Keenan Ganz

ganzk@uw.edu
github.com/s-kganz

Research Interests

Thermal remote sensing. Geospatial modeling. Plant ecophysiology.

Education

Environmental and Forest Sciences Ph.D. (3.99 / 4.0 GPA) **October 2022 - Present**
University of Washington, Seattle
Advised by L. Monika Moskal; supported by NSF Graduate Research Fellowship, project title "A wildfire early warning system from meteorology and satellite land surface temperature".

Environmental Science & Computational Biology B.S. (4.0 / 4.0 GPA) **Aug 2018 – May 2022**
Rensselaer Polytechnic Institute
Astrobiology Minor; Geoinformatics Concentration
Class of 1902 Research Prize for best undergraduate thesis: "The distribution of depth, volume, and basin shape for lakes in the conterminous United States".

Publications

Peer Reviewed

1. *In Review.* **Ganz, K.**, Still, C.J., Rastogi, B., Moskal, L.M., 2024. Understory and overstory leaves warm faster than air in evergreen forests. Agricultural and Forest Meteorology.
2. **Ganz, K.,** Glines, M.R., Rose, K.C., 2024. The distribution of depth, volume, and basin shape for lakes in the conterminous United States. Limnology and Oceanography 69, 22–36. https://doi.org/10.1002/lno.12475

Data & Software

1. **Ganz, K.**, M. Glines, and K. Rose. 2023. Modeled maximum and mean lake depths for the contiguous United States. Environmental Data Initiative. https://doi.org/10.6073/pasta/d68d5a218d1ec0351f8c3721d41e5e9c.
2. **Ganz, K.** 2021. SCUTR: Balancing Multiclass Datasets for Classification Tasks. R package version 0.2.0, https://CRAN.R-project.org/package=scutr.

Awards

Grand Prize Winner. AGU Michael M. Freilich Data Visualization Contest. December 2023.
NSF Graduate Research Fellow. National Science Foundation. 2022 – 2025.
1st Place Presentation. Department of Energy Ignite Off Competition. August 2022.
Class of 1902 Research Prize. Rensselaer Polytechnic Institute. May 2022.
Kenneth J. Osborn Scholar. American Society of Photogrammetry and Remote Sensing. March 2021.

Teaching

Lead Instructor

Course	Quarters Taught
Communicating Science to the Public Effectively	Winter 2024, Autumn 2024, Winter 2025

Teaching Assistant

Course	Quarters Taught
Data Analysis in Environmental Studies	Summer 2023, Winter 2024
Introduction to Geographic Information Systems	Spring 2023

Experience

Earth Science Information Partners (Remote) **Dec 2024 – November 2025**
Community Fellow

- Assigned to information technology and interoperability committee.
- Will plan and run monthly teleconferences for Earth data science professionals.
- Will present research at conferences in January and June.

Oak Ridge National Laboratory (Oak Ridge, TN) **Jun – Aug 2021, 2022**
Science Undergraduate Laboratory Intern

- Assessed plant productivity and water stress in the SPRUCE experiment, an artificially warmed peat bog enclosure under elevated CO2 in northern Minnesota.
- Developed Python scripts to align drone images taken at different altitudes and orientations.
- Compared spectral indices for monitoring plant health. Determined that green chromatic coordinate best identified divergent responses to warming between larch and spruce trees.
- Presented results at lab-wide poster session. Developed a short form talk for the public which was selected as 1st place in the Department of Energy Ignite Off competition.

Environmental Science Associates (Seattle, WA) **May 2020 – Jan 2021**
Geospatial Analysis Intern

- Programmed predictive models of vegetation type and wetland presence in the Skagit river basin of Washington State. Compiled results to support recertification of the Ross Lake dam.
- Produced time-series maps of phosphate mine settlement ponds in the Alafia estuary in Florida. Demonstrated that wastewater has accumulated close to municipal water supplies.
- Delivered a company-wide presentation on applications of data science to environmental management.

References

Name	Title	Relationship	Contact
Monika Moskal	Professor Environmental and Forest Sciences University of Washington	Ph.D. Advisor	lmmoskal@uw.edu
Kevin Rose	Kolleck Professor in Freshwater Ecology Biological Sciences Rensselaer Polytechnic Institute	Undergraduate Advisor	rosek4@rpi.edu
Jeffrey Warren	Plant Ecophysiologist Environmental Sciences Division Oak Ridge National Laboratory	Research Advisor	warrenjm@ornl.gov