



The PSM Alumni and Graduation Chronicle



In This Issue

NPSMA Conference and Workshop ..	1
PSM 5MP Student Presentations	2
Alumni Profiles	3-10
Wang (Mich. State)	3
Boyd (FIU)	3
Mathis (UCONN)	4
Rosas (UCONN)	5
Schleizer (Rice)	5
Ahmed (Rice)	6
Breedlove (Mo. State)	7
Hensley (UNC Chapel Hill).....	7
Awe (Lehman)	8
Payne (OSU)	8
Rose (SUNY Oneonta).....	9
Burke (KSU).....	9
PSM Certificate of Completion	10

NPSMA 11th Annual Conference and Pre-conference Workshop

Just a reminder that our annual conference and pre-conference workshop are coming up on November 10-12, 2021 in Tampa, Florida.

The pre-conference workshop will cover STEM Master’s Individual Development Plans as an essential tool in workforce development. This workshop is supported by the NSF (Award Abstracts #1940221, #193934) through a collaborative grant to the NPSMA (P.I. Deborah Silver, Rutgers) and CGS (P.I. Hironao Okahana). Prevalent in PhD and Postdoctoral programs, IDPs are not at all common in science master's programs. The short time frames to completion and workforce development aspects of STEM master's degrees present distinctive conditions that call for the creation of specialized IDPs for their students. The goal of the workshop is to share what is known about IDPs, to learn how to apply them, and to explore elements for a STEM MS IDP template.

The Conference’s theme this year is “ Developing a roadmap for your PSM Program.”

We have some exciting topics, interactive sessions and interesting speakers. Topics including strategic planning for PSM programs; redefining best practices for transferable skills; feedback from industry representatives, 5 minute student presentations, and other.

Please visit our conference information and registration here: <https://npsma.org/event-3653487>

Seeking INNOVATOR Articles

Articles for the 2022 edition are being accepted now!

Did your PSM student work on a COVID-related project?

Submit a short description including a photo and/or graphic to:

Natalie Bosecker, University of Illinois, natalieb@illinois.edu by November 15.

General Announcements and Opportunities: Nominate Members for the NPSMA Workforce Advisory Council

We are still welcoming new members for the NPSA Workforce Advisory Council. Please consult with your successful alumni, your board members and industry partners to see whether anyone might be interested to serve on our board. So far, we have recruited two new members from alumni of programs housed at Worcester Polytechnic Institute and from Rice University. We still have a few seats left, if you have a successful alum who would be a productive member of WAC, please nominate him or her and recruit them for our Council!! For more info, please reach out to [Marcel Y. Blais \(myblais@wpi.edu\)](mailto:myblais@wpi.edu).

NPSMA Five-Minute Presentation Competition

For the 2020 NSPMA Virtual Conference, we changed the format and asked students to prepare five-minute TED style talk/video presentations with the goal to encourage creativity and focus on the importance of their work and its broader impact.

Five students prepared videos on their experiential learning activities which were “streamed” during the conference session. The presenters included:

Ashlee Malone

Analysis and Visualization of Port Orange, FL Sidewalk Survey Data to Facilitate Infrastructure Repair and Improvement
University of West Florida MS (Geographic Information Systems Administration)

Cynthia Miller

How Does Reliance On Technology Affect Perceived Happiness? Communication Methods and Connectedness
University of Findlay, MS (Applied Security and Analytics)

Kruttika Raman

Uncovering Trends in Human Capital for College Graduates
Rutgers University, MBS (Analytics)

Kendal C. Stauffer

Predicting Outpatient Demand to Help with Provider Supply Optimization
University of Utah, MST (Computational and Data Science)

Jake Strong

Confluence Method Qualification with Adherent Discogenic Cells
University of Utah, MST (Biotechnology)

The presenters then joined the conference for a virtual panel discussion on their projects and its impact on their careers. While we are looking forward to a live 2021 national conference, the need to work remotely presented a unique opportunity for the presenters to creatively present their work.

