

SEARCH FOR THE VICE PRESIDENT FOR RESEARCH



Message from the Hiring Officer



May 18, 2022

Dear Prospective Candidate,

I am pleased to announce the search for the Vice President for Research at New Mexico Institute of Mining and Technology. This is an exciting time of change and opportunity for our campus.

The NMT research mission will play an integral part in shaping our plans for the institution's present and future growth. We are currently redeveloping our strategic plan. This offers a unique opportunity for a dynamic, enthusiastic, and innovative individual to advance the research mission of the University by addressing four critical questions:

- How can NMT grow and diversify externally funded research?
- How can NMT grow transdisciplinary research within the University and increase collaborations with other universities, the national labs in New Mexico and private enterprise?
- How can the University better support the research and scholarly work of faculty to maximize their potential for success?
- How can NMT support historically underrepresented populations and facilitate broadening their participation in STEM fields?

I look forward to working with the search committee and its chair Dr. Aly El-Osery to identify a pool of excellent candidates and ultimately select a leader to head the research mission at NMT.

Thank you for considering a future at New Mexico Tech.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Wells".

Stephen G. Wells, PhD
President

Search Committee



Search Committee Chair

Aly El-Osery, PhD; Dean of Graduate Studies & Professor of Electrical Engineering

Search Coordinator

Vanessa Grain; Senior Chief Executive Assistant to the President

Committee Contact Information

Mailing Address:

801 Leroy Place
Socorro, NM 87801

Phone: 575-835-5600

Email: vanessa.grain@nmt.edu

Committee Members

Gayle Bailey; Director, Sponsored Projects

Lorie Liebrock, PhD; Director, Cybersecurity Center of Excellence and Professor of Computer Science

Mendi Marquez; Doctoral Student Biotechnology/Chemical Engineering

Michael Smith; Director, Institute for Complex Additive Systems Analysis

Myrriah Tomar, PhD; Executive Director, Office of Innovation & Commercialization

Pedram Roghanchi, PhD; Assistant Professor of Mineral Engineering

Richard Sonnenfeld, PhD; Langmuir Laboratory Chairman, Professor of Physics

Job Profile

Title: Vice President for Research

Location: New Mexico Institute of Mining and Technology

Area: Office of the Vice President for Research

City/State: Socorro, New Mexico

Overview

New Mexico Institute of Mining and Technology (NMT), invites nominations and applications for the position of Vice President for Research (VPR).

This position is an excellent opportunity for a visionary leader to support and expand the scientific and creative potential of a diverse and highly motivated academic faculty as well as research scientists and engineers. The VPR plays a vital role in capitalizing on the intellectual wealth and economic impact of the NMT research enterprise, using it as a driver for the overall enhancement of the institution, the state, and the nation. The VPR is the chief promoter of creativity and innovation and facilitator of the University's research mission. In addition, the VPR is responsible for assuring the effective administration of research at all stages, ensuring its integrity and compliance with international standards of excellence.

The Vice President for Research (VPR) oversees and enables a current external funding portfolio of approximately \$550M and annual research expenditures exceeding \$50M. The VPR reports directly to the University President and is the most senior direct manager of several science and engineering research centers, some of which perform classified projects. As a member of NMT senior leadership, the VPR guides institutional strategic planning for research and sponsored program development. The VPR is responsible for connecting faculty, staff and external entities to enable transdisciplinary research opportunities and campus-wide initiatives to enhance one of NMT's roles as a driver of research and development in the State of New Mexico and globally.

The Office of the Vice President for Research includes the following key positions: Associate Vice President for Research, Director of Finance and Business Operations, Manager of Research Development, and an Administrative Assistant.

Duties and Responsibilities

LEADERSHIP AND INNOVATION

- Provides a vision for developing and expanding NMT's research enterprise across the spectrum from individual faculty and staff projects to large scale, robust, transdisciplinary initiatives.
- Engages in effective and transparent decision-making in consultation with key stakeholders.
- Provides leadership in envisioning, developing, and maintaining transdisciplinary research centers.
- Leads efforts to effectively identify and organize funding for campus-wide research initiatives.
- Engages with faculty to help connect them with funding and research opportunities.
- Promotes the social importance and creative value of university-wide research to the broader community.
- Cultivates partnerships and collaborations across the state, region, nation, and world with labs, industry, government and other academic institutions.
- Develops a culture of broadening participation of underrepresented populations in Science, Technology, Engineering, Entrepreneurship, and Mathematics (STE²M) research.
- Collaboratively plans for the construction and renovation of research space and infrastructure/instrumentation to support growth in emerging research areas.
- Represents the NMT community at internal and external meetings and boards involving research activities.

