



November 18, 2022

**LiDAR Technician (Archaeology)**

New Mexico Consortium  
Albuquerque, NM

We seek a creative technician with a background in archaeology to assist in integrating next-generation remoting sensing and LiDAR applications into cultural resource management on public lands. As a team of researchers and practitioners from the US Forest Service, US Fish and Wildlife Service, and the New Mexico Consortium, we are building new tools to assist heritage programs in archaeological reconnaissance, inventory, and management. The LiDAR Technician (Archaeology) will be a vital member of this collaborative team. Established in 2006, the New Mexico Consortium (NMC) partners with Los Alamos National Laboratory to develop, implement and continually improve models that encourage and support collaborative research across its partner institutions, including New Mexico universities. For more information, please visit <https://newmexicoconsortium.org/>.

**Job summary:**

The LiDAR Technician (Archaeology) will work as part of a team in developing new workflows for processing aerial LiDAR datasets for use in archaeological feature detection at local and regional scales. This work will be accomplished by conducting literature reviews on aerial LiDAR processing and feature extraction/detection, maintaining archaeological databases, archaeological data synthesis, and modifying/developing code in R and/or geospatial software (e.g., ArcGIS, QGIS). Additionally, the LiDAR Technician (Archaeology) will participate in field-based validation studies, including archeological site-visits, pedestrian survey, site mapping, etc., and assist in maintaining field data. In addition to these duties, the LiDAR Technician (Archaeology) will be encouraged to pursue new skills and/or training in LiDAR acquisition, processing, or applications in archaeology as they arise through other funded projects (e.g., terrestrial LiDAR). This is a full-time position with benefits. For more details, please see the full LiDAR Technician (Archaeology) job description (attached).

**Required qualifications:**

- Master's degree in Archaeology or a related field; Bachelor's degree and relevant experience will also be considered.
- Minimum 1 year of work experience in Cultural Resource Management or coursework in Cultural Resource Management.
- Experience using geospatial software (e.g., ArcGIS, QGIS).
- Experience coding in R.
- Willingness to learn the regional cultural history of project study areas.

**Salary:** Salary is commensurate with experience/qualifications; target salary is similar to the federal GS-9, step 1 pay scale for Albuquerque, NM.

**To apply:** Interested candidates should email a CV and a short cover letter (1 page) detailing their qualifications and interest for the position to Dr. Grant Snitker ([gsnitker@newmexicoconsortium.org](mailto:gsnitker@newmexicoconsortium.org)). Please include "LiDAR Tech Archaeology Position" in the email subject line. The position will remain open until filled; for best consideration, please apply by January 2, 2023.

New Mexico Consortium is an independent non-profit Equal Opportunity Employer, M/F/Vet/Dis, e-verify employer.



Rev. 070122

### Job Description

**Employee Name:** TBD

**Job Title:** LiDAR Technician (Archaeology)

**Position Type:** Regular

**Exemption Status:** exempt from the overtime provisions of the federal Fair Labor Standards Act

**NMC Supervisor (Name, Title):** Dr. Grant Snitker, Research Scientist and Director of Cultural Resource Sciences

**Job Location:** New Mexico Consortium, Albuquerque, NM

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**Essential Job Functions** (list basic job duties that are the reason the job position exists and that must be performed by the employee to keep the position: if you need extra space, use and attach a separate page):

LiDAR workflow development and analysis – 70%

- Conduct literature reviews on aerial LiDAR data collection, processing of 1st order derivatives (DEMs, DSMs, etc.), and LiDAR applications in archaeological feature detection/extraction.
- Develop, maintain, and synthesize geospatial databases of archaeological sites and other information provided by agency (US Forest Service) collaborators.
- Modify or develop code and models in R and/or geospatial software packages (e.g., ArcGIS, QGIS) as necessary in support aerial LiDAR processing and feature extraction/detection.

Fieldwork in support of research project – 20%

- Participate in fieldwork planning and logistics.
- Serve as a member of an archaeological field crew.
- Maintain field data and assist in tracking fieldwork progress, logistics, and supplies during the field season as needed.

Other work as assigned by supervisor – 10%

- Examples include learning new skills in LiDAR data processing, attending training events and conferences, contributing to peer-reviewed publications.

**Required Knowledge, Skills, and Abilities:**

- Manage and maintain large spatial and tabular databases as inputs and archives.
- Write code to process LiDAR point clouds into products for archaeological feature detection (DEMs, terrain parameters, etc.) at a local and regional scale.
- Assist in developing workflows for extracting/detecting archaeological features within aerial LiDAR datasets, including semi-supervised classification and/or machine-learning approaches.
- Serve as a field crew member in remote and physically demanding environments.
- Work as part of a collaborative team archaeologists, including those from academic and practitioner backgrounds.
- Participate in development of research products including peer-reviewed publications, datasets, websites, and reports.

**Required Qualifications** (education level, experience):

- Master's degree in Archaeology or a related field; Bachelor's degree and relevant experience will also be considered.
- Minimum 1 year of work experience in Cultural Resource Management or coursework in Cultural Resource Management.
- Proficiency in geospatial software (e.g., ArcGIS, QGIS).
- Experience coding in R.
- Willingness to learn the regional cultural history of study areas.

**Attendance Requirements:**

- Position is 40hrs/week in person on site.

**Expectations/Standards:**

- Work as part of a team of archaeological researchers and practitioners
- Report progress and status to supervisor weekly

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Employee signature

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Date

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Supervisor signature

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Date