NEDA KASRAEE

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EDUCATION

MS **University of Wisconsin – Madison** Expected ~ August 2022
Forestry | RA in the SILVIS Lab

BS **California Polytechnic State University, San Luis Obispo** June 2018
Environmental Earth Sciences | Specialization in Hydrology
Minors: Geographic Information Systems & Soil Science

RESEARCH EXPERIENCE

September 2020 - Present
Graduate Research Assistant, University of Wisconsin – Madison

- Utilize remote sensing techniques to study wildfires in the wildland-urban interface
- Research Assistant in the SILVIS Lab at UW-Madison's Department of Forest & Wildlife Ecology

May 2019 – August 2020
Scientist I, Radar Science and Engineering, NASA Jet Propulsion Laboratory

- Analyze satellite and airborne imagery (optical and radar) with ArcMap, QGIS, and Python to provide data-based results for a variety of applications such as monitoring natural disasters
- Assist in leading and organizing one of NASA's airborne science teams, UAVSAR (Uninhabited Aerial Vehicle Synthetic Aperture Radar) team, by coordinating operational logistics

September 2018 - April 2019
Impact Analysis Fellow at NASA DEVELOP, NASA Jet Propulsion Laboratory

- Manage project impact assessments by compiling and processing data and results with GIS and R programming for 50+ projects
- Improve communication, transparency, and availability of data, results, and assessments across 12 NASA centers & regional offices in the DEVELOP program

January 2018 - August 2018
Research Consultant, NASA Jet Propulsion Laboratory

- Analyzed optical (Landsat 5, 7, & 8) and radar (UAVSAR, Sentinel-1) data to observe landscape changes (i.e. desert erosion, coastal flooding)
- Batch processed imagery with IDL, R, SNAP, and ArcGIS Modelbuilder
- Assisted in writing outreach material (i.e. article link) and a technical memorandum for the Bureau of Land Management

January 2017- January 2018
Undergraduate Research Assistant, California Polytechnic State University, San Luis Obispo

- Processed and analyzed hyperspectral imagery captured from a push-broom line imaging spectrometer, the SHARK visible/near infra-red (visNIR) hyperspectral system
- Investigated correlations between specific bands and water retention in plants using spectral indices; processed imagery with ENVI and IDL programming

July 2016-January 2018
GIS Intern, County of San Luis Obispo

- Mapped and continually updated the county's map index by digitizing county monuments, corner records, parcel maps, records of surveys, and tract maps
- Geocoded industrial business addresses, maintained county datasets and databases, created map books for different county departments using data driven pages, and utilizing COGO to digitize AutoCAD drawings

CONFERENCES

[1] Oral Presentation [2] Invited

Denbina M., Towfic Z.J., Thill M., Bue B., **Kasraee N**., Peacock P., and Lou Y. "Flood Mapping Using UAVSAR and Convolutional Neural Networks," IEEE International Geoscience and Remote Sensing Symposium (IGARSS), 2020

Au M., **Kasraee N.**, Moneymaker B., and Beltran G. "Monitoring Bighorn Sheep Habitat by Assessing Vegetation, Topography, and Soil Moisture," 15th Biennial Conference of Science & Management on the Colorado Plateau & Southwest Region - Animal Ecology and Nonnative Species, Arizona, USA, 2019

Kasraee N., Laczniak D., Rose M., and Rousseau N. "A Multi-Sensor Approach to Determine the Impacts of Human Activity and Natural Surface Deformation on the Black Rock Playa," NASA Jet Propulsion Laboratory Data Science Showcase, California, USA, 2019

[1, 2] **Kasraee N.**, Laczniak D., Rose M., and Rousseau N. "A Multi-Sensor Approach to Determine the Impacts of Human Activity and Natural Surface Deformation on the Black Rock Playa," Esri Federal GIS Conference, Washington D.C., USA, 2019 Announcement

Kasraee N., Au M., Higa E., and Lee B. "Improving Flood Extent Mapping Using NASA Earth Observations and UAVSAR within Southern California," American Meteorological Society (AMS) 99th Annual Meeting - 17th Symposium on the Coastal Environment, Phoenix, USA, 2019 Abstract

[1, 2] **Kasraee N.**, Au M., Higa E., and Lee B. "Improving Flood Extent Mapping Using NASA Earth Observations and UAVSAR within Southern California," Annual Earth Science Application Showcase (AESAS), Washington D.C., USA, 2018