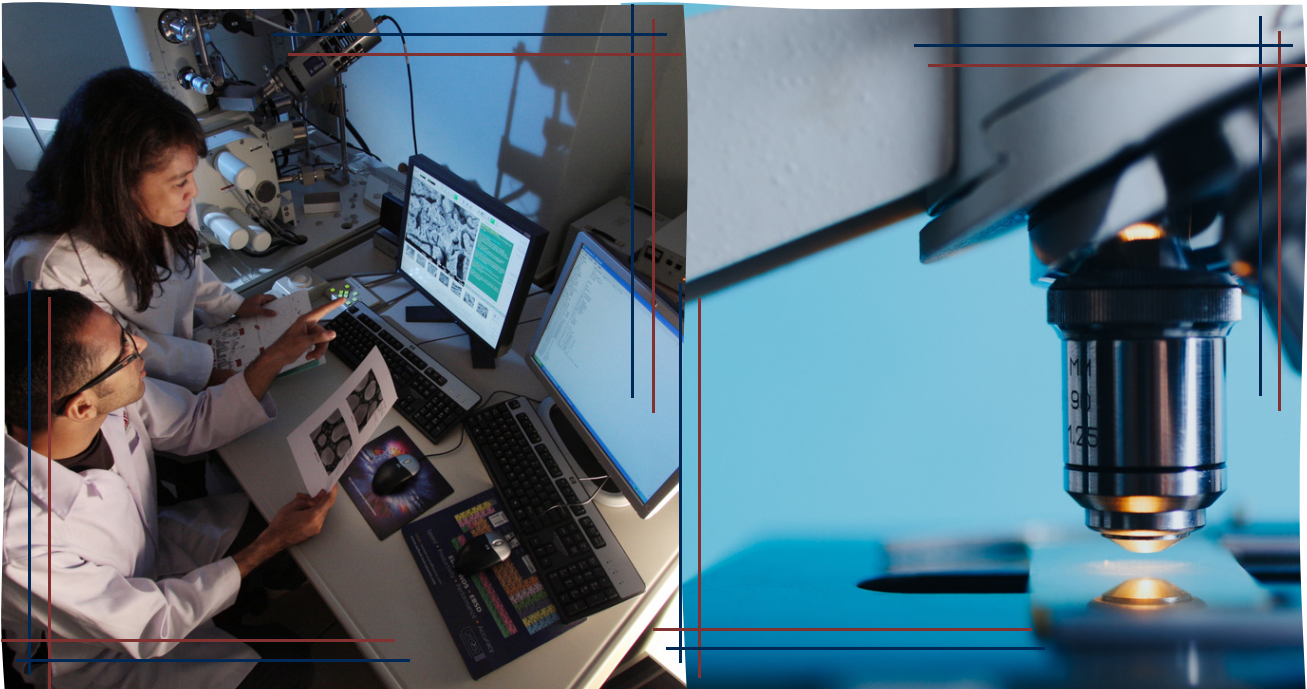
ADMINISTRATION

- Develops a sustainable financial model that includes a balanced budget and appropriate resources to facilitate and incentivize research activity.
- Manages the personnel and financial resources of the Office of the Vice President for Research in support of the research enterprise.
- Negotiates competitive start-up packages for incoming faculty.
- Maintains the integrity of the research enterprise by ensuring compliance with university, state and federal policies and regulations.
- Working with NMT Property Office to maintain an inventory of the university's major research instrumentation/equipment.
- Establishes a program for maintaining the instrumentation/equipment, and assesses the future instrumentation needs to maintain the university research leadership.

...Duties and Responsibilities

COLLABORATION (INTERNALLY AND EXTERNALLY)

- Provides leadership and funding for the growth of transdisciplinary research efforts in conjunction with Academic departments and research centers.
- Maintains close communication with faculty and research centers regarding research trends, opportunities, concerns and issues.
- Works closely with NMT's Office of Innovation Commercialization to foster and leverage research in support of entrepreneurship, innovation, and economic development throughout the NMT campus via the university's STE²M initiative.
- Works closely with NMT Research Park Corporation, the university's commercialization arm, to promote technology transfer and provide incentives for research.
- Works closely with the Office of Graduate Studies to support the research experience and training of graduate students.
- Works closely with the Office of Academic Affairs to evaluate hiring, tenure, and promotion decisions for faculty.
- Works closely with Sponsored Projects Administration to promote and ensure compliance with University, State, and Federal regulations governing all sponsored projects and provides collaborative leadership to support all facets of the research process.
- Cultivates close relationships and partnerships with industry, national laboratories and other research institutions.
- Through service on consortiums and boards, collaborates in above-mentioned relationships and partnerships to develop and support statewide and national research initiatives.



