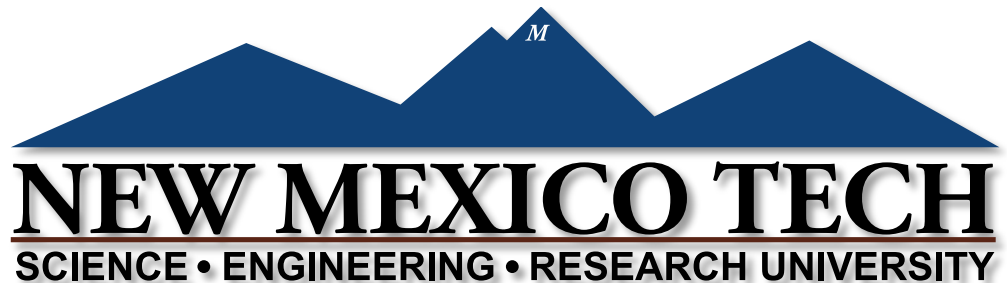


*New Mexico's Academic Starship*

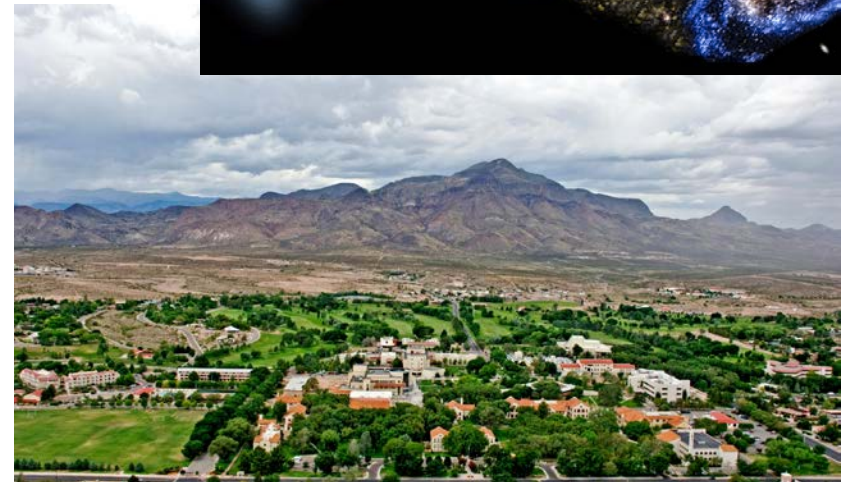
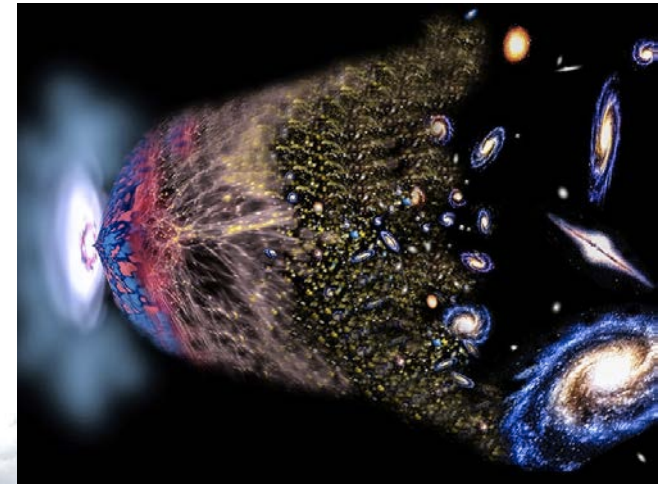
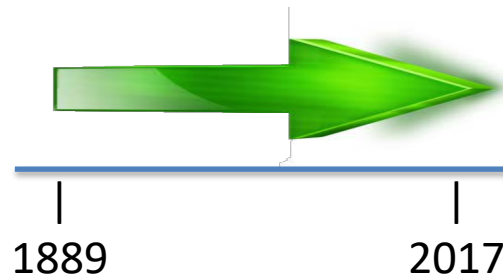
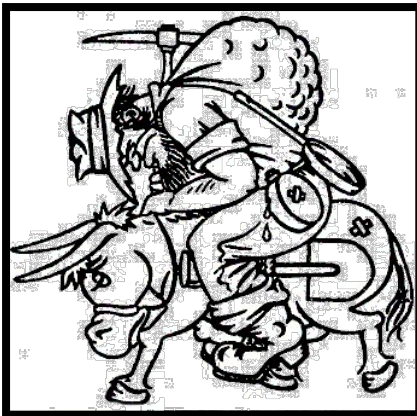
# **New Mexico Tech: Voyage of Inquiry, Inspiration and Innovation**

Presented by: Dr. Stephen G. Wells, President



# Voyage From Gold Dust to Star Dust

- Established in **1889** as the New Mexico School of Mines
- **Now** recognized as a premier educational institution in a number of areas of scientific study and research. New Mexico Tech awards degrees in 18 different academic and technical disciplines.







