

# Brain WAVES

Spring 2018

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## Bridging Science and Policy Outside the UW Campus

by Andrew Merluzzi  
N&PP Graduate Student



Christine Mirzayan Science and Technology Policy Graduate Fellows (Andrew Merluzzi farthest right in back row)  
The National Academies of Sciences, Engineering, and Medicine

A guiding theme in the Neuroscience & Public Policy (N&PP) program is the notion that evidence coupled with effective communication can serve as a pivot for social, scientific, and political change. I joined N&PP to train under this theme, and it was this idea that guided me toward two fantastic learning opportunities last year: a fellowship at the National Academies of Sciences, Engineering, and Medicine, and three workshops in Siena, Italy through the Neuroscience School of Advanced Studies.

The Christine Mirzayan Science and Technology Policy Fellowship at the National Academies aims to train early-career scientists to become expert public policy communicators, analysts, and advisors. Indeed, their mission as an organization is to provide scientific and policy guidance to the nation in an objective and measured fashion.

During the 12-week fellowship, I conducted systematic literature searches and wrote the introduction to a recently published report on the safety, known health effects, and current regulations of electronic cigarettes. The report, entitled "The Public Health Consequences of E-Cigarettes," was published in January, 2018.

As a whole, the National Academies echoes several of the main themes driving the N&PP program: that the scientific method is the most useful tool we have for understanding complex problems; that there are challenging tensions between scientific discovery and political zeitgeist; and that reasoned public policy must be based on aggressive impartiality. These themes are the substrate upon which the National Academies' operates. As an example, each committee member tasked with reviewing evidence on a particular

## Congrats to the following students that recently completed their prelims:

Mroj Al Assaf (*Wolman lab*)  
Martin Hsu (*Fabry lab*)  
Russell Taylor (*Dent lab*)  
David White (*Chanda and Goldsmith labs*)

## Welcome New Faculty

ANITA  
BHATTACHARYYA

Assistant Professor,  
Department of Cell  
And Regenerative  
Biology

Research Focus:  
Modeling cortical  
development in  
neurodevelopmental  
disorders with  
human stem cells.



RAUNAK  
SINHA

Assistant Professor,  
Department of  
Neuroscience

Research Focus:  
Visual processing in  
the retina

## Congrats to Recent Graduates

TRINA BASU graduated from the Roopra lab and is now a Postdoctoral Fellow at UW-Madison.

SARA BERMAN graduated from Sterling Johnson's lab and returned to medical school at UW-Madison

CP FROST graduated from the Abercrombie and Meyerand labs and is now a Program and Policy Analyst with the Wisconsin Department of Corrections, Division of Juvenile Corrections.

DAVID RUHL graduated from the Chapman lab and is now a Postdoctoral Scholar in the Department of Neuroscience at the University of California-San Diego.

SISI LI graduated from the Alisch lab.

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scientific topic is vetted with the utmost care for any real or perceived bias. Because of this, the ensuing reports – including the electronic cigarettes report that I was fortunate to work on – are respected and objective accounts of the state of scientific understanding.

Yet in many areas of science, our understanding of the evidence itself is wanting. Humility in the face of the brain's complexity was a primary refrain at the Neuroscience, Society, and Public Policy workshops I attended through the Neuroscience School of Advanced Studies (NSAS) in Siena, Italy last October. Offering upwards of 20 workshops per year on a range of neuroscience topics, NSAS's policy-focused workshops centered on three themes: Neuroscience, Responsibility, and Law; Neuroeconomics of Uncertainty; and the Ethics of Neuroenhancement.

At each of these workshops, which hosted about a dozen scholars from around the world, I took part in discussions about the future of scientific research, how public support for science can be ensured, and how new technologies threaten or strengthen core human values. As a scientist interested in the frontiers of evidence-based policymaking, these workshops were particularly interesting in that they focused on nascent fields with many unknowns.

While attending the workshops, I had ample opportunities to network with visionaries in these fields. The workshops were designed to be collegial, with time devoted not only to discussing the central themes, but also for open discussions intended to generate new hypotheses. I was particularly interested in gaining a better understanding of the

ethical issues in the production and dissemination of science, as well as the democratization of science.