Position Qualifications

Required Qualifications:

- Ph.D. or other doctorate level equivalent from an accredited institution.
- Expertise in one or more areas of science, technology, engineering, or mathematics research and associated areas.
- Has achieved academic rank of Full Professor or higher, or title equivalent to senior research manager in industry, non-profit, or government.
- Record of scholarly accomplishment to warrant tenure at the rank of Professor in an academic department at NMT.
- Has demonstrated the ability to obtain funding for and lead major research initiatives/groups with strong collaboration.
- Five years or more of senior management/administrative experience in academia, industry, non-profit, or government.
- Demonstrated ability to advance an organization with a clear vision.
- Demonstrated ability to make difficult decisions transparently and collaboratively.
- Knowledge of and demonstrated experience in budgeting, financial controls and fiscal accountability.
- Commitment to the importance of research compliance and institutional adherence to rules, regulations, policies, and standards of conduct that govern research.
- Must be a US Citizen and eligible to obtain up to a TS/SCI Security Clearance.

Desired Qualifications:

- Delivering an inspiring and actionable vision for the role of the Vice President for Research at NMT.
- Demonstrated excellence in leading or participating in a complex organization with a broad experience across disciplines.
- Experience in cultivating diversity across an organization.
- Experience in building collaborations among disciplines and organizations.
- Experience in institutional policy setting and decision making.
- Leadership experience in relations with federal and state governments.
- Demonstrated record of working positively and enthusiastically with a wide range of constituencies.

Application Requirements

- Cover Letter outlining interest in the position, relevant experience, and a statement articulating the candidate's vision for the role of the Vice President for Research at NMT; Curriculum Vitae; Brief biography, not to exceed one page; Names, with brief biography, and contact information for five (5) references, at least one of whom should be from the candidate's current institution or organization.
- This is a full-time executive position with a preferred starting date of January 3, 2023.
- Applications will be received until the position is filled.
- For full consideration, a complete application packet should be received by November 7, 2022.

Please email complete application packet (one single PDF attachment) to:

nmtjobapps@npe.nmt.edu
Cc: vanessa.grain@nmt.edu

By mail, received by November 7, 2022
(for full consideration), to:

***New Mexico Tech
Human Resources
801 Leroy Place
Brown Hall Box 000
Socorro, NM 87801***

**“New Mexico Tech
is an Equal
Opportunity/Affirmative
Action Employer and
Educator”**

NMT by the Numbers

2021-2022 Academic Year



\$98 Million
in Award Funding



160
Awards



366
Proposals



4
NSF Career
Awards



120
Tenure-Track
Faculty



Over
\$50 Million
in Award Expenditures



1200
Undergraduates

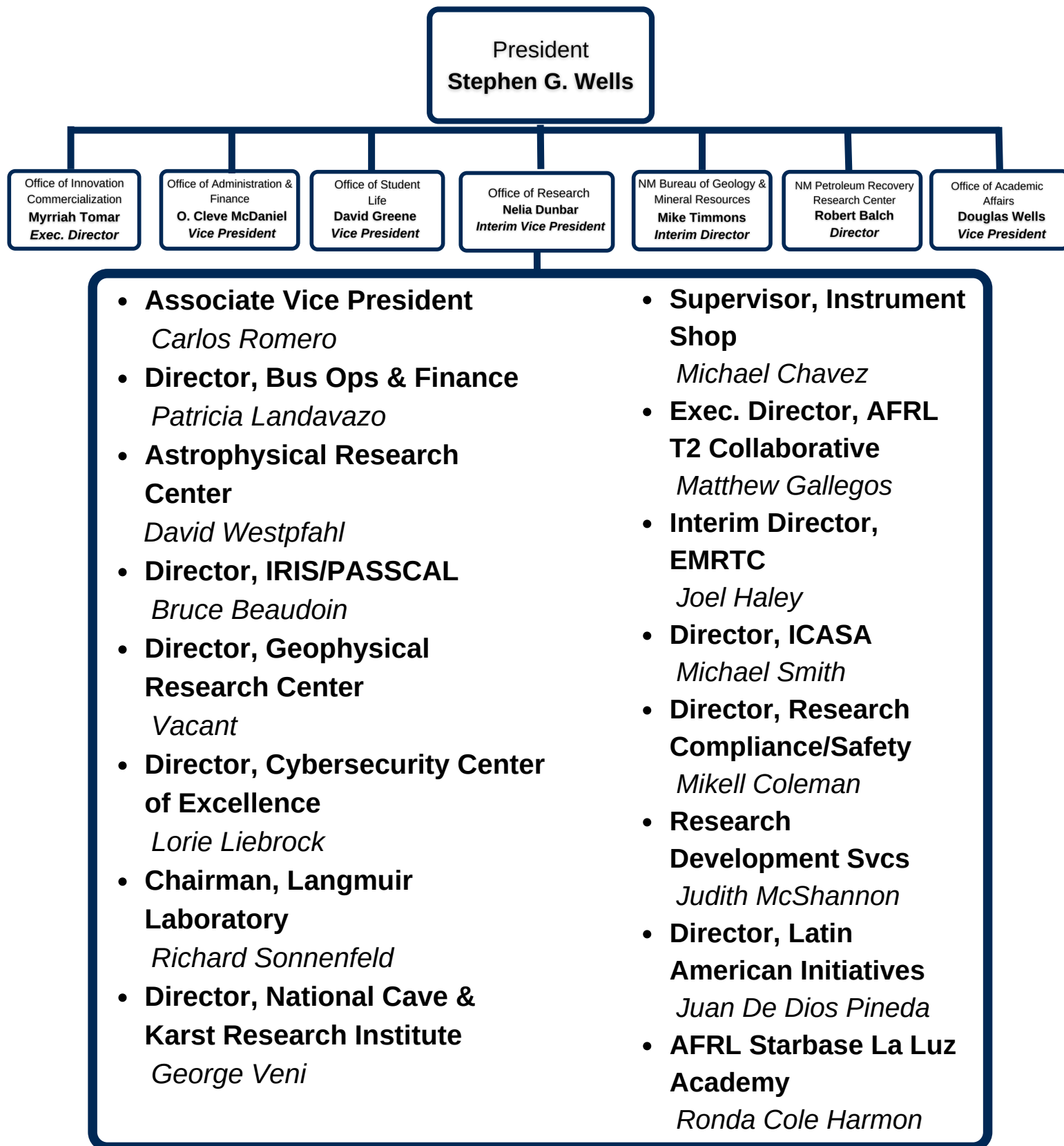


400
Graduate Students



\$3.9 Million
in Student Salary
Expenditures

Office of Research Organizational Chart



NMT Research Divisions

Energetic Materials

Research & Testing Center

In existence for more than 70 years, the Energetic Materials Research and Testing Center (EMRTC) is the largest of the research divisions at New Mexico Tech.

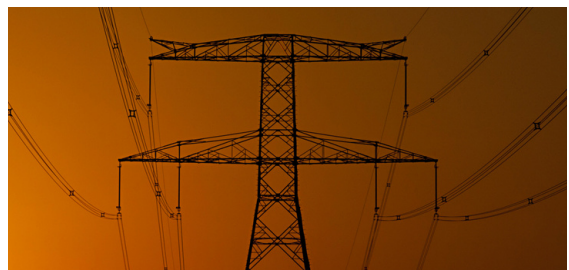
EMRTC conducts research on the performance and safety of energetic materials and explosives for the U.S. Government, friendly foreign governments, and academic and commercial entities at its 40-square mile field test laboratory. This complex includes more than 30 separate test sites, gun ranges, and state-of-the-art research laboratories. EMRTC also develops tools to analyze material interactions by using computer codes designed to simulate detonation, fragmentation, and impact.



Institute for Complex Additive Systems Analysis

The Institute for Complex Additive Systems Analysis (ICASA) is a research division of NMT. ICASA's mission is to contribute innovative and relevant solutions to national security and critical infrastructure protection problems. This is performed through examination of the control plane of the system — the mechanisms that enable it to dynamically change and respond to its environment.

NMT has been consistently recognized by the National Security Agency and Department of Homeland Security as a Center of Academic Excellence in Information Assurance Education since 2001 and a Center of Academic Excellence in Information Assurance Research since 2009. As an academic research institute, ICASA is committed to fostering student excellence. Having employed over 150 student interns, ICASA provides opportunities for the development and refinement of analytical skills against real-world problems.