## Our Mission

*2015-16 Mechanical Engineering Rocket Launch  
Team at Spaceport America*

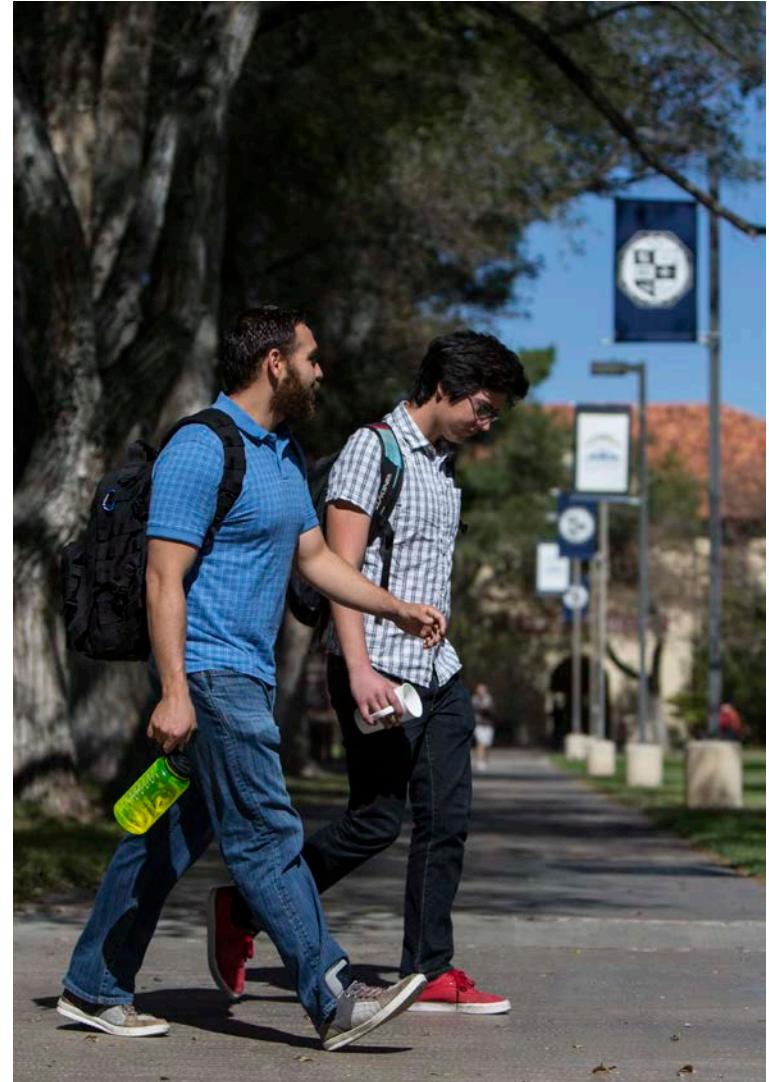
- Advancing science, technology, engineering, and mathematics – to meet the challenges of tomorrow through applied innovation, transdisciplinary education, and effective collaborations.

- Serving New Mexico and beyond through exceptional education, research, and service, focused in science, technology, engineering, and mathematics.
- Serving the public through applied research, professional development, and teacher education, benefitting the people of New Mexico.
- Serving New Mexico through innovation to commercialization, benefitting the economy of the state and creating opportunities for success.



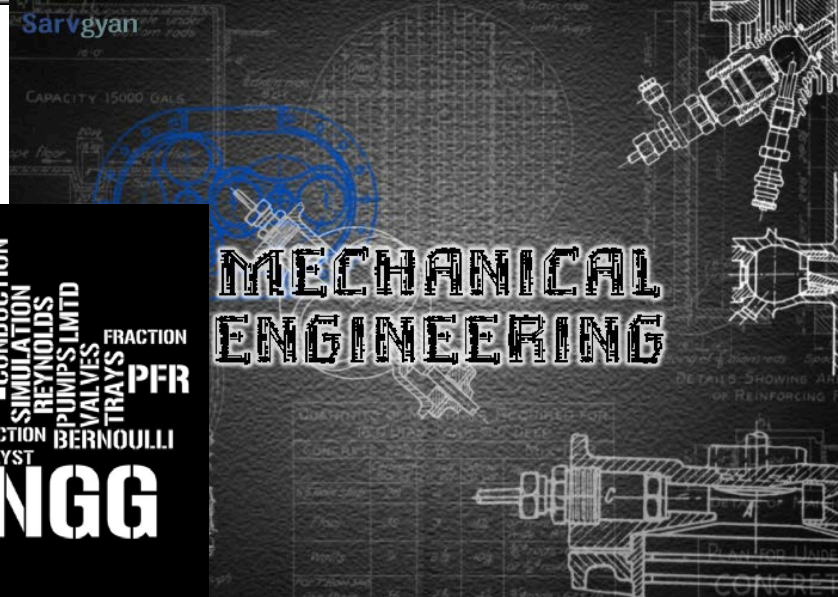
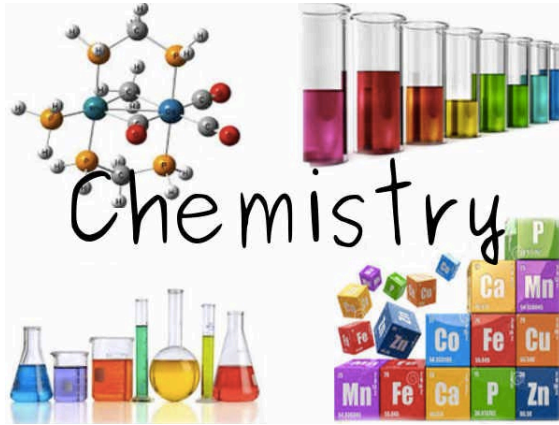
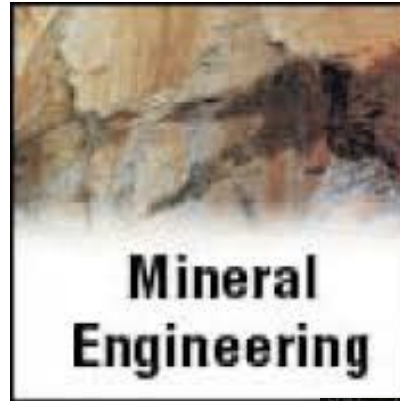
# New Mexico Tech: A Snapshot