Alumni Profiles

JUN WANG

PROFESSIONAL SCIENCE MASTER'S: INDUSTRIAL MATHEMATICS
MICHIGAN STATE UNIVERSITY, 2004



After graduating from Michigan State University's PSM program in Industrial Mathematics, Jun started his career in HSBC's Risk Management working on portfolio management strategies and risk-based pricing models. Later, he joined Google and spent five years building and leading technology teams for different products: Maps, Ads, and Google Payment.

Eight years ago, Jun moved on to Twitter working for their revenue team after taking the startup dive and running data science and product development at a venture-funded company in the fin-tech space for a few years. He is currently the Director of Data Science and Software Engineering, leading a global team in the U.S., Europe, and Asia driving Twitter's revenue growth through technology. In his spare time, Jun is a startup advisor, investor, and board member, helping startups of various stages on business strategy, product management, and technical topics around big data and machine learning.

Jun always felt that his professional career would have been completely different were he not as well-prepared by the PSM program for the industry jobs. As someone who previously had almost exclusively focused on academic math and had near-zero exposure to the business world, Jun had the opportunity, through the PSM program, to explore interests in a wide range of topics: from economics to data mining, from bio-stats to computer science.

Jun also learned and refined his business and communications skills such as project management, presentation, writing, finance, accounting, etc. through the business certificate program, which made the early-career path less bumpy. Studying with a very talented, ambitious, and diverse student pool, he also gained valuable experiences in effective teamwork, and built life-long friendships along the way. Jun demonstrates the success of PSM graduates: data scientist, industrial leadership and teamwork, problem solving skills, versatility, and passion.

Contributed by Peiru Wu, Ph.D., Director, PSM Program in Industrial Mathematics, Department of Mathematics, Michigan State University

MICHIGAN STATE
UNIVERSITY



KEVIN BOYD

PROFESSIONAL SCIENCE MASTER'S:
ENVIRONMENTAL POLICY AND MANAGEMENT
FLORIDA INTERNATIONAL UNIVERSITY, 2019

Meet Kevin, one of our graduates from the PSM/EPM program. After graduation, Kevin continued his career with the U.S. Coast Guard in District Seven Office in Miami, FL. There he worked on the Biologist Assessment concerning the impacts of alternative response technologies on endangered species and essential fish habitats in the event of an oil spill offshore Southeast US and Gulf of Mexico.

Kevin later moved to Washington, D.C. and accepted a position with the Coast Guard's Marine Environmental Policy Division where he worked with a team that established a salvage and marine firefighting rubric to evaluate oil tanker and non-tank (>400 gross ton) Vessel Response Plans for compliance with OPA90 regulations.

(Continued on pg. 4)

ALUMNI PROFILES, KEVIN BOYD (cont. from pg. 3)

Kevin now works as a Training Officer at the U.S. Coast Guard Academy, and despite the focus of his current position veering away from environmental policy, he sees his current position as an opportunity to mentor and train his colleagues and cadets on Coast Guard career opportunities including environmental policy and management.

Contributed by Stephanie Roque, Program Coordinator for CASE, Modesto A. Maidique Campus, Florida International University.



MARSENIA HARRISON MATHIS

PROFESSIONAL SCIENCE MASTER'S: MICROBIAL SYSTEMS ANALYSIS
UNIVERSITY OF CONNECTICUT, 2009

Marsenia Mathis considers herself a public health advocate, scientist, and STEMist. After a long career working with the Centers for Disease Control (CDC), Marsenia now works at Goldbelt C6. In addition to her current position, Marsenia is also an entrepreneur as the founder and creator of The Nerdy CEO.

At UConn, Marsenia found the MSA program “offered exactly what I was looking for.” One course in particular, Mechanisms of Bacterial Pathogenicity, sparked Marsenia’s interest in infectious disease. “I knew right away I wanted to work at the CDC.” Marsenia found the MSA program prepared her well for the workforce. “I gained more expertise, skillsets, and knowledge in Microbiology that applied to my career.”