Big-picture questions included: What is and should be the role of neuroscience evidence in the legal arena? How do emerging brain-computer interfaces challenge our conception of autonomy? Do neurotechnologies that enhance cognitive performance truly differ from those that ameliorate what we have defined as neurological disease? Do the neural correlations of human decision making lend useful insight into public policy development?

A recurring refrain in these discussions was the importance of training scientists to communicate knowledge and boundaries to knowledge, advising policymakers and thought leaders with careful advice. By seeking to bring difficult ethical issues to the fore, these workshops were forward thinking and, at times, mirrored the discussions NTP and N&PP students have about their own research.

Participating in these workshops gave me the skills and knowledge useful not only for my dissertation in Neuroscience and Public Policy, but also for every step of my career moving forward – simply put, it was an extraordinary opportunity to learn from the world's most renowned science, ethics, and policy experts.

If you are an NTP or N&PP student interested in either of these opportunities, please do not hesitate to contact me with any and all questions. I cannot speak highly enough of these programs as learning opportunities for those interested in the intersection of science and policy.

## Awards and Recognitions

**DR. QIANG CHANG** was named the new director of the Waisman Center.

**DR. ERIK DENT** received a Romnes Faculty Fellowship.

**DR. RUTH LITOVSKY** received the Kellett Mid-Career Award

**DR. GAIL ROBERTSON** received a Kellett Mid-Career Award.

**ANDREW MERLUZZI** won a Society of Biological Psychiatry Travel Award.

**DR. RAGHU VEMUGANTI** was appointed as the Editorial board member for the Journal of Cerebral Flow and Metabolism

**DR. RAGHU VEMUGANTI** was selected to serve on the Program Committee of the International Stroke Conference

## NTP wraps up another great spring for public outreach

Spring offers NTP students and faculty lots of great opportunities to participate in science based outreach with students and members of the public. The spring semester is typically when most local schools host their science nights and classroom visits, and there are numerous science-focused public events on campus and around Madison. NTP members take advantage of these great opportunities to engage and interact with the public about neuroscience and the amazing research happening at UW-Madison.

This spring, NTP students and faculty participated in ten major events, including numerous school science nights, full day classroom visits, and a Wisconsin Institute for Discovery Saturday Science event with Badger Athletics. NTP had a table present at both days of the UW Science Expeditions, a campus open-house devoted to science that hosted 4,100 visitors over the course of the weekend. In addition, NTP outreach materials were loaned to groups from across campus at numerous other events. These events facilitated direct interactions between NTP members and over 1,000 local students and members of the public. UW-Madison chancellor Rebecca Blank even tried her hand at tracing a star in our mirror boxes and held a human brain at our table during Science Expeditions!

NTP also expanded its outreach collaborations this year. During after school visits, NTP students spoke with local high school students enrolled in the UW PEOPLE Program, a pre-college pipeline comprised primarily of underrepresented students from Wisconsin. Faculty and students provided tours and Q&A sessions for visiting groups as part of the Madison Metropolitan School District's Person-



UW-Madison Chancellor Rebecca Blank holds a brain at the NTP table during UW Science Expeditions

alized Pathways program, which partners with the UW. Both of these initiatives focus on highlighting the variety of career outcomes possible with a UW degree, including many in science, research, and healthcare. NTP members got to share why they love science, and how they blazed their own path through science education and into careers. They received lots of great questions and definitely saw a few budding scientists in the audience.

A huge thank you goes out to all of our volunteers, both within and beyond NTP, for making all of this great outreach possible! Our human brains, engaging activities, and attentive outreach volunteers continue to be a big hit with people of all ages. NTP looks forward to continuing and expanding its outreach efforts in the future. To learn more about our outreach efforts and opportunities, contact NTP outreach specialist Josh Knackert at [ntp@mailplus.wisc.edu](mailto:ntp@mailplus.wisc.edu).



UNIVERSITY OF WISCONSIN-MADISON  
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TRAINING PROGRAM

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### Contributions to the Program

Funds given to the program are used to support recruiting activities, guest speakers, the graduate travel award for professional conferences and the annual program picnic. For additional information, please contact the program office at (608) 262-4932. To contribute, please contact the UW Foundation at:

<https://www.supportuw.org>

Thank you to all those who have contributed and continue to support the Neuroscience Training Program and its students.

### Connect With Us