- Total Revenue = \$144M
- 35.1% of total revenue from state government (among the lowest in NM)
- Tuition & fees = 8.2% of total revenue
- 888 employees (665 Full-time), including faculty, researchers, staff
- 211 faculty (full- & part-time)
- 19 academic programs
- \$53.1M in External Awards





# Inquiry-Based Education



# Techies: Our Students

Ranks **11<sup>th</sup>** Nationally among Top State Universities By Salary Potential



School Name	Starting Salary	Mid-Career Salary
New Mexico Tech	\$50,500	\$99,500

*As Determined By Payscale.com*

*Methodology: Annual pay for graduates with only bachelors degree.  
Typical starting graduates have 2 years of experience; mid-career have 15 years.*

- Students Enrolled = 1525 undergrad; 610 grad
- 56% White, 28% Hispanic, 3% American Native (undergrad)
- 64% majoring in Engineering
- 77% of entering freshman retained following fall semester
- Graduating class of 2017 = largest
  - 72% from New Mexico
  - Ave. GPA 3.3%;
  - 74% GPAs of 3.0 and greater
  - 39% received at least 1 F in courses at NMT
- 55% employed in New Mexico



# Where are our graduates?

- Employment at:
  - **Sandia National Laboratories** - Albuquerque, N.M.
  - **Los Alamos National Laboratory** - Los Alamos, N.M.
  - **Google** – Mountain View, Calif.
  - **Amazon** – Seattle, Wash.
  - **Microsoft** - Redmond, Wash.
  - **Freeport-McMoRan** - Phoenix, Ariz.
  - **Motorola** - Phoenix, Ariz.
  - **Intel** - Folsom, Calif.
  - **Lockheed-Martin** – Bethesda, Md.
  - **China Lake Naval Weapons Research** - China Lake, Calif.
  - **Hewlett-Packard** - Vancouver, Wash.
  - **Raytheon** - Denver, Colo.
  - **Boeing** - Seattle, Wash.
  - **Chevron** – San Ramon, Calif.

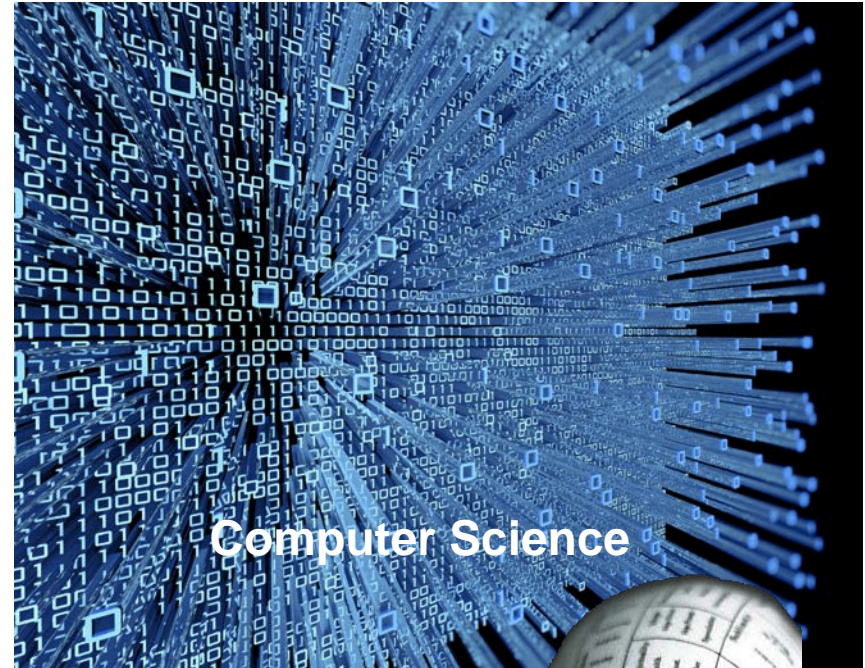






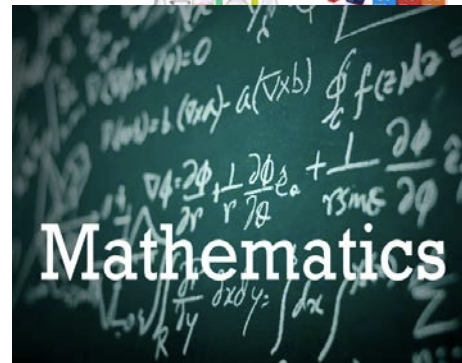
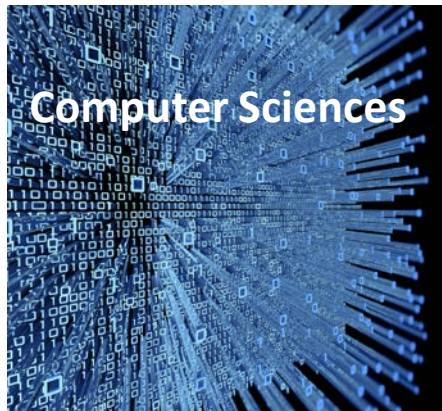
## 2016 BEST COMPUTER SCIENCE DEGREES