After graduation, Marsenia spent nine years “chasing infectious diseases, particularly respiratory illnesses by way of the CDC.” In her current role at Goldbelt C6, Marsenia manages and oversees federal government contracts with the CDC, which includes staff recruiting, customer relationship development, project growth, and staff leadership.

Marsenia recently created the online platform, The Nerdy CEO, (thenerdyceo.com), a limited liability company, “to educate and encourage individuals in STEM professions ensuring they have the support, resources, self-confidence, and conviction to achieve their goals.”

As to her assessment of the MSA program, “I think this program is a wonderful opportunity. It definitely positions you with the skillsets and knowledge to perform to the best of your ability.”

Contributed by Elaine Mirkin, M.S., Director of Graduate Professional Education, Department of Molecular and Cell Biology, University of Connecticut.



(Continued on pg. 5)

ALUMNI PROFILES (cont. from pg. 4)

MARIA DEL CARMEN ROSASPROFESSIONAL SCIENCE MASTER'S: APPLIED GENOMICS
UNIVERSITY OF CONNECTICUT, 2020

It was an interest in Sanger sequencing and its applications to biotechnology that led Maria Rosas to the Applied Genomics PSM program at UConn. The program allowed Maria to develop the skills needed to pursue her interest in the real-world application of laboratory research. Maria currently works as the sole laboratory technician in the Biobehavioral Research Laboratory at the School of Nursing, UConn.

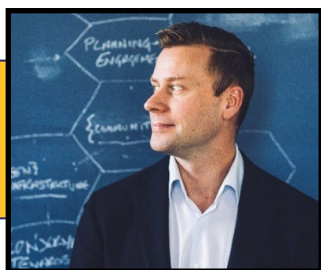
While researching biotechnology programs in the U.S., Maria had the opportunity to discuss the PSM program with Dr. Charlie Giardina, the Director of the Applied Genomics program at UConn. "The program had what I was looking for, hands-on training with real applications! And those skills could be applied to different settings, research and industry," Maria recalls.

Maria currently manages the new Biobehavioral Research Laboratory. Her duties include equipment acquisition, overseeing grant budgets, operating the service center, training graduate assistants, and obtaining IBC approval for new projects. In addition, she performs different types of sample analysis. Currently, Maria is developing and validating SOPs for assays of common biomarkers in saliva and fecal samples from babies using a new multiplex platform (ELLA) acquired by the facility.

As to how well the PSM program prepared her, Maria says, "The program provided me with the skills needed for my job, the technical and the soft ones, such as the training in laboratory management and communication, two things I was not trained in before. I can prepare budgets, manage a good number of samples, assist with research protocols, and communicate effectively with people." She recommends the program for those who "love to work in a laboratory setting and want to be exposed to cutting-edge technologies and applications."

Contributed by Elaine Mirkin, M.S., Director of Graduate Professional Education, Department of Molecular and Cell Biology, University of Connecticut.

UCONN
UNIVERSITY OF CONNECTICUT

**BILL SCHLEIZER**PROFESSIONAL SCIENCE MASTER'S: ENVIRONMENTAL ANALYSIS
RICE UNIVERSITY, 2004

Bill drives strategy behind Delta's collaboration with more than 180 communities in Chicago and throughout the Midwest to solve environmental challenges and spur economic development. Bill comments: "I try to balance high-level decision-making with tactical implementation, and I set an authentic and inclusive culture, including personally engaging with all our staff consistently."

Bill's accomplishments include: Working with 1,400 farmers and foresters to reduce climate change impacts; Implementation planning for the Chicago Climate Action Plan—focusing on residential and commercial energy efficiency mitigation strategies that most impact greenhouse gas emissions; Helping establish the Michigan Saves program, an energy efficiency loan program that has \$160M in its loan portfolio; and incepting a venture decision framework to spin off and scale initiatives.

"I now have over 18 years of experience in systems analysis, environmental science, and consulting, and also serve on the Advisory Board for Loyola University Chicago's Institute of Environmental Sustainability."

