Yohtaro Kobayashi
120 Hearthstone Dr Apt F, Blacksburg, VA 24060
Cell Phone: 915-799-2040
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Education:

Virginia Polytechnic Institute and State University
Doctor of Philosophy in Geosciences
Expected Graduation 2027

University of Texas at El Paso
Master of Science in Environmental Engineering
Graduated August 2020

Thesis Title: *A Comparison of Data-Driven and Process-Based Modeling for Nutrient Estimation in a Eutrophic Reservoir*

University of Texas at El Paso
Bachelor of Science in Civil Engineering
Graduated May 2018

Organizations:

Chi Epsilon Honor Society — May 2017-Present
American Society of Civil Engineers (ASCE) — January 2017-Present
American Geophysical Union (AGU) — August 2023-Present
American Ecological Engineering Society (AEES) — January 2024-Present

Work Experience:

Virginia Tech
Blacksburg, VA 24061
Phone: (540) 231-6000

Graduate Research Assistant — August 2021-Present
Virginia Tech

- Responsible for maintenance and piloting of unoccupied aerial vehicle.
- Responsible for processing of LiDAR data collected from unoccupied aerial vehicle.
- Organized lab group data into a singular ArcGIS geodatabase.
- Preliminary research using LiDAR on hybridized chestnut trees for analyzing the correlation between tree form and genotype.
- Ongoing research estimating the light availability on water surfaces for rivers in the Contiguous United States.

Texas A&M University - Agrilife Extension
1380 A&M Circle
El Paso, TX 79927
Phone: 915-859-9111
Fax: (915) 859-1078

Student Technician — July 2019-September 2020
Texas A&M Agrilife Extension

- Maintained hardware and software for an unoccupied aerial vehicle.
- Performed analysis on data recorded by an unoccupied aerial vehicle.

Research Associate September 2020-August 2021
Texas A&M Agrilife Extension
- Conducted experiments with a hyperspectral camera to determine the concentration of Carbon Dioxide and conducted a preliminary analysis of the data.
- Developed a script in Interactive Data Language (IDL) to assist in image alignment for hyperspectral images.

University of Texas at El Paso
500 W University Ave
El Paso, TX 79968
Phone: (915) 747-5000

Teaching Assistant September 2018-August 2020
University of Texas at El Paso
- Taught students how to use and maintain engineering surveying equipment.

Graduate Research Assistant June 2019-August 2019
University of Texas at El Paso
- Assisted in preprocessing and postprocessing of data as well as the field work of projects involving an unoccupied aerial vehicle.
- Designed a method to record the images of the ground under the canopy of an orchard and create an orthomosaic from the images.

Undergraduate Research Assistant September 2017-May 2018
University of Texas at El Paso
- Designed a preliminary Bayesian network model for salinity within the soil of farmland to assist in the decision making of farmers.
- Assisted in preprocessing and postprocessing of data as well as the field work of projects involving an unoccupied aerial vehicle.

Licenses and Certifications:
FAA Remote Pilot Certificate, 2024

Overall Skills:
- Experienced with general computer hardware and software knowledge and the process of troubleshooting.
- Experienced with Microsoft 365 family of software (Word, Excel, PowerPoint, Teams).
- Intermediate knowledge of coding in Python, R, and IDL.
- Intermediate knowledge of image analysis and processing in ENVI, Agisoft Metashape, and Pix4d.
- Intermediate knowledge of geospatial data processing in ArcMap, ArcGIS Pro.
- Intermediate knowledge of unoccupied aerial systems (UAS) and various sensors (multispectral, hyperspectral, and LiDAR).
- Intermediate knowledge of hydrologic and hydraulic modeling with HEC-HMS, HEC-RAS, SWAT, and SWMM.

- Have worked well with team members in multiple positions and organizations, both as a lead and as a member.
- Approach a problem from multiple angles and consider the pros and cons of each before proceeding.
- If given a project or situation in which there is insufficient knowledge, able to determine and obtain what is required to proceed.

Presentations:
Kobayashi, Y., Allen, G.H. *Light Availability Estimates for River Surfaces in the Contiguous United States*. American Geophysical Union, 2024 [poster presentation]

Kobayashi, Y., Hession, C.W., Allen, G.H. *Light Availability Estimates for River Surfaces in the Contiguous United States*. American Ecological Engineering Society Conference, 2024 [oral presentation]

Kobayashi, Y., Allen, G.H. *Estimation of Light Availability on River Water Surfaces using Remote Sensing and Geospatial Data*. New River Symposium, 2024 [oral presentation]

Kobayashi, Y., Allen, G.H. *Light Availability Estimates for River Surfaces in the Contiguous United States*, Office of GIS and Remote Sensing Research Symposium, 2024 [poster presentation]

Kobayashi, Y., Allen, G.H *Estimation of Light Availability on River Water Surfaces using Remote Sensing and Geospatial Data*. American Geophysical Union, 2023 [poster presentation]

Kobayashi, Y., Prior, B., Ritz, A. (April 2023). *Straying from the Mississippi River: A Case Study on Avulsion at Neptune Pass*. Office of GIS and Remote Sensing Research Symposium, 2023 [poster presentation]

Kobayashi, Y., Lakoba, V., Hession, C.W. *Applying Remote Sensing Techniques for Phenotyping Chestnut Trees*
The American Chestnut Foundation Symposium, 2022 [oral/poster presentation]

Kobayashi, Y., Hession, C.W. *Identifying Meander Scars through Lidar and Multispectral Imagery*
Office of GIS and Remote Sensing Research Symposium, 2022 [poster presentation]

Kobayashi, Y., Kumar, S. *Improving the Output of a Farm Field Model Through Data Assimilation*
Sustainable Water Resources Symposium, 2019 [poster presentation]

Kobayashi, Y., Kumar, S. *Model to Improve Decision Making for Farms Dealing with Salinity in the South-West Region*
International Environmental Modelling & Software Society, 2019 [oral presentation]

Kobayashi, Y., Kumar, S. *A Bayesian Network Based Model for Decision Making on a Farm Scale Impacted by Salinity*
Environmental & Water Resources Institute, 2018 [oral presentation]

Kobayashi, Y., Kumar, S. *Using a Bayesian Network Based Model to Improve Decision Making for Farms Dealing with Salinity*
Sustainable Water Resources Symposium, 2018 [poster presentation]

Grants, Awards, and Funded Proposals:
Kobayashi, Y., Allen, G.H. *Light Availability Estimates for River Surfaces in the Contiguous United States*. Outstanding Student Presentation Award. American Geophysical Union, 2024.

Hession, C.W., Kobayashi, Y., Resop, J. "Investigating the Impact of Genome Content on Hybridized Chestnut Trees for Growth Form Utilizing Remote Sensing Techniques: Lesesne State Forest (Nelson Co., VA)". The American Chestnut Foundation. December 2022-November 2023. $9,794.50.

Kobayashi, Y., Hession, C.W. "Characterizing Chestnut Tree Structure through Remote-Sensing Applications". The American Chestnut Foundation. June-August 2022. $4500.