<u>Institution</u>	<u>Ranking</u>
Queens College	1
MIT	6
Harvard	11
Columbia	13
RPI	20
<b>NEW MEXICO TECH</b>	<b>22</b>
UC Irvine	23
UC Berkeley	26
Colorado School of Mines	31
Cal Tech	33
USC	36



## Pair of New Technology Doctoral Degree Programs Approved for New Mexico Tech

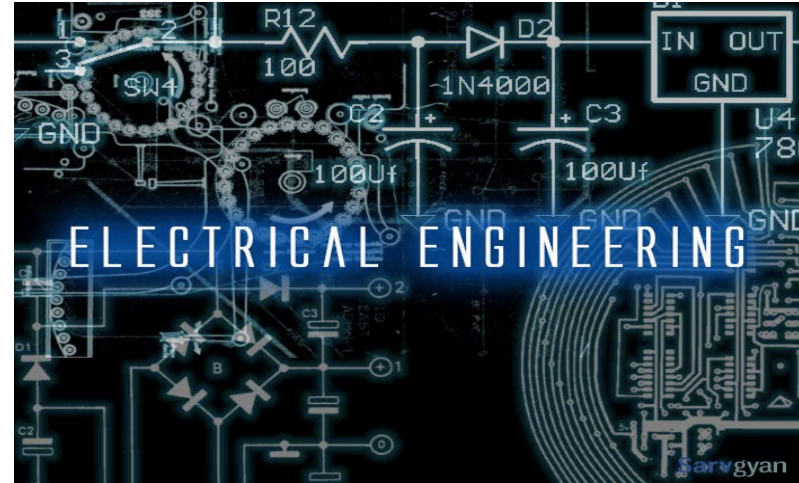
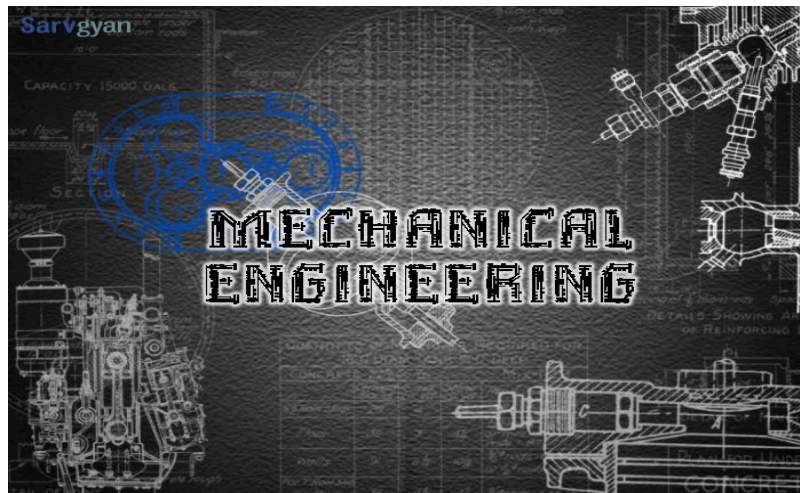
*Biotechnology, Mechanical Engineering Ph.D. programs*



**Danielle Turner, at 23, has earned her MS in Biology in five years and is on a three year track to earn the department's first Ph.D. in Biotechnology.**



