Kjirsten Elizabeth Coleman

LinkedIn | Portfolio | kjirstencoleman@gmail.com

Summary

I analyze remote sensing data to create novel products that enhance our understanding of forest dynamics and inform climate-adaptive forest management.

Education

PhD (degree in progress), "The Potential of Earth Observation for Characterization of Forest Fragmentation Dynamics in Bavaria"
Julius-Maximillian University of Würzburg – Würzburg, Germany

Master of Science, Natural Resources Management
Norwegian University of Science and Technology – Trondheim, Norway (Sep 2019)
Thesis title: "Uncovering the Impacts of Fencing in the Mara: as assessment of vegetation and bare soil using remote sensing and stakeholder participation"

Bachelor of Science, Biology
Portland State University – Portland, Oregon (Aug 2009)

Technical Skills

- Analysis of Earth observation data (multispectral, LiDAR, radar, atmospheric)
- Expertise using GIS software – QGIS, GEE, ArcPro, AGOL
- Advanced application of Python and R for data management, statistical analysis, and visualizations
- Scientific study design, field sampling, and technical writing
- Team leadership, classroom instruction, and science communication
- Languages: English (native), German, Norwegian (intermediate), Korean, French, Spanish (basic)

Professional Appointments

PhD candidate, Analysis of forest fragmentation dynamics
Land Surface Dynamics (LAX) department, German Remote Sensing Data Center (DFD), German Aerospace Center (DLR), Munich (Apr 2023 – present)

Student assistant, Unmanned Aerial Systems (UAS) Research Lab
Department of Remote Sensing, University of Würzburg (Dec 2022 – Mar 2023)

Remote Sensing and Spatial Ecology Intern
Smithsonian Conservation Biology Institute – Front Royal, Virginia (May – Nov 2022)

DEVELOP National Program Intern
National Aeronautics and Space Administration (NASA)
(1) Jet Propulsion Lab – Pasadena, California (Sept – Nov 2021)
(2) Goddard Space Flight Center – Greenbelt, Maryland (Jan – Apr 2021)

Research Assistant – Department of Natural Resources and Environmental Sciences
University of Illinois – Urbana-Champaign, Illinois (Apr – Aug 2021)

Geospatial Consultant
Heimdal Satellite Technologies – Oslo, Norway (Dec 2020 – Mar 2021)

Research Assistant – Remote Sensing and GIS
AfricanBioServices – Trondheim, Norway (Jul 2019 – Sep 2020)

Community Outreach – Urban Green Infrastructure
City of Portland Bureau of Environmental Services – Portland, Oregon (Jun 2010 – Feb 2011)

Field Technician – Rangeland Vegetation Assessment
Eastern Nevada Landscape Coalition – Ely, Nevada (May – Oct 2009)

Teaching Appointments	TechGyrls STEM Program Manager and Instructor Young Women's Christian Association (YWCA) Lancaster, Pennsylvania (Apr – July 2022) Teaching Assistant – Biology Dept. Norwegian University of Science and Technology – Trondheim, Norway (Aug 2019) Primary School Teacher (1) Global Educational Development Institute – Daejeon, South Korea (Mar 2015 – Mar 2017) (2) North Jeolla Provincial Office of Education – Gunsan, South Korea (Feb 2014 – Feb 2015) (3) Ulsan Metropolitan Office of Education – Ulsan, South Korea (Feb 2011 – Feb 2013) Weekend Science Program Instructor Ulsan Science Center and Planetarium – Ulsan, South Korea (May – Jul 2011)
Publications	**Coleman, K**. and Kuenzer, C. (2025). "Forest Fragmentation in Bavaria: A first-time quantitative analysis based on Earth Observation data" (manuscript in review). . Xu, J., **Coleman, K.**, Radeloff, V., Songer, M., Huang, Q. (2025) "Modeling Tree Biodiversity Using vertical vegetation structure metrics from GEDI data at a global scale" *Remote Sensing*. **Coleman, K**., Müller, J., & Kuenzer, C. (2024). Remote Sensing of Forests in Bavaria: A Review. *Remote Sensing*. Holzwarth, S., Thonfeld, F., Kacic, P., Abdullahi, S., Asam, S., **Coleman, K**., ... & Kuenzer, C. (2023). "Earth-observation-based monitoring of forests in Germany—recent progress and research frontiers: a review". *Remote Sensing*. Hunninck, L., **Coleman, K.**, Boman, M., O'Keefe, J. (2022) "Far from home: distance to roost decreases bat's contribution to crop pest control" *Global Ecology & Conservation*. Wana, D., Smith, S.W., **Coleman, K.**, Speed, J. (2021) "Proximity to high densities of pastoral settlements reduces grassland regrowth in a protected tropical savannah" *Biotropica*.
Conference presentations	Researchers Meeting on Fencing in the Mara – Kenya Wildlife Trust – Narok, Kenya (July 2019) Title: "Causes and Effects of Fencing" – A review of the decision-making processes and policy changes that have led to increased fencing, and an impact assessment of the effects on landscape changes using remote sensing and stakeholder perspectives.
Volunteering	Trained master students with GIS (ESRI ArcPro) at NTNU in Trondheim • Contributed to development of a cooperative board game for resource management • Sea-kayak guide & naturalist in Washington state • Organized beach clean-ups in coastal South Korea • Juara Sea turtle conservation project on Tioman island in Malaysia • Crew leader for Friends of Trees in Oregon • Telemetry surveys of sage grouse and goshawk point-counting in Nevada • Amphibian egg-mass counts in urban wetlands in Oregon • Capture and marking of migratory adult and juvenile salmon • Mist-netting, measuring and banding songbirds in western Oregon • Plant functional trait measuring for speciation analysis project in central Oregon

References

Dr. Qiongyu Huang, Wildlife Biologist
Conservation Ecology Center
Smithsonian National Zoo and Conservation Biology Institute
Relation: Internship supervisor
huangq@si.edu
+1 (540) 635-6502

Dr. Louis Hunninck, Biostatistician
Schweizerische Vogelwarte
Relation: Project supervisor
louishunninck@gmail.com
+41 76 263 64 26