(Continued on pg. 6)

ALUMNI PROFILES, BILL SCHLEIZER (cont. from pg. 5)

He earned his BS in Ecology, Evolution, and Organismal Biology and Environmental Studies from Tulane University. “I wanted to broaden my education and found the Environmental Analysis degree at Rice University to be a great fit for my career plans. I was in the first cohort completing this unique, and as Rice likes to describe it “unconventional” science master’s degree.” He is a 2019 Notable LGBTQ Executive for Crain’s Chicago Business.

Submitted by Dagmar Beck, Director, Professional Science Master’s Programs, Rice University.



NADA AHMED

PROFESSIONAL SCIENCE MASTER’S: ENVIRONMENTAL ANALYSIS
RICE UNIVERSITY, 2009

Nada Ahmed graduated in 2009 from the program and had an amazing career over the last 11 years. Starting out at DNV after graduation, Nada moved to Norway for her job and never looked back. She acquired over 10 years of project management and leadership experience in the Offshore Energy and Maritime Industry.

Over the past 6 years she has been leading various innovation and business development teams with a special focus on digital transformation. “I am now the Head of Research and Innovation at Aker Solutions, a leading engineering and sub-sea technology supplier to the offshore industry based out of Norway.” Nada adds: “I am also an avid voice in topics concerning Innovation, Agile leadership, Sustainability and Diversity and Inclusion.”

Nada was on the 2020 list of Top 50 Women in Technology in Norway, awarded by Abelia and ODA network. “I am staying pretty busy, having a family, a busy job and being active as head of the board of the Norwegian Polytechnical Society Digital Leadership Community and also serving on the advisory board of Noroff School of Technology and Digital Media (based in Oslo). “The EA degree program prepared me well for the challenges in the environmental consultancy industry. The management and business components were especially important to advance my career, and help me now with another venture, i.e., leading the non-profit organization that I co-founded in 2015, TCF Norway, focused on providing quality education to underprivileged girls and boys in Pakistan.”

Nada has been doing amazing work paving the way for women in STEM across the globe. If you would like to hear more from her, visit her live stream on LinkedIn:
<https://www.linkedin.com/feed/update/urn:li:activity:6816699684678074368/>

Contributed by Dagmar Beck, Director, Professional Science Master’s Programs, Rice University.



(Continued on pg. 7)

ALUMNI PROFILES (cont. from pg. 6)

**GATES BREEDLOVE**

PROFESSIONAL SCIENCE MASTER'S: NATURAL AND APPLIED SCIENCE
MISSOURI STATE UNIVERSITY, 2021

After receiving her undergraduate degree in general biology in 2018 Gates knew that she wanted to pursue a career in a STEM-based field, but her interest in workforce development led her away from more traditional programs. Her attention was drawn to the PSM program at Missouri State, after spending time in a corporate position and discovering the substantial benefit of obtaining a diverse professional skillset.

The interdisciplinary nature of the Professional Science Master's program allowed her to further advance her education in biology while gaining an understanding of complimentary subjects in business and law. After pursuing course offerings in environmental microbiology, she began to appreciate the role of biology in public works and city management. It was then that she had the honor to secure an internship assisting with a microbial source tracking project for the City of Springfield Environmental Services who offered her to continue in this position after graduation.

"The fact that the internship component of the PSM option replaced a thesis is what permitted me to take on such a large project and the flexibility of my coursework allowed me to take supporting classes in hydrology, environmental policy, and many others to create a well-rounded foundation for my focus in water resources and management.", Gates comments. The career-oriented format of the program let her focus on her long-term vocational goals, including building her networking with contacts in her industry. Participation in this program allowed her to establish herself in her field while still obtaining her degree. "I am looking forward to further developing my career with the knowledge and experience that the PSM degree afforded me."

Contributed by Kyoungtae Kim, MNAS Director, Missouri State University.