- Transdisciplinary PhD Program
  - Intelligent Energetics



# The top 50 Universities that produce PhD students

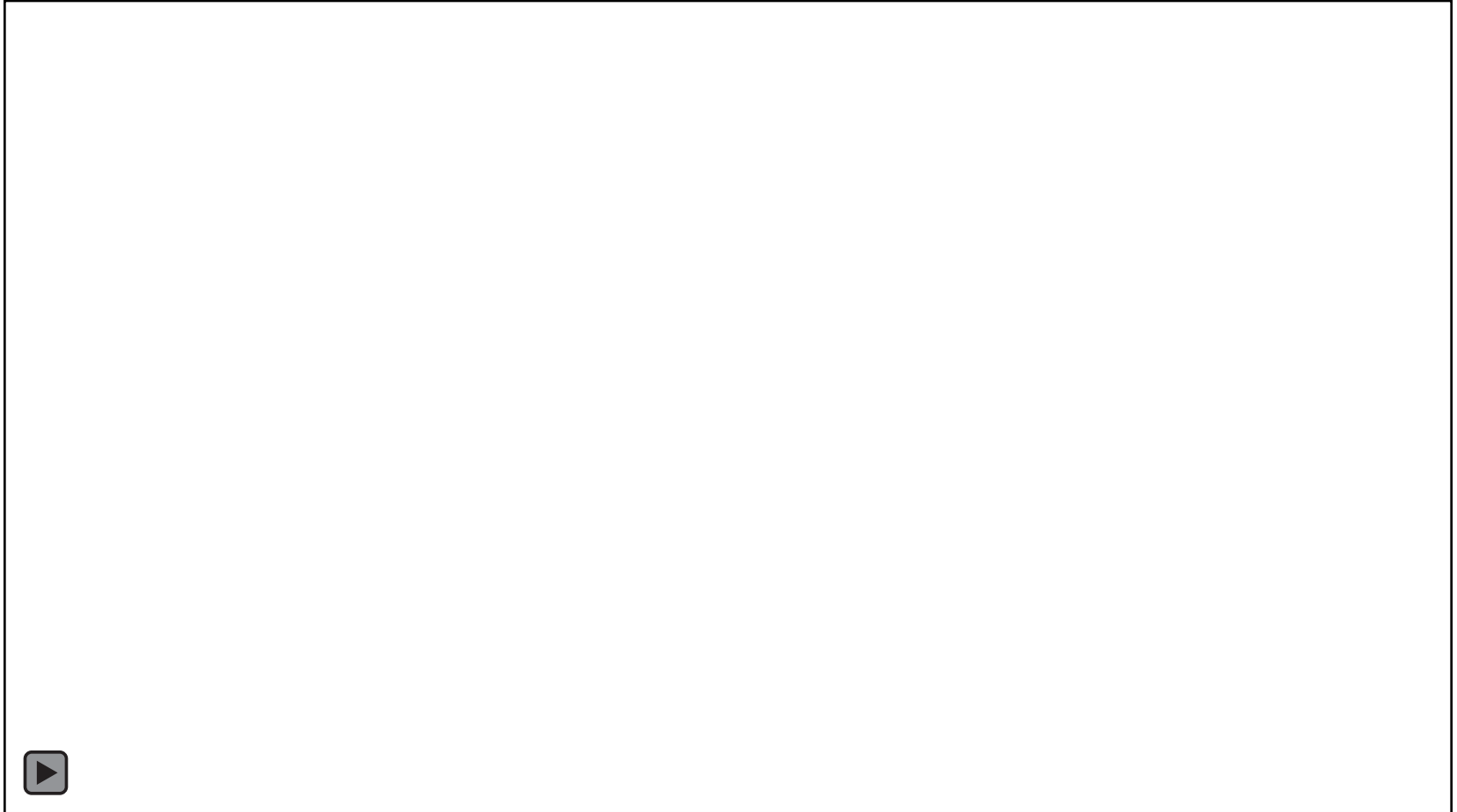
1. Cal Tech
2. Harvey Mudd College
3. MIT
4. Reed College
5. Swarthmore College
6. Carleton College
7. University of Chicago
8. Grinnell College
9. Rice University
10. Princeton University
11. Harvard University
12. Bryn Mawr College
13. Haverford College
14. Pomona College
15. **New Mexico Tech**
16. Williams College
17. Yale University
18. Oberlin College
19. Stanford University
20. Johns Hopkins
21. Kalamazoo College
22. Cornell University
23. Case Western Reserve
24. Washington College
25. Brown University
26. Wesleyan University
27. Carnegie Mellon
28. Macalester College
29. Amherst College
30. Duke University
31. Beloit College
32. Bowdoin College
33. Wellesley College
34. RPI
35. Earlham College
36. Franklin and Marshall
37. Lawrence University
38. University of Rochester
39. **Univ of Cal-Berkeley**
40. Dartmouth College
41. Occidental College
42. Hendrix College
43. Vassar College
44. Trinity University
45. **College of William and Mary**
46. St. John College
47. Bates College
48. Whitman College
49. Brandeis University
50. Hampshire College

**Blue = Public Universities**

**Black = Private**

# MythBusters at New Mexico Tech

## *Student Testimonials!*



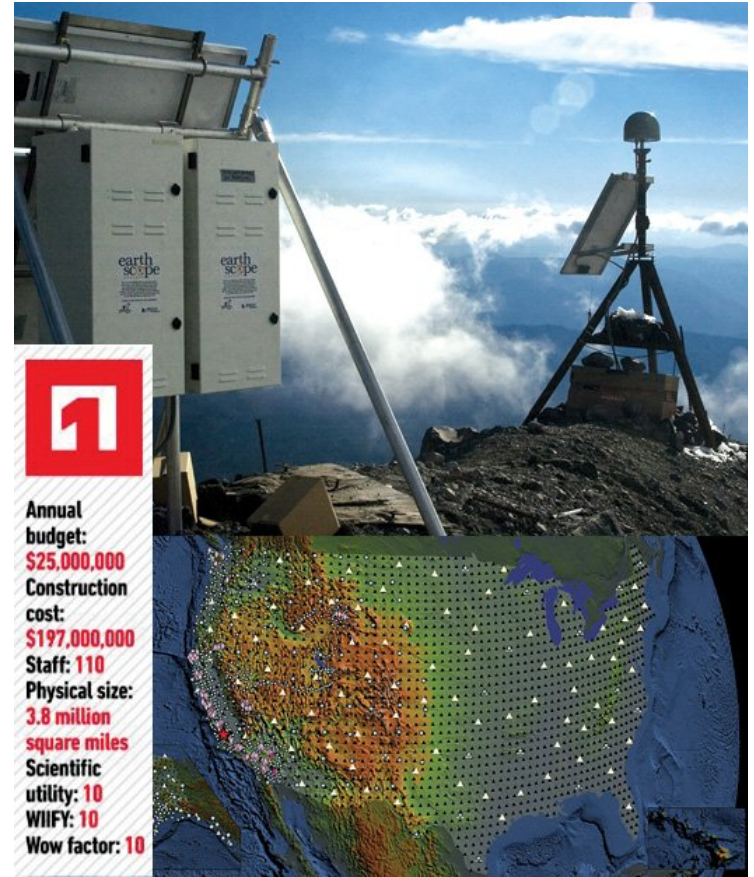


# Inspirational Science





Annual budget: **\$15,000,000**  
Construction cost: **\$300,000,000**  
Staff: **280**  
Physical size: **27 antennas on 39 miles of track**  
Scientific utility: **8**  
WIIFY: **3**  
Wow factor: **6**





