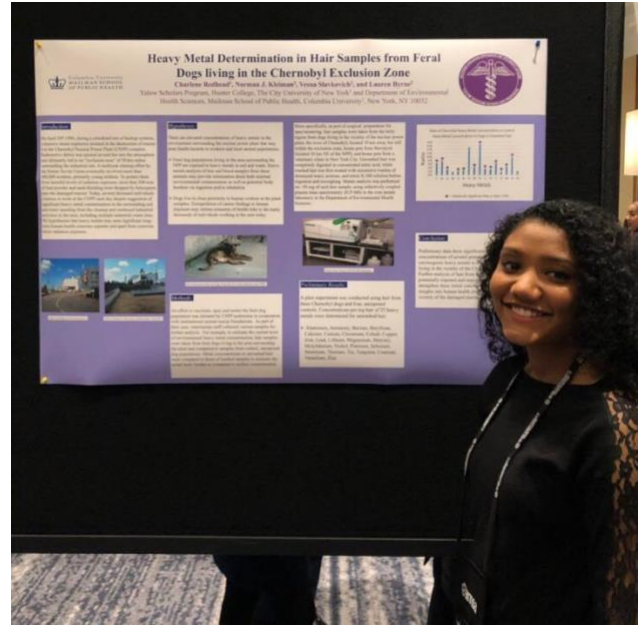
**Vince Tam, MS Student:** The Society of Toxicology's Tox Expo was held in Baltimore earlier this month, with a few members of our EHS faculty and student body presenting their knowledge. Taking advantage of a train ride and Columbia's REAL Fund to subsidize the costs, Vince was able to attend and "gorge" himself on toxicological professional development. From symposiums to poster presentations to an industry exhibition, there was so much knowledge and networking to be had. He had opportunities to hear the latest research and speak to the presenters about their methods. He made use of the U.S. EPA's in-person demonstrations to learn how to use tools such as the CompTox Dashboard and HHTK package for R. Furthermore, Vince visited industry booths to see the latest technologies and services available for the toxicologist. Taking advantage of so many companies, the exhibition served as an impromptu "job fair" for him, minus the lines of anxious students. ToxExpo 2020 will be in Anaheim, so get planning and apply for Columbia funding!





## PrIMER Trainees

**Charlene Redhead:** Charlene presented a poster on her work with Dr. Norman Kleiman in March analyzing heavy metal concentrations in dog hair from animals living in the exclusion zone surrounding the Chernobyl nuclear reactor complex. Her poster was entitled: *“Heavy Metal Determination in Hair Samples from Feral Dogs Living in the Chernobyl Exclusion Zone”* and her collaborators included Dr. Kleiman, Lauren Byrne, and Vesna Slavkovich. The work is being presented at the annual meeting of the American Medical Student Association (AMSA) in Washington, DC under the auspices of their AMSA Academy for pre-med students.



**Nelsa Matienzo:** Nelsa presented a poster on her work with Dr. Jeffrey Shaman at the NCUR (National Conference of Undergraduate Research) from April 11 to 13 at Keenesaw State University in Atlanta. Her project is titled: *“Respiratory Viruses in Pediatric Emergency Room Patients and Their Family Members”*.



### PrIMER

Program to Inspire Minority Undergraduates in Environmental Health Science Research

## Grants & Awards

- **Jeffrey Shaman, PhD** received the award titled “The Virome of Manhattan: A Testbed for Radically Advancing Understanding and Forecast of Viral Respiratory Infections” from DARPA. This project funds the collection of samples from individuals infected with a respiratory virus and uses these specimens to support the identification of biomarkers predictive of symptom outcome.
- **Brandon Pearson, PhD** received the Calderone Junior Faculty Prize from the MSPH for the project titled “Experimental Approach to Prevent the Intergenerational Health Impacts of Advanced Paternal Age.” The Calderone awards were established through the generosity of Dr. Frank Calderone and his family, in recognition of Dr. Calderone’s distinguished career and life-long commitment to public health. This highly competitive awards program provides initial support for the most outstanding junior investigators at Mailman, allowing them to develop their ideas into competitive proposals.
- **Micaela Martinez, PhD** received the Calderone Junior Faculty Prize from the MSPH for the project titled “Investigation into Seasonal Changes in Human Immune Function.” The Calderone awards were established through the generosity of Dr. Frank Calderone and his family, in recognition of Dr. Calderone’s distinguished career and life-long commitment to public health. This highly competitive awards program provides initial support for the most outstanding junior investigators at Mailman, allowing them to develop their ideas into competitive proposals.
- **Roheeni Saxena, MPH, current PhD student** received an NIH F31 award for the project titled “Micronutrient Deficiency, Arsenic Exposure, and Cognitive Function Outcomes in Adolescents.”
- **Elizabeth Gibson, MPH, current PhD student** received an NIH F31 award for the project titled “Complex Mixtures of Endocrine Disrupting Chemicals in Relation to Cognitive Development.”