NMT Research Divisions

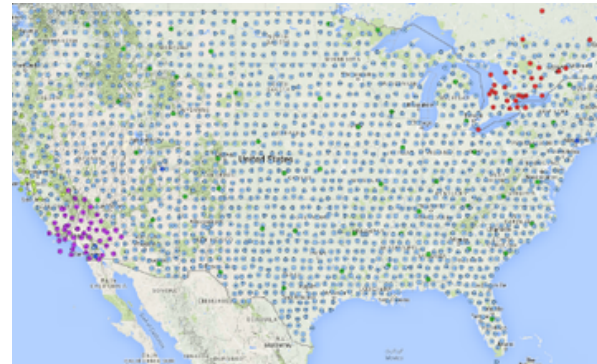
New Mexico Cybersecurity Center of Excellence

The New Mexico Cybersecurity Center of Excellence (NMCCoE) is leading the CyberReadyNM program and working with stakeholders across the state to make New Mexico a leader in cybersecurity research, economic development, education, and outreach. The NMCCoE runs research programs, academic programs, outreach programs, and works with entrepreneurs to grow cybersecurity companies in New Mexico. Research includes projects such as at the Open Source Intelligence (OSInt) focus, where data is collected from open sources and analyzed to improve understanding of cyber events. Working with the New Mexico Economic Development Department and the Department of Defense, NMCCoE is providing training and support for Cybersecurity Maturity Model Certification to New Mexico photonics companies. NMCCoE runs graduate academic programs (Master of Science, Professional Master, and Doctoral) in Transdisciplinary Cybersecurity including a core curriculum with Foundations of Cybersecurity, Psychology of Cybersecurity, Cybersecurity Data Science, Cybersecurity Ethics and Law, Cybersecurity Risk Analysis and Management, and Cybersecurity Policy. Outreach programs provide cyber hygiene awareness events for K-20, industry, and community. Across all programs, the NMCCoE typically employs approximately 40 students.



IRIS PASSCAL Center

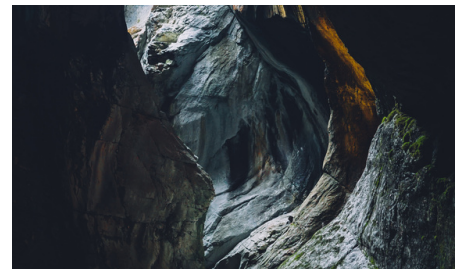
The Incorporated Research Institutions for Seismology (IRIS) Consortium's Portable Array Seismic Studies of the Continental Lithosphere (PASSCAL) Instrument Center is located in New Mexico Tech's Research Park. The Center is primarily supported by the National Science Foundation (NSF) and U.S. Department of Energy, and is operated by Tech professional staff in coordination with the Department of Earth & Environmental Science Geophysics Program and the Geophysical Research Center.



National Cave and Karst

Research Institute

The National Cave and Karst Research Institute (NCKRI) facilitates and conducts programs in research, education, data management, and stewardship in all fields of cave and karst science. NCKRI promotes and performs projects of national and international application through dedicated staff and partners, including with programs and departments at NMT. Research projects are diverse, with recent studies focused on geophysical characterization, sinkhole collapse hazard assessment and prevention, geomicrobiological characterization, and hydrogeological evaluations. NCKRI's projects and interests range quite literally from the inner space to outer space. NCKRI scientists also study cave microbes for industrial and medical applications, and work with NASA to better understand where life might be found on other planets.



NMT Research Divisions

Langmuir Laboratory for Atmospheric Research

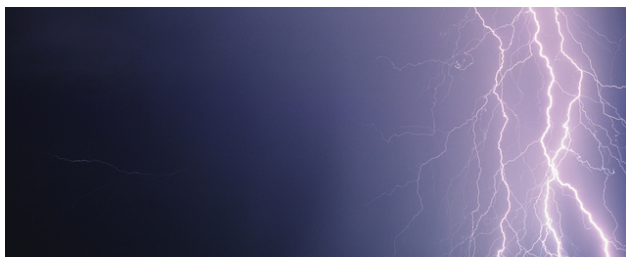
Langmuir Laboratory, built by New Mexico Tech in 1963, is located at an elevation of 3,240 m (10,630 ft) in the Magdalena Mountains, 27 km southwest of the main campus. The laboratory was named in honor of Dr. Irving Langmuir, Nobel Prize winner, who participated in numerous experiments at Tech related to cloud physics after the discovery of cloud seeding in 1946.

Langmuir Laboratory operates one of only four lightning triggering facilities in the world. Triggered lightning is used to study basic lightning physics, as well as for engineering and testing purposes. The facility also has a restricted airspace (R-5113) that is dedicated for the laboratory's use in the summer months. The airspace allows us to fly balloons, aircraft, rockets and UAVs up to 45,000 feet altitude while maintaining safe separation from other air traffic. The Langmuir Research Site consists of 33,000 acres of Cibola National Forest land which surrounds Langmuir Laboratory.