Annual budget: **\$25,000,000**  
Construction cost: **\$197,000,000**  
Staff: **110**  
Physical size: **3.8 million square miles**  
Scientific utility: **10**  
WIIFY: **10**  
Wow factor: **10**



# Energetic Materials Research and Testing Center

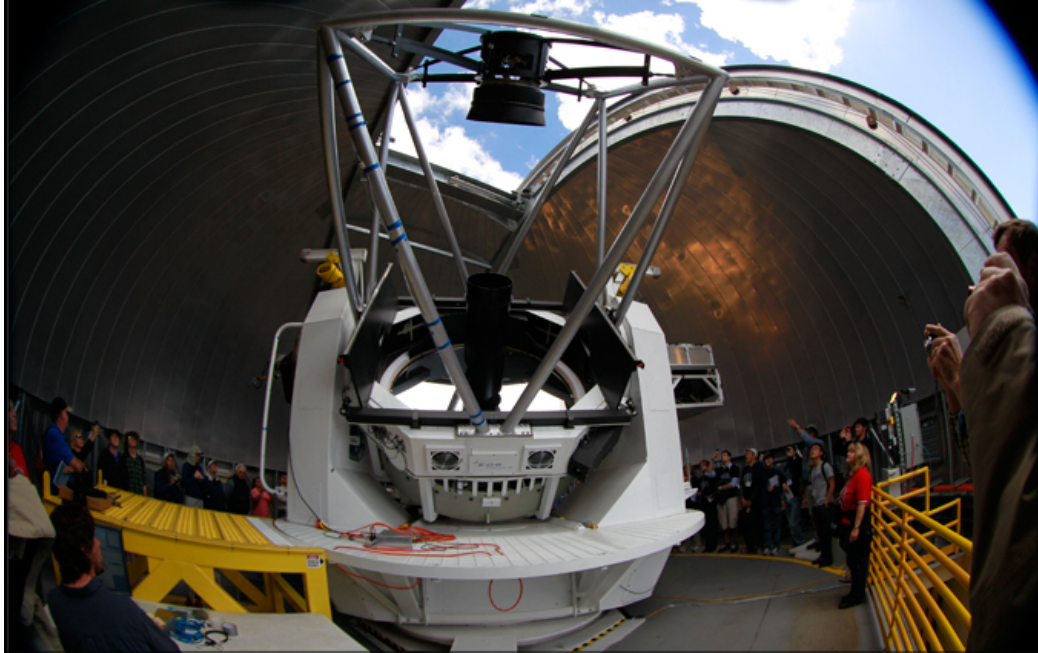
The **Energetic Materials Research and Testing Center (EMRTC)** and its **First Responder Program** is working on the cutting edge of technology to help keep our country safe

**\$500 million**

**In research and testing to New Mexico over the past 10 years**



# Inspirational Science: Magdalena Ridge Observatory



The MRO consists of two major facilities:

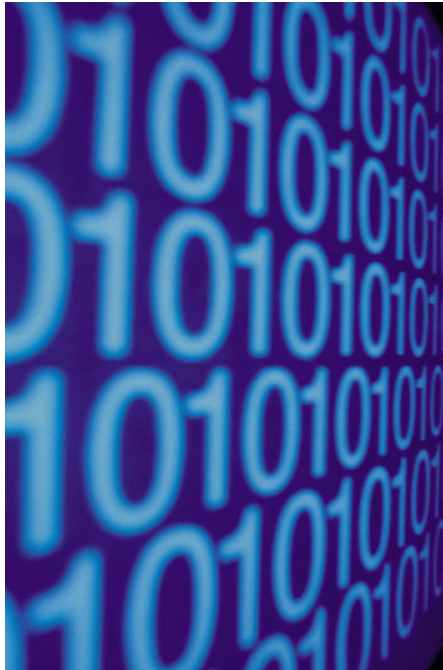
- A 2.4-meter fast-tracking telescope (2.4-meter telescope)
- The Magdalena Ridge Observatory Interferometer (MROI), a ten-element optical/infrared interferometer.

The MRO works with the Air Force Research Laboratory to protect our country with its ability to identify satellites, space vehicles and terrestrial military targets.