Missouri State

RYAN HENSLEY

PROFESSIONAL SCIENCE MASTER'S: BIOMEDICAL AND HEALTH
INFORMATICS
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL, 2020



Dr. Ryan Hensley earned his BS in Biology from UNC-Chapel Hill and his MD at East Tennessee State University. He completed his residency in pediatrics at Cincinnati Children's Hospital Medical Center.

He graduated from the online PSM program in one year while continuing to practice full-time and raising his family. His internship project, "Development of New Workflows for Telemedicine and Well Child Checks," gave Ryan an opportunity to apply his informatics education to his daily work as a pediatrician.

Since graduation, Dr. Hensley earned board certification in Clinical Informatics through the American Board of Preventive Medicine. His master's project has been implemented at his organization, and he continues to work to streamline workflows and provide better patient care.

Contributed by Hannah David (she/her), CHIP Programs Manager, Carolina Health Informatics Program, University of North Carolina at Chapel Hill.



(Continued on pg. 8)

ALUMNI PROFILES (cont. from pg. 7)

ADEOLA AWE

**PROFESSIONAL SCIENCE MASTER'S: GEOGRAPHIC INFORMATION SCIENCE
CUNY LEHMAN COLLEGE, 2018**



Adeola graduated from the Lehman College in December of 2018 where he earned a Professional Science Master's in Geographic Information Science. During this time, he interned at the Office of Pupil Transportation in New York City's Department of Education as part of the requirements for the PSM. In his time at the OPT, he was assigned to the Business Intelligence/GIS unit. Some of the projects he worked on include the creation of a citywide data to assign transportation eligibility for all 1.1 million students and analysis of GPS data generated by the city's school bus fleet of 9,000 vehicles.

"The PSM program gave me the opportunity to practice class lessons, gather GIS workplace experience and develop key hands-on skills. I also had the pleasure of networking with professionals in my field as well as across different fields."

He is currently a Geospatial Data Analyst at New York City Economic Development Corporation where he lends his knowledge and expertise to promoting economic growth in the city. During the COVID pandemic, he designed and created web applications that drove prompt decision making for identifying optimal locations to situate emergency services for testing around the city. During this time, he also worked on several inter-agency projects which involved analyzing the city's retail supply chain to identify where alternatives needed to be sought as well as ensure that all neighborhoods were adequately served.

His current project leverages GIS as a tool for community engagement for the Hunts Point Forward initiative, by creating a web application that allows residents to submit feedback tied to a specific location. The feedback will help shape the revitalization of the Hunts Point (Bronx, NY) economy as well as improve the community's quality of life. Prior to the PSM program, Adeola completed a bachelor's degree in Urban and Regional Planning from the University of Lagos in 2014. He had worked as a Municipal Planner and an Investment Advisor in Nigeria.

Contributed by Juliana Maantay, Ph.D., M.U.P., F.R.G.S., Professor of Urban Environmental Geography, Department of Earth, Environmental, and Geospatial Sciences, Lehman College, City University of New York.

**IRENEE PAYNE**

**PROFESSIONAL SCIENCE MASTER'S: ENVIRONMENTAL SCIENCES
OREGON STATE UNIVERSITY, 2020**

Irene received her PSM in Environmental Sciences in 2020. She has worked for Georgia Association of Conservation Districts (GACD) since 2018 and will continue working for the organization as their Pollinator Coordinator.

Through her position with GACD, Irene implements outreach programs centered on conserving pollinator habitat, and she has been working throughout 2020 to enhance pollinator habitats throughout Georgia.

Irene conducted her PSM internship through the University of Georgia (UGA), where she analyzed how the return of fire to Southern Appalachia impacts soil food webs and decomposition rates. She is interested in forest health and habitat restoration, specifically creating more resilient forests amidst changes in fire regimes and possible invasive species outbreaks. The skills learned during her studies at Oregon University have helped her to promote her career with GACD.

Contributed by Carolyn Fonyo, PhD, Director, Environmental Sciences Graduate Program, Oregon State University.