Geophysical Research Center

The state-supported Geophysical Research Center (GRC) supports research in atmospheric physics and chemistry, air quality, seismology, and groundwater hydrology. The Langmuir Laboratory for Atmospheric Research, located in the nearby Magdalena Mountains, is an internationally recognized facility for research in lightning, cloud physics, and water chemistry, and is part of the GRC. Through the GRC, several faculty, graduate students, and undergraduate students are supported in their research.



Other NMT-Affiliated Research Divisions

Petroleum Recovery

Research Center (PRRC)

The Petroleum Recovery Research Center (PRRC), the only research center of its kind in New Mexico, is a world-class scientific research organization dedicated to solving problems related to the oil and gas industry. The PRRC's mission is to develop, through theoretical and practical research, improved oil recovery methods to increase oil and natural gas recovery from New Mexico's and the nation's oil and gas reservoirs and to transfer new technology to the industry and to local independents. Interaction between the educational institution and the PRRC's research staff is extensive. New Mexico Tech offers the only petroleum and natural gas engineering degree program in the state, and students have ample opportunity to participate in ongoing front-line research at the PRRC while pursuing their academic training.

The PRRC employs 20 full-time research and professional personnel, provides research assistantship support to an average of 25 graduate students year round, and employs an average of 22 undergraduate students throughout the academic year. The center's daily operations are conducted at the John M. and Esther L. Kelly Petroleum Building which features general office space, 20 laboratories (approximately 10,000 square feet), specially designed storage areas, a core-cutting and welding facility, machine and woodworking shops, a reports and publications office, and a large seminar room.

Magdalena Ridge Observatory (MRO)

The Magdalena Ridge Observatory (MRO) is a world-class, state-of-the-art astronomical research facility consisting of two projects, the fast-tracking 2.4-meter Telescope and the multi-telescope Interferometer (MROI). Located at an elevation of almost 10,640 feet in the Magdalena Mountains of the Cibola National Forest, and just a one hour drive from campus, the

MRO is the fourth highest observatory in the world. The operational goals of the Observatories include conducting classical astronomical research, contributing to addressing national security concerns (space surveillance), and supporting and enhancing education and public outreach. The Magdalena Ridge Observatory Interferometer (MROI) is currently in the construction and development stages. The MROI team has finished most of the design work and is currently building all the major subsystems. The MROI design has been optimized to maximize the throughput and quality of light received within the beam combining laboratory. This will allow the MROI to observe targets more than 40 times fainter than has been possible with similar facilities. Using interferometry, the same technique used at the Very Large Array (VLA) radio telescope to link 27 separate radio receivers to form one gigantic instrument, the MROI will link ten large optical and infrared telescopes to provide the resolving power of a single 347-meter telescope.



New Mexico Tech Seismological Observatory

The New Mexico Tech Seismological Observatory (NMTSO) is dedicated to the recording and study of earthquakes and other seismological phenomena throughout New Mexico and the southwestern United States. The network consists of 21 seismometers, located primarily around the Socorro Magma Body and in southeastern NM. Data are streamed continuously to the New Mexico Tech campus and are archived at the IRIS Data Management Center (<http://ds.iris.edu>).



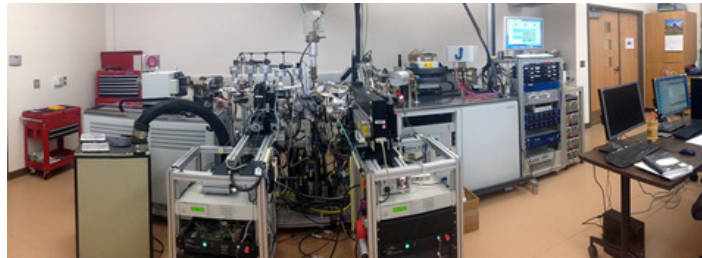
Playas Training and Research Center (PTRC)

The Playas Research and Training Center (PRTC), located in the far southwestern New Mexico, is a “real- world” research and training center focused on missions related to homeland protection, national security, and military readiness. PRTC is used for simulations of urban warfare, emergency preparedness drills, antiterrorism training, military operations training in urban terrain, hostage negotiation training, Small Unmanned Aircraft Systems (sUAS) applications, and other law enforcement and defense initiatives.