# “Protecting our nation’s infrastructure”

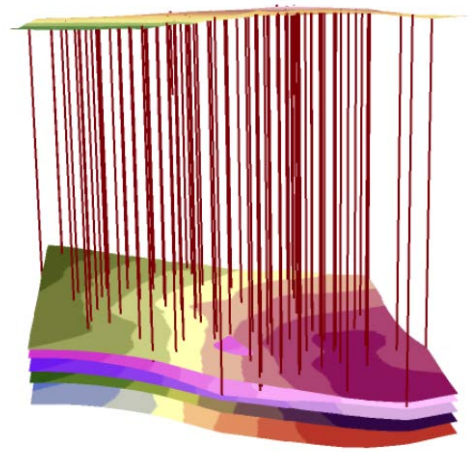
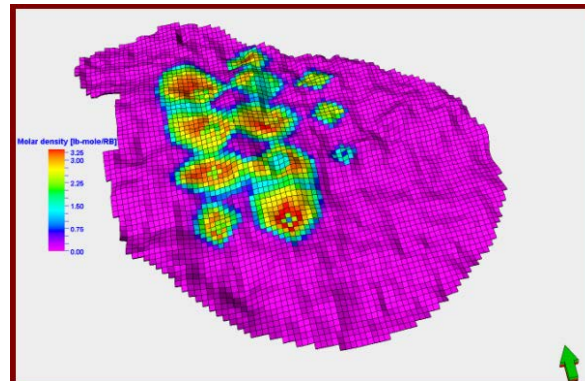


## Innovation thru management, computer science and engineering

While it’s known as New Mexico Tech’s Cyber Security research division, but ICASA hangs it’s hat on taking enormous amounts of complex data, organizing it and making sense of it for its customers.

- *Designated by the National Security Agency (NSA) and Department of Homeland Security (DHS) as a Center of Academic Excellence in Information Assurance Education*
- *Designated by the National Security Agency (NSA) and Department of Homeland Security (DHS) as a Center of Excellence in Information Assurance Research*

- Established in 1977, PRRC is research arm of the oil and natural gas industry in New Mexico.
- One of the nation's leading petroleum research organizations.

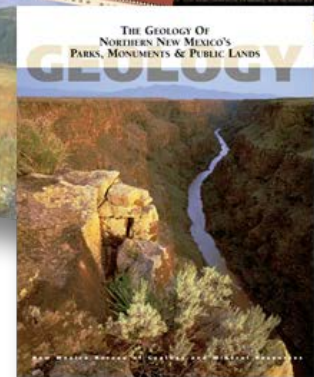
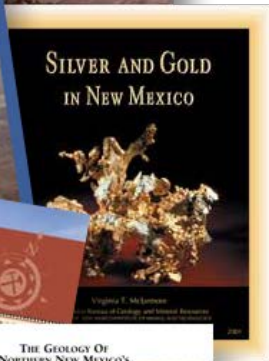
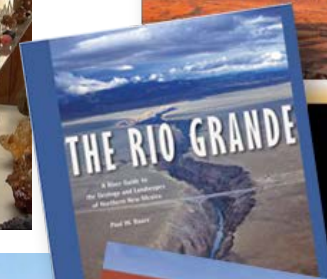
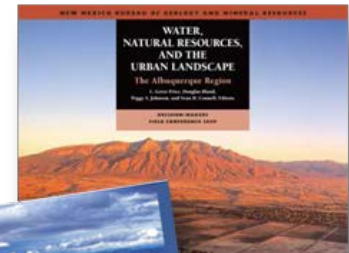


*Complex reservoir problems require complex software solutions. Left, a simulation of CO2 migration in an oil reservoir undergoing CO2 EOR, right, well penetrations into a stacked pay zone in southeastern New Mexico.*

**We are a research and service division of New Mexico Tech (under Higher Education). We serve as the geological survey for the state.**

## **Divisions of our agency:**

- Energy
  - Oil/Gas
  - Geothermal
- Mineral/Economic
- Laboratories
- Outreach and education
  - Publications
  - Archives and collections
- Geologic mapping & hazards
- Hydrogeology  
(Aquifer Mapping Program)





## How have we helped New Mexico?

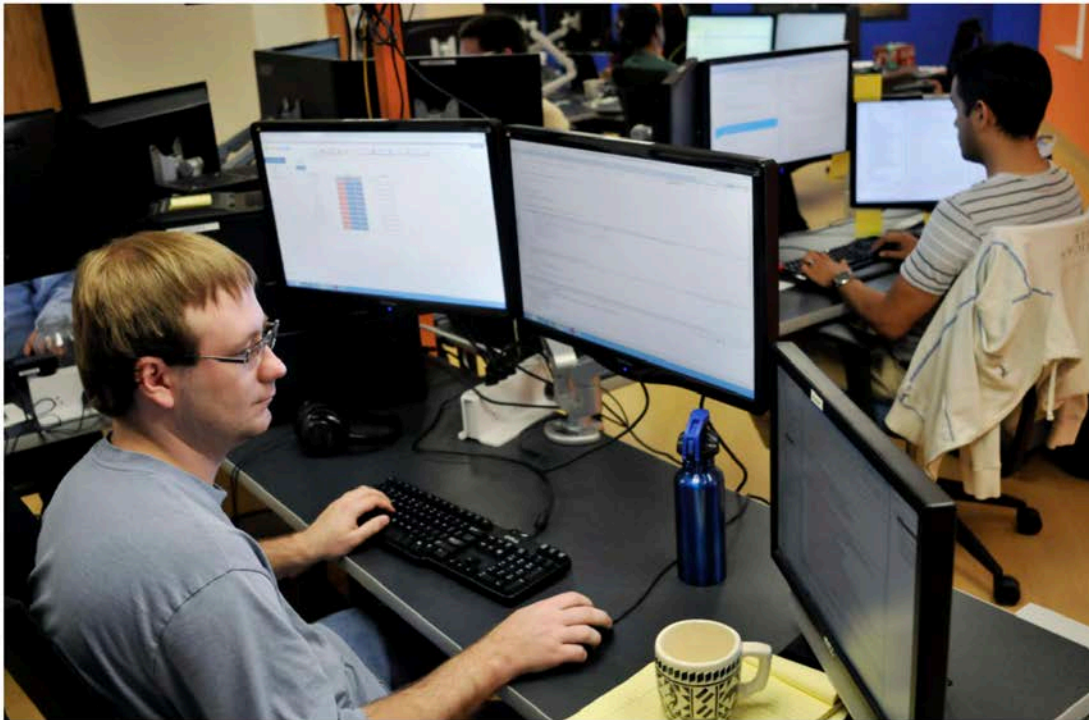
- We're actively working towards building a statewide water monitoring network
- We've improved understanding of New Mexico's groundwater resources
- We've studied petroleum and water reserves in the San Juan Basin in order to support future development
- We've investigated helium-rich gasses around New Mexico
- We've examined rare earth element resources in the Caballo Mountains and Jicarilla Apache areas
- We've developed a processing method for potash that dramatically improved potash recovery during the mining process



## New Mexico Tech research impacts New Mexico's economy

### RiskSense garners \$7M in venture investment

By ABQJournal News Staff  
Wednesday, August 3rd, 2016 at 8:41am



Chris Reisinger, left, is shown working in 2013 as a software developer at CAaNES, the company that has since changed its name to RiskSense to better reflect its premier product, the RiskSense cybersecurity platform. (JOURNAL FILE)

**RiskSense**, which launched in 2006 based on cybersecurity technology and expertise developed at the New Mexico Institute of Mining and Technology in Socorro.

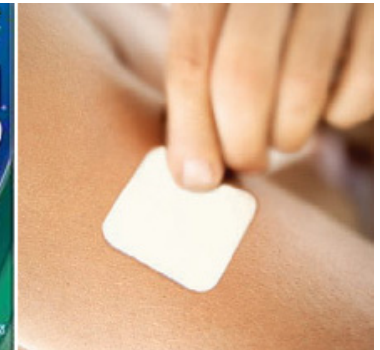
The company has emerged in recent years as a fast-growing player in the booming cybersecurity market. It offers businesses and government a platform to provide real-time evaluation of cyber risks, to rapidly remediate problems and to adopt adequate defenses.





## Frank Etscorn

- New Mexico Tech faculty member who invented the nicotine patch aiding people with nicotine addiction



## NM Tech attacks powdery mildew

By Kevin Robinson-Avila / Journal Staff Writer



New Mexico Tech assistant biology professor Siv Watkins examines soil samples from harvested cannabis plants. (SOURCE: New Mexico Tech)

### Dr. Siv Watkins, Assistant Professor of Biology

- ABQ Journal: July 27, 2017
- “....a major breakthrough...New Mexico Tech biologist discovered a way to use naturally occurring fungus in soil to protect plants..”

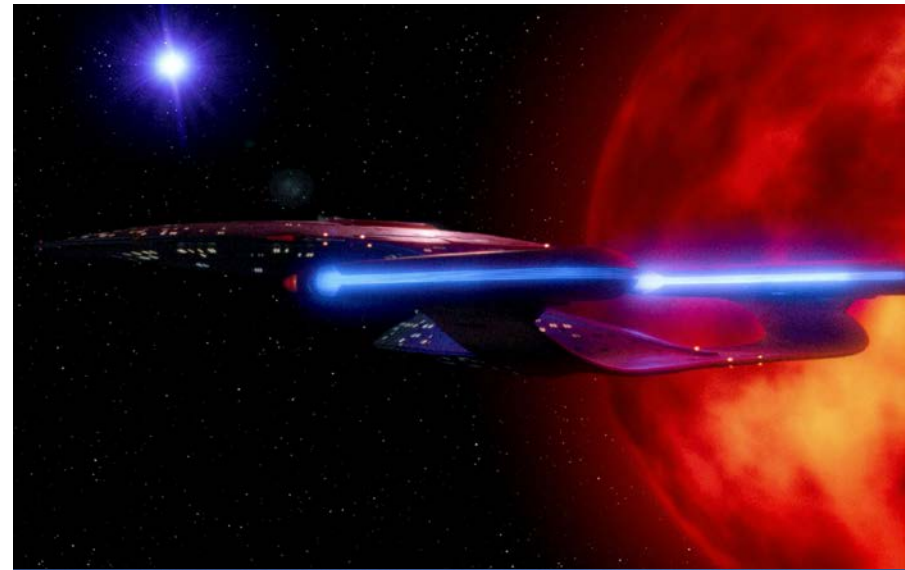


## Ed Fries

- Vice President of Game Publishing at Microsoft
- Co-founder of the Xbox.
- Played instrumental role in development of Microsoft Word and Excel



- Cultivate Transdisciplinary Education and Research
- Expand Funding Opportunities to Ensure Planned Quality of Growth
- Build Collaborations between NMT's Community of Scholars & Industry
- Create and Support an Ecosystem of Innovation to Commercialization
- Enhance Student Success – Create a Culture of Entrepreneurialism



*The Voyage Continues....*







NEW MEXICO TECH

Thank You.