# Publications

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# SEWELL LECTURE

Named in honor of one of the Mailman's most revered and long-term 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. Thomas A. Burke, PhD, MPH, the Jacob I. and Irene B. Fabrikant Professor and Chair in Health Risk and Society at Johns Hopkins University Bloomberg School of Public Health, Department of Health Policy and Management. Dr. Burke also served as the EPA Assistant Administrator for the Office of Research and Development and scientific advisor under President Barack Obama.

Dr. Burke's insightful lecture, "Changing Times: Rethinking the Science of Environmental Health," demonstrated that from climate change to hydraulic fracturing, to PFOAs and lead in drinking water, all environmental challenges require an intersectional and systems thinking approach. Today's environmental challenges are increasingly complex and transdisciplinary, requiring all of us as EHS professionals, researchers, and students to continue to push the limits and look beyond our siloes. The Department wants to thank Dr. Burke for his insight into the challenges, frustrations, and successes of working as Deputy Commissioner of Health for the State of New Jersey and Director of the Office of Science and Research in the New Jersey Department of Environmental Protection to working as the EPA Assistant Administrator under President Barack Obama. Dr. Burke's achievements in environmental health policy are inspiring, and we thank him for making the trip up to New York City.



# Alumni Panel 2019

In April our master's students welcomed distinguished EHS alumni for a panel on their experience after the program. Dr. Greg Freyer moderated the panel and current students had an opportunity to ask questions. The event was a great way for the EHS family to connect and network!



## **Christina Olbrantz McNeillis, MPH '17** **Climate and Health Certificate**

Christina is the Associate Director of Environmental Health & Safety for The Mount Sinai Hospital. In this position, she is responsible for ensuring regulatory compliance and maintaining a safe Environment of Care for patients and staff. Christina also leads the hospital's sustainability committee. Previously, Christina was an Environmental Health & Safety Consultant at Triumvirate Environmental, where she specialized in laboratory safety and health care compliance.



## **Carisse C. Hamlet, MPH '17** **Global Health Certificate**

Carisse is a Program Officer in the Environmental Health Division at Vital Strategies, a global health organization. She works closely with air pollution and data experts to advance clean air action around the global south. Her current projects include developing an urban air quality management technical guide for city governments and creating data journalism trainings on environmental health topics. She also develops air pollution trainings for clinical audiences and coordinates activities for clinicians around the world advocating for clean air.



## **Jamal Lewis, MPH '18** **Molecular Epidemiology Certificate**

Jamal Lewis transitioned into a role as the Policy and Technical Assistance Specialist for GHHI, after completing a two-year fellowship with GHHI. Jamal is the lead for GHHI's energy efficiency portfolio and also works on the organization's National Lead Campaign to End Childhood Lead Poisoning in 5 Years. Jamal works with several jurisdictions around the country to help incorporate best practices into their energy efficiency and lead poisoning prevention programs and policies. He is one of the primary authors of GHHI's Lead Funding and Financing Toolkit, an online tool that will help local governments explore new options for funding their lead programs, which will be released in the spring of 2019. He has also co-authored three papers on energy efficiency: *Energy Efficiency as Energy Justice: Addressing Racial Inequities through Investments in People and Places* (*Energy Efficiency Journal*, 2019), *De-weathering through Weatherization: A Conceptual Application of the Weathering Hypothesis to the Household Energy and Stress Nexus* (*ACEEE Summer Study on Energy Efficiency in Buildings*, 2018), and *Achieving Health and Social Equity through Housing: Understanding the Impact of Non-Energy Benefits in the United States* (*The Green & Healthy Homes Initiative*, 2017). He was named one of the 2018 Linda Latham Scholars by the American Council for an Energy-Efficient Economy for showing promise in the energy efficiency field. Jamal is dedicated to improving the health and well-being of vulnerable populations through fostering a healthier environment.



