

GOLD PAN

ALUMNI MAGAZINE WINTER 2019





John Durica (Mineral Engineering major) guides a jackleg drill at the **2018 49ers** Heritage Mining Competition, watched by Renae "Alex" Hickman (B.S. Materials Engineering, 2017, and M.S. Materials Engineering, 2018).

a word from the president



Greetings NMT Alumni,

I am pleased to welcome you to this special edition of Gold Pan, with a focus on alumni giving and alumni activities.

My administration and the Office for Advancement and Alumni Relations have made

great efforts to expand our activities throughout the year: 49ers, the President's Golf Tournament, Founder's Club, an alumni trip, alumni receptions, and much more.

In 2018, we continued the Heritage Mining Events as a key part of the 49ers schedule, and added Chile Day and other fun activities to encourage alumni to return and participate. Please see our calendar in this issue for upcoming 2019 alumni receptions and interesting faculty-led day-trips around the country.

As President of New Mexico Tech, I am spending a significant amount of my time at the 2019 New

Mexico legislative session in Santa Fe, shepherding bills of importance to higher education and particularly to our university. Specific key legislative requests include increases to three of our university's Research and Public Service Projects (RPSPs): the Bureau of Geology & Mineral Resources, New Mexico MESA Inc., and the Professional Development component of the Science Fair/Science Olympiad. In addition, we are proposing one new RPSP, the Cybersecurity Education Center.

I encourage you to think about New Mexico Tech, our academic departments, research divisions, and endowments when you are considering where you make charitable contributions this year. I know that you hold a special place in your hearts for your alma mater. Your support of NMT will go a long way toward helping the next generation of NMT Miners.

Warmest regards,

Dr. Stephen G. Wells President, New Mexico Tech

A word from the director . . .

Happy 2019 to our Tech Family!

The NMT Advancement team members enjoyed the break and are now focused on making 2019 the year of outreach, new programs, and greater involvement with the most important members of our Tech family -you!

In this special issue you will find our inaugural Advancement and Foundation Annual Report to Donors and Alumni. Many of you have expressed a desire to know how many donations come to Tech and the Foundation every year and what causes those donations support. This Annual Report is one of the ways we plan to provide greater transparency, which is as important to us as it is to you.

Alumni matter greatly to me and to the entire Advancement team. If you have suggestions on how we might communicate better, what you would like to be

informed about, where to host alumni receptions, or if you have updates, please let us know. You are part of this family, and you are the reason we are here.

The usual Gold Pan content will return in the next edition. Have a wondrous and exciting New Year.



Warmly,



Colleen Foster Director, Office for Advancement and Alumni Relations Executive Director, New Mexico Tech Research Foundation



Gold Pan is published by New Mexico Institute of Mining and Technology (New Mexico Tech) for alumni, faculty and friends, by the Office for Advancement and Alumni Relations, 801 Leroy Place, Socorro, NM 87801.

Editorial

Colleen Foster, Editor in Chief

Rebecca Clemens, Editor

Design

Rachel Montoya

Administration

Dr. Stephen Wells President

Melissa Jaramillo-Fleming V.P. for Student and University Relations

Dr. O. Cleve McDaniel V.P. for Administration and Finance

Dr. Van Romero V.P. for Research and Economic Development

Dr. Douglas Wells V.P. for Academic Affairs

Alumni Relations Office

Colleen Foster
Director
575.835.5352
colleen.foster@nmt.edu

Lisa Majkowski
Associate Director
575.835.6168
lisa.majkowski@nmt.edu

LaVern Robinson
Donation Specialist
575.835.5525
lavern.robinson@nmt.edu

Mary Gillard Administrative Coordinator 575.835.5352 mary.gillard@nmt.edu

MeganVan Winkle Major Gifts Officer 575.835.5353 megan.vanwinkle@nmt.edu

Rachel Montoya Alumni Relations Manager 575.835.5278 rachel.montoya@nmt.edu

Rebecca Clemens
Manager/Database
and Technical Editing
575.835.5292
rebecca.clemens@nmt.edu