New Mexico Bureau of Geology and Mineral Resources

Since 1927, the New Mexico Bureau of Geology and Mineral Resources has been pursuing fundamental geoscience research on the geologic framework of our state. This work has included geologic mapping and assessments of the state's natural resources, as well as research on the diverse aspects of the state's geology. Throughout our history we have conducted statewide resource inventories and evaluations of oil and gas, coal, potash, and other minerals. We are also responsible for archiving and providing this information to other researchers, government agencies, industry educators, and the general public.



New Mexico Homeland Security Center

The New Mexico Center for Homeland Security (NMCHS) is focused on national and homeland security research, training, testing, and evaluation. NMCHS focuses on community resilience, that is enhancing the sustained ability of a community to utilize available resources to respond to, withstand, and recover from adverse situations.

Non-NMT Affiliated Research

National Radio Astronomy Observatory (NRAO)

NRAO is not a division of New Mexico Tech (it is funded by the National Science Foundation), but its office on the New Mexico Tech campus operates two major radio telescopes: the Karl G. Jansky Very Large Array (VLA) and Very Long Baseline Array (VLBA). The Very Large Array is made up of 27 radio antennas configured in a Y-shape 50-miles west of Socorro, N.M. Each radio antenna is 82-feet (25-meters) in diameter. The data from each antenna is combined to create the resolution of an antenna 22-miles in diameter. New Mexico Tech faculty and students conduct research using the NRAO facilities. Also, several NRAO scientists hold adjunct faculty positions with New Mexico Tech.



About New Mexico Tech

Our Mission

New Mexico Tech serves the state and beyond through education, research, and service, focused in science, technology, engineering, and mathematics. Involved faculty and research staff educate a diverse student body in rigorous and collaborative programs, preparing scientists and engineers for the future. Our innovative and interdisciplinary research expands the reach of humanity's knowledge and capabilities. Researchers, faculty, and students work together to solve real world problems. Our economic development and technology transfer benefit the economy of the state and create opportunities for success. We serve the public through applied research, professional development, and teacher education, benefitting the people of New Mexico.

Vision

New Mexico Tech aspires to be a preeminent community of scholars dedicated to research, education, and innovation – advancing science, technology, engineering, and mathematics – to meet the challenges of tomorrow. We will drive innovation and education through transdisciplinary collaborations.

Values

- Excellence
- Integrity
- Research
- Creativity
- Collegiality & Collaboration
- Innovation, Economic Prosperity & Technological Development
- Integrated Planning & Decision Making

About New Mexico Tech

Campus & History

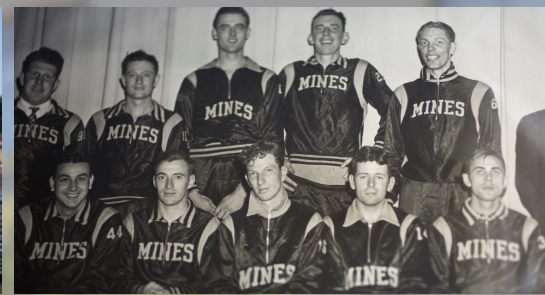
The New Mexico Institute of Mining and Technology, also known as New Mexico Tech (NMT) is an federally-designated Hispanic-Serving Institution and state university in Socorro in the Rio Grande Valley, New Mexico, founded in 1889 as the New Mexico School of Mines.

The New Mexico School of Mines (NMSM) proudly opened its doors on Sept. 5, 1893, with one building, two professors, and seven students. Courses offered included chemistry and metallurgy.

During 1930s, NMSM enrollment increased as more people sought a college education during the Depression. Graduating classes now numbered in the dozens, rather than the handfuls. Petroleum engineering was added to the curriculum and quickly acquired more students than mining engineering. The college's president, Edgar Wells, was instrumental in obtaining funds from federal programs such as the WPA to increase the number of buildings on campus. Several of the campus' classic mission-style buildings with red tiled roofs date from this period.

In another landmark, the School of Mines had its first woman graduate, Irene Ryan, in 1939. The college had never had a "men only" policy and never had a formal date when it "went coed," but in the world of the 1890s, women didn't attend a college that called itself a "school of mines." By the 1930s, things had changed, and by the end of the decade, mining companies were anxious to hire female (non-draftable) mining engineers.