## **Shanna Keown, MPH '17** **Climate and Health Certificate**

Shanna is a Senior Grant Writer for the Natural Resources Defense Council (NRDC). In this role, she communicates NRDC's science and policy to foundation donors. She helps raise funds for all NRDC programs including clean energy efforts in the Midwest, litigation, safe and affordable drinking water, food waste, and oceans protection. Shanna also sits on the Diversity Equity and Inclusion Committee, which brings together colleagues from across NRDC to advance equity and inclusion internally and externally. (She's excited to see how classes in toxicology, climate and health, and race and health are informing her current work.)



Shanna has over nine years of non-profit fundraising experience and serves as an Advisor to Nurturing Minds in Africa, a non-profit that empowers vulnerable girls in Tanzania through education. Before NRDC, Shanna was a program manager at Echoing Green, where she worked with Climate Fellows, conducted climate ecosystem research, and facilitated partnerships between Echoing Green and environmental organizations.



# EHS Speed-Networking

In mid-April, EHS master's students participated in the third annual EHS speed-networking event with prospective employers including: Rocky Mountain Institute, NYC Department of Health and Mental Hygiene, NYU School of Medicine - Division of Environmental Pediatrics, Weill Cornell Environmental Health and Safety, and NYC Health and Hospitals.

This was a great opportunity for our students to network with professionals in the environmental health sphere. Employers came to the event with information on current full-time job and internship opportunities, answered questions about their current roles and responsibilities, and gave an inside view into their organizations. Thanks to the students and organizations for their participation and thank you to the Office of Career Services for their help organizing another successful event. We look forward to next year!

## EHS Master's Students

Join us for the

### 3rd Annual EHS Speed-Networking Event

Rocky Mountain Institute

NYC Department of Health and Mental Hygiene

NYU School of Medicine - Division of Environmental Pediatrics

Weill Cornell - Environmental Health & Safety

NYC Health and Hospitals

**EMPLOYERS**

11:30 AM - 1:00 PM

Wednesday, April 17, 2019

Hammer Health Sciences

LL203



COLUMBIA UNIVERSITY | MAILMAN SCHOOL of PUBLIC HEALTH | ENVIRONMENTAL HEALTH SCIENCES



# Capstone Poster Presentation 2019

This year, the 2<sup>nd</sup> year MPH students participated in the new iteration of the Capstone course in the EHS Department. Students worked in groups of five or six with clients curated by the course directors to create final projects that incorporate many facets of their MPH education. Projects ranged from risk assessment, policy recommendation, or community workshops and spanned

## EHS CAPSTONE POSTER PRESENTATION

OFFICE OF THE NEW YORK STATE ATTORNEY GENERAL

HABITATMAP

CARDNO CHEMRISK

NATURAL RESOURCES DEFENSE COUNCIL

VITAL STRATEGIES

PRESENTED BY

THE MPH CLASS OF 2019

WEDNESDAY, MAY 8TH

11:30 AM - 1:00 PM

EHS CLASSROOM (1101)

# Letter from SEA

Dear EHS Family,

We, the new Executive Board of Students for Environmental Action (SEA), are excited about the programming this semester. At the beginning of March, we collaborated with Sexual and Reproductive Health Action Group (SHAG) and Women 4 Women for an International Women's Day event. We used the event as an opportunity to talk to the student body about eco-safe sex and menstruation products and behaviors. In addition, students had the opportunity to win highlighted products from Sustain Natural and LunaPads.

In early April, we partnered with Graduate Student Association (GSA) and One Health Initiative (OHI) to hold a film screening of *An Inconvenient Sequel: Truth to Power*. In late April, we continued our tradition of hosting SEA of Thoughts by inviting Dr. Joseph Graziano from the Environmental Health Sciences Department and Professor Heather Butts from the Health Policy and Management Department to have a conversation and discussion around urban gardening and food deserts in New York City.

This year, with the support and collaboration of the EHS Department and numerous school and campus offices, we are continuing the composting pilot on the EHS 11th floor. At our General Body Meeting, we invited students to join the composting subcommittee this semester to ensure the success of this pilot. Last semester, we totaled over 160 pounds of compost collected just on the 11th floor!

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 [Engage](#) with your ideas, and we look forward to seeing you at our events in the Fall! Thank you all for your continued support!

Best,

Victoria Sanders, Maxine Coady, Dennis Khodasevich, Kaitlyn Coomes  
The 2019 Executive Board of Students for Environmental Action



# CONGRATULATIONS EHS CLASS of 2019!



We are excited for  
your future EHS  
journeys! Stay in  
touch wherever life  
takes you.

- The EHS Family -