Sandi Lucero
Events Coordinator
575.835.5618
sandi.lucero@nmt.edu

GOLD PAN ALUMNI MAGAZINE

TABLE OF CONTENTS

WINTER 2019

Q2 A WORD FROM the PRESIDENT

Q2 A WORD FROM the DIRECTOR

O4 LETTER to the EDITOR

O5 LOPEZ ROSE GARDEN DEDICATION

O5 FRANK ETSCORN RETIRES - AGAIN

06 IN MEMORIAM - FACULTY & FRIENDS

10 RESEARCH: DEPARTMENT TIDBITS

14. FACULTY SPOTLIGHT - BRIAN BORCHERS, Ph.D.

17 YOU KNOW YOU'RE A TECHIE WHEN...

17 eSPORTS @ TECH

18 SCHOLARSHIP SPOTLIGHT

18 #GIVINGTUESDAYNMT 2018

20 PRESIDENT'S GOLF TOURNAMENT - 2018 WRAP UP

21 2018 FOUNDER'S CLUB BANQUET

22 2018 49ERS - GAME ON

26 PEOPLE YOU KNOW

32 IN MEMORIAM - ALUMNI

34 ODE TO THE REUNION, 2017

35 THE LAST WORD - Rachel Montoya & Megan Schwingle

Front and back cover photos: Rachel Montoya

letter to the editor

60/60 in 2020

I turned immediately to "In Memoriam" when the [Summer 2018] Gold Pan arrived to see what old friends are no longer around. Not finding any, I assumed that most those I knew had already passed on. Then, I went to "People You Know," for whatever reason, and found Alan Cheetham's photo and blurb.

When I transferred into the [School of] Mines in 1948, Alan was an editor of *Gold Pan* - a monthly publication with a semi-hard cover. Before I graduated in 1951, the *Gold Pan* shed its attractive cover, I say with regret.

I read in your editorial that the 2018 graduating class numbered 397. In Alan's 1950 graduating class, there were 50 and that set a new record, according to my May 1950 copy of the *Gold Pan*. (Yes, I do have a few copies from 1948 and 1950.)

My October 1948 copy revealed that the 1948 all-male enrollment of 248 also had set a record. It noted that: "In addition to the regular enrollment, there is one special student, Miss Adelina del Castillo, attending the School of Mines."

Lots of change since the "Mines" became NMIMT in 1951. Best wishes,

Mike Wolf (B.S. Geophysics, 1951)



Mike Wolf, 1951 Porphyry

Editor's Note: 1951 was a year of transition at NMT. Mr. Wolf's class ring displayed the name "The New Mexico Schools of Mines," while his degree was issued from "New Mexico Institute of Mining and Technology."

The **Class of 1960** will celebrate their 60th Anniversary at New Mexico Tech during St. Patrick's Day in **March, 2020.**

Start planning now!



St. Pat's tug-of-war, 1960.

We want to include all who attended in the time frame of the class of 1960, even those who may have graduated at a later time, so please update your address with the MMT Office for Advancement so all can be contacted.:

Email: advancement@nmt.edu

Phone: 575.835.5352 Mail: New Mexico Tech

Office for Advancement

801 Leroy Place Socorro, NM 87801

Your gifts further the academic and research goals of New Mexico Tech while allowing you to support your special interests.

Visit our *Giving Page* to see the many ways you can contribute to Tech and the students.

www.nmt.edu; click Give option at top right

rose garden dedication dr. daniel lópez and linda vigil lópez honored

On September 18, 2018, New Mexico Tech President Dr. Stephen Wells presided over the dedication of the *Dr. Daniel López* and Linda Vigil López Rose Garden,

which was supported by NMT alum John Dowdle.

A 1960 graduate of NMT, Dowdle has been a longtime donor to and friend of the university and received an honorary doctorate from NMT in 2016.

Dowdle and his wife, Ann, donated funds to create the rose garden at the fountain by Workman Center. At the ceremony, Dowdle spoke of his fondness for the university and his respect and admiration for Dr. López.



Pictured (from left) are John Dowdle, Ann Dowdle, President Stephen Wells, Linda Vigil López and former President Dr. Daniel H. López.

Dowdle said his first connection to NMT was as a high school student in Deming. A visiting professor from NMT gave a recruitment talk and demonstration - the professor froze a rose in liquid nitrogen, then shattered the rose. "To this day, I still love roses and I still love this school," he said.

frank etscorn retires—again



NMT Psychology Professor and former Dean of Students Frank Etscorn retired (again) at the end of the Fall 2018 semester.

To honor Dr. Etscorn's contributions, alum Tom Jones (B.S. Physics, 1992) of Greenbelt, Maryland created a thank-you card / plaque with messages from Frank's former students and friends.

Mr. Jones visited campus on December 6 - and sat in on Dr. Etscorn's last scheduled class - to present the plaque and a warm speech of thanks.

Dr. Frank Etscorn (tall guy at left, front row) had an enormous positive effect on the lives of many in the Tech community. NMT students, alumni, and employees joined him for this farewell celebration.

in memoriam — faculty & friends

Holm O. Bursum III, a prominent Socorro banker who, as a youngster, witnessed the detonation of the atomic bomb at Trinity Site, died Tuesday, December 4, 2018; he was 84.