[...Click to continue reading](#)



City of Socorro & Surrounding Areas

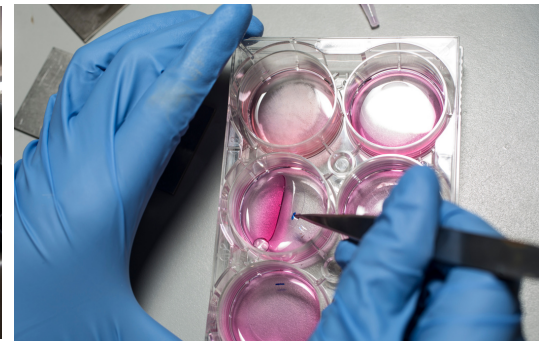
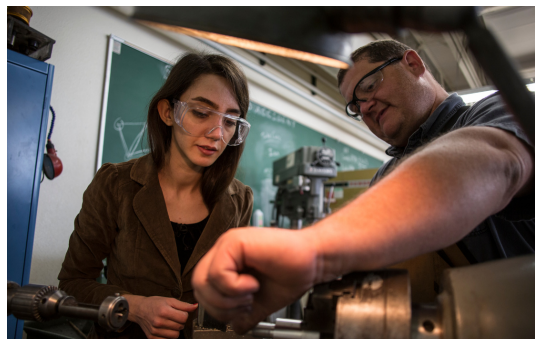


New Mexico Tech is located in **Socorro**, in the scenic Rio Grande River Valley of central New Mexico, 75 miles south of Albuquerque and its many attractions, and 139 miles south of Santa Fe. Nearby mountains and desert canyons provide opportunities for excellent hiking, climbing, horseback riding, target shooting, and mountain biking. The Bosque del Apache National Wildlife Refuge, located just south of Socorro along a major north-south flyway, offers some of the best birding in the USA.

NM Tech is a federally-designated Hispanic Serving Institution, and roughly 1/3 of our faculty and majors are female. The department and campus is small and collegial with roughly 1200 undergraduates and 400 graduate students in science and engineering. Socorro is a town of 9000 people and it provides a low cost of living (median home price < 50% of US average) and surprising amenities for a town of its size. NMT supports work-life balance via extended tenure clocks for growing families and on-campus childcare.

New Mexico is home to Sandia National Laboratories, Los Alamos National Laboratory, Kirtland Air Force Base, Holloman Air Force Base, and White Sands Missile Range.





NM COUNTIES & ATTRACTIONS

Los Alamos National Laboratory



Angel Fire Ski Resort



Rio Grande Gorge



Sandia National Laboratory



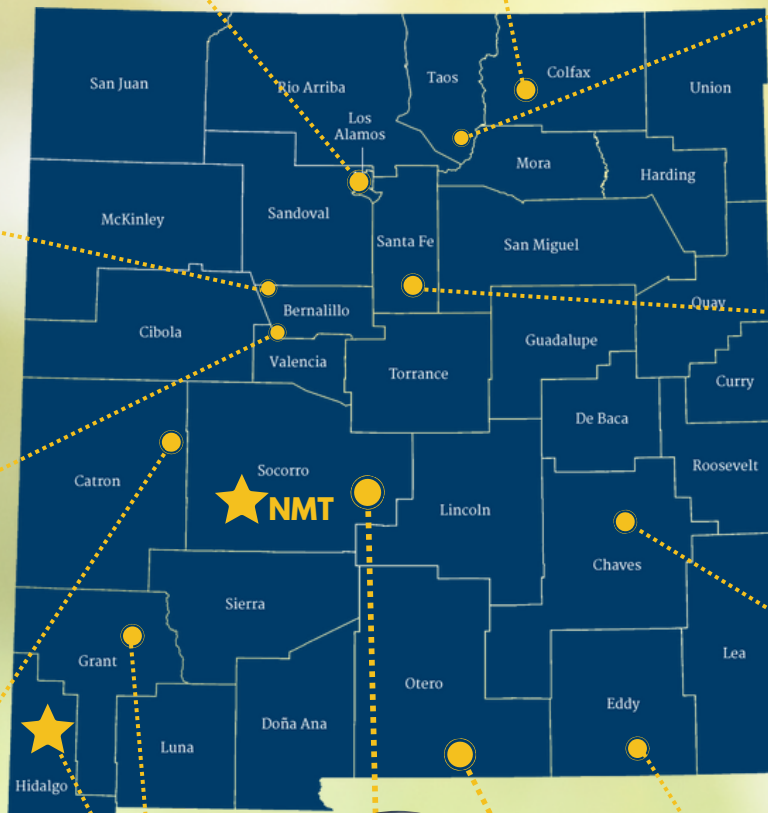
NM State Capitol



Albuquerque Balloon Fiesta



International UFO Museum



Playas Training & Research Center



Bosque del Apache Wildlife Refuge

Carlsbad Caverns National Park



Very Large Array



Gila Cliff Dwellings National Monument



White Sands National Monument

