

EDUCATION

Expected Spring 2021 Rutgers, The State University of New Jersey, New Brunswick, NJ –
Environmental Science – Exposure Science, Ph.D. Candidate
Thesis: Development and application of low-power samplers to study bioaerosol presence
Advisor: Dr. Gediminas Mainelis

2012 University of Guam, Mangilao, GU — M.S. Environmental Science
Thesis: A Hydrologic Study of the Piti-Asan Watershed, Guam
Advisor: Dr. Shahram Khosrowpanah, P.E.

2010 University of Guam, Mangilao, GU — B.A. Biology

PUBLICATIONS

Manibusan, S., and Mainelis, G. 2020. Performance of Four Consumer-grade Air Pollution Measurement Devices in Different Residences. *Aerosol and Air Quality Research*. 20: 217-230. doi: 10.4209/aaqr.2019.01.0045.

Manibusan, S., Khosrowpanah, S., Lander, M.A., Golabi, M.H., and Patil, U.D. 2019. “A GIS Based Assessment of a Dynamic Watershed in Guam.” *Hydrology*. Vol. 7, No. 1, 2019, pp. 1-9. doi: 10.11648/j.hyd.20190701.11

Golabi, M.H., **Manibusan, S.**, Righetti, T., Okano, D. and Iyekar, C. 2018. “Using Vetiver grass technology for mitigating sediment loads in the Talakhaya Watershed areas in Rota, CNMI.” *International Soil and Water Conservation Research*. doi: 10.1016/j.iswcr.2018.03.001

WORK EXPERIENCE

Graduate Student, Mainelis Laboratory, Rutgers, The State University of New Jersey, December 2015 – Present

- Adaptation of the Rutgers Electrostatic Passive Sampler (REPS) into a low-flow active bioaerosol sampler, REPS-Active
- Optimization of culturable analysis methods for REPS
- Analysis of bioaerosol charge using a passive electrostatic bioaerosol sampler
- Evaluated the performance of low-cost, consumer-grade air particle monitors

Graduate Student, Weisel Laboratory Rotation, Rutgers, The State University of New Jersey, September 2015 – December 2015

- Evaluated the levels of formaldehyde in floor materials
- Use of high performance liquid chromatography (HPLC) and gas chromatography mass spectrometry (GC-MS) in air sampling analysis

Research Associate, Western Pacific Tropical Research Center (WPTRC), University of Guam, December 2012 – March 2015

- Developed a sampling strategy for hydrologic and sedimentation measurement in a local watershed.
- Evaluated sediment loading rate under different vegetation strategies within the Talakhaya Watershed (Rota, CNMI), a priority watershed under the CNMI Conservation Action Plan (CAP)

Research Assistant, Water and Environmental Research Institute (WERI), University of Guam, May 2011 - November 2012

- Development of A GIS Based- Watershed Management Plan for the Piti-Asan Watersheds, a priority watershed identified in the Guam CAP

Research Assistant, Cancer Research Center, University of Guam, October - November 2010

- Interviewed volunteer study group participants related to risk factors for breast cancer in the development of a Gail model for locally represented ethnic groups

Teaching Assistant, College of Natural and Applied Sciences, University of Guam, June - August 2009; January - May 2010

- Assisted students and professor on educational excursions illustrating the local environment including flora, fauna, geology, and natural history
- Assisted students on course related topics and assignments

GRANTS, HONORS, AND AWARDS

Eagleton Institute of Politics Graduate Fellowship Program – Class of 2021, 2020-2021

New Jersey Chapter for the Society of Women in Environmental Professions (NJSWEP) Scholarship, 2020

Rutgers School of Graduate Studies Travel Award, 2019

American Association for Aerosol Research (AAAR) Student Travel Award, 2018

Rutgers School of Graduate Studies Travel Award, 2017

Rutgers Honor Scholar in Biomedical Science Award, 2015

NIEHS Training Grant in Exposure Science Fellow, 2015 – Present

University of Guam Masters of Environmental Sciences Program Scholarship, 2011

ORAL PRESENTATIONS

Manibusan, S. and Mainelis, G. 2020. “Assessment of a low-power active bioaerosol sampler performance”, 2020 AAAR 38th Annual Conference, Virtual.

Manibusan, S. and Mainelis, G. 2017. “Performance of Consumer-Grade Air Pollution Measurement Devices in Residential Environments”, 2017 International Society for Exposure Science (ISES) Annual Meeting, Durham, NC.

Manibusan, S., Golabi, M.H., Okano, D., and Iyekar, C. 2014. “Talakhaya Watershed Soil Loss Assessment (Rota, CNMI)”, 2014 Regional Island Sustainability Conference, Tumon, GU.

POSTER PRESENTATIONS

Manibusan, S. and Mainelis, G. 2019. “Further investigation and application of passive and low-energy bioaerosol samplers.” 2019 AAAR 37th Annual Conference, Portland, OR.

Manibusan, S. and Mainelis, G. 2018. “Investigation of Bioaerosol Charge Levels Indoors Using the Rutgers Electrostatic Passive Sampler (REPS)”, 2018 International Aerosol Conference, St. Louis, MO.

Manibusan, S., Mainelis, G. 2016. “Performance of Four Consumer-Grade Air Pollution Measurement Devices”, 2016 AAAR 35th Annual Conference, Portland, OR.

Manibusan, S., Golabi, M.H., Okano, D., and Iyekar, C. 2014. “Environmental Education for Rota, CNMI: The Talakhaya Watershed Soil Loss Assessment”, 2014 Soil and Water Conservation Society (SWCS) International Annual Conference, Lombard, IL.

Golabi, M.H. and **Manibusan, S.** 2013. “Teaching Watershed Stewardship by Using a Topographical Model of Island of Guam - A Community Education Program About Protecting the Coral Reef from Upland Sedimentation Caused By Human Activities”, American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) International Annual Meetings, Tampa, FL.

Golabi, M.H., Biggs, J., Iyekar, C., and **Manibusan, S.** 2013. “Community Education for Watershed Management”. SWCS International Annual Conference, Reno, NV.

PROFESSIONAL TRAINING

Computational Risk Assessment Workshop, September 2019

Real Time PCR Hands-On Training, June 2019

Risk Assessment Bootcamp, January 2019

Fundamentals of Aerosol Health Effects: Health Outcome Measurement Methodologies in Toxicology, AAAR Tutorial 2016

MEMBERSHIPS & AFFILIATIONS

International Society of Exposure Science (ISES), 2016 - Present

American Association for Aerosol Research (AAAR), 2016 - Present

Air and Waste Management Association (A&WMA), 2017 – Present

Rutgers Exposure Science Student Association (RESSA), 2017 – Present

Secretary, 2017 - 2018

Rutgers Environmental Sciences Graduate Student Association (ESGSA), 2015 - Present

President, 2019 – Present

Treasurer, 2016 – 2019

North and Central New Jersey Chapter A&WMA Student Poster Competition Committee, Rutgers Student Representative, 2019 and 2020

Guam Nature Alliance (GNA, formerly Environmental Education Committee), Hånom (Water) Group, 2012- 2015

University of Guam Natural Sciences Graduate Student Organization, 2010-2012

Secretary, 2010-2011