(Continued on pg. 9)

ALUMNI PROFILES, (cont. from pg. 8)

PAT ROSEPROFESSIONAL SCIENCE MASTER'S: LAKE MANAGEMENT
SUNY ONEONTA, 2018

Pat has been working as a Staff Scientist II at Princeton Hydro for 2 years now, a position that combines field work and office work. They conduct a lot of routine lake monitoring, like the monitoring and sampling that's done in the program, as well as biological sampling (fisheries, SAV, plankton) and stream work. His office work consists mostly monitoring reports for the main lakes but he is also involved in writing lake, watershed, cyanotoxin, fisheries, etc. plans.

"The PSM program was perfect for what I was looking to pursue after graduation. I knew I wasn't looking to go back to school or pursue a research position and the PSM track allows you to get the necessary education and experience without spending too much time with research. It was nice because the coursework was relatively limited but still covered all of the important info necessary to start out in the lake management field. I definitely felt more than prepared jumping right into it when I started at Princeton Hydro, in the office and in the field, and was able to contribute right away." Pat comments.

He was able to secure a position with AquaTechnext in Washington for his co-op experience. This company works on a lot of big beautiful lakes throughout the Pacific NW, rather than a lot of small ponds which a lot of treatment companies around here and down south end up working on. He enjoys his work and used his skills learned at the PSM program at SUNY to promote his career in Lake Management.

Contributed by Dr. Willard N. Harman, CLM, Director, SUNY Oneonta Biological Field Station.

SUNY ONEONTA

**ROCHELLE BURKE**PROFESSIONAL SCIENCE MASTER'S: APPLIED BIOSCIENCE
KANSAS STATE UNIVERSITY, 2020

Rochelle received a B.G.S (Bachelor of General Studies) in Human Biology from the University of Kansas in 2003. "I always wished I had pursued a master's degree, and up until 2018 I felt it was not possible since I was already immersed in my career." She said, "When I started researching programs, I was not aware of PSM program that would teach me STEM knowledge, professional skills etc." She found the PSM program at K-State and was surprised to learn it would fit into her schedule as a full-time working adult and mom.

Current PSM Students described the program with excellent professors who cared about students' success in the program, and the program curriculum that included science knowledge along with invaluable professional skills. So "I could benefit from learning professional skills to increase my value in my career." Rochelle remembers, "just prior to joining the PSM program, I was promoted to a manager in my department but lacked skills to successfully manage people of all types of personalities and backgrounds." The PSM program taught her how to be a more effective manager. Additionally, my writing skills, presentations skills, and communication skills have vastly improved since completing the PSM degree. "My confidence in writing, communicating, and speaking in front of others has increased significantly."

One of the PSM program goals is to immerse students in an interdisciplinary approach to problem solving. "I have

(Continued on pg. 10)

ALUMNI PROFILES, ROCHELLE BURKE (cont. from pg. 9)

worked in my field for over 13 years, but I was not an expert or knowledgeable about disease and disease transmission prior to completing the PSM education.” Rochelle has gained better understanding about the diseases and the people at work. This has given her greater passion towards her career. Now she is now working as a senior scientist and principal investigator in the Pharma Discovery Group KCAS Bioanalytical and Biomarker Services.

Contributed by Rebekkah Stuteville, Ph.D., PSM Program Director, Kansas State University.



PSM Certificate of Completion: Another Benefit of Membership





Affiliated PSM programs may request a PSM Certificate of Completion for their students. For 2021 graduates, email (coordinator@npsma.org) an excel file with the list of names of your students, names of program director(s) or other program official(s) and dates to be shown on the certificate. We will electronically send completed certificates within 2-3 weeks.

PSM Alumni may also request certificates by filling out the request form for the PSM Certificate of Completion found at www.professionalsciencemasters.org/certificate-completion-form.



The PSM Alumni and Graduation CHRONICLE
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 The PSM Alumni and Graduation CHRONICLE is published annually by the National Professional Science Master's Association, P.O. Box 571351, Salt Lake City, UT 84107.
 Send submissions for consideration to be included in the 2022 issue to coordinator@npsma.org.

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