A third-generation New Mexican, a lifelong resident of Socorro, and a longtime supporter of New Mexico Tech, Bursum was



president and CEO of the family business, First State Bank, a position he held since 1987. He served on the Socorro City Council and as chairman of the Socorro County Commission. In 1995, he was appointed to the New Mexico Highway and Transportation Commission and served as chairman from 1995-2003. During those years, bonds were issued to build, reconstruct and complete the Interstate 40/Interstate 25 (Big I) Project in Albuquerque.

In 1993, he was presented with a Distinguished Service Award by the Alumni Association in recognition of his work enhancing the influence and reputation of New Mexico Tech. An alum of NMSU (B.S., Animal Husbandry), Holm was named Distinguished Alumnus of NMSU's College of Agricultural, Consumer and Environmental Sciences. He was honored with a New Mexico Distinguished Public Service Award in 2004, for residents who make commendable contributions to public service and their communities.

Born in Roswell, his folks relocated to Socorro in 1942. He was raised on a ranch 30 miles east of Socorro in an area known as Jornada del Muerto Basin. He reminisced in a 2014 interview of spending summers and as much free time as possible on the sprawling Bursum Ranch, which covered about 300 square miles.

Banking was a far cry from his first love, ranching and cattle. "It was basically put together by lots of

homesteads," he said in one interview. "It was originally a sheep ranch, but later they ran cattle."

By the early 1940s parts of the ranch's acreage were acquired by the U.S. Army for the new White Sands Bombing Range. But as an 11-year-old, Holm loved to spend the night in the bunkhouse, and it was there he was an accidental witness to history.

It was summertime, 1945, and Holm said he may have been the closest civilian to the Trinity atom bomb test – only 16 miles away – on the morning of July 16. "Highway 380 cuts through the center of our old ranch," Bursum said. "The military had taken over the south portion – one half of the ranch – from 380 down to three miles north of what is now the Trinity Site.

"That summer I was staying in an adobe building four miles east of Bingham and 16 miles north-northeast of the shot," he said. "The army had blocked part of the highway (Highway 380), and there was a military presence in San Antonio. We later learned they were there to evacuate Socorro if the radioactive cloud blew over it."

The test was scheduled for midnight, but because of a big thunderstorm, was rescheduled for just before sunup. From 16 miles away the detonation at 5:30 a.m. shook the building in which Bursum was sleeping. "I slept in a top bunk in a bunk bed against the south wall of the adobe place that morning, and it woke me up," he said. "It shook the house pretty good and rattled all the cans, and it was bright as morning. For a minute I thought the sun was coming up in the south," he said. "We had no idea what it was. It was announced later that an ammunition dump had blown up."

Bursum's first job in the banking business was in 1959 at Albuquerque National Bank. "I was planning on coming down here and work[ing] for my dad here at the bank," Holm once said. "I guess I had mentioned it to my dad and he said, 'No, get a job with somebody else and learn on somebody else's money."

That was just a few months after his wedding. He and Earle Powell were married in Roswell and had their wedding reception at his boyhood home in Roswell in 1958 while Holm was still a captain in the U.S. Air Force.

Coming from divergent backgrounds, Earle, a Democrat, and Holm, a Republican, made a pact, a spousal agreement before getting married. Holm is quoted in *The Bursums of New Mexico*: "When we first got married I made a deal with Earle. She agreed to join the Republican Party if she could raise the kids as Episcopalians (Holm's background was Presbyterian). 'Let the kids be Episcopalians and I will be a Republican,' she said." Earle died in 2014. They were together 56 years.

Holm was preceded in death by his parents; wife Earle Bursum; brother Michael F. Bursum and his beloved dog, Oscar. Holm is survived by children Holm O. Bursum IV, Elizabeth Spencer (husband Ben), Julia J. Bursum, and Michael Bursum (wife Lori Keleher Bursum); ten grandchildren; one great-granddaughter; and Holm's dog, Par.

Memorial donations may be given to the First Presbyterian Church of Socorro or the Socorro County Fair Board. Donation accounts have been opened at First State Bank, PO Box Z, Socorro, NM 87801.

passed away December 26, 2018, following an extended battle with cancer. Since the early 2000's, Dr. Jacobson had taught physics, metallurgy, and engineering courses most

Dr. Loren Arthur Jacobson

Fall semesters at New Mexico Tech. He relished discussions with faculty in addition to the challenge of teaching new material to



interested students. He spent countless hours working with students in need of extra support, helping them become comfortable with difficult scientific concepts. Teaching was always one of his greatest joys - in the last few months of his life he was enthusiastically developing a new solid state physics course which he had hoped to teach in the Fall of 2019.

Born in 1938 in St. Peter, MN, he attended Dartmouth College upon receiving an Alfred P. Sloan Foundation Grant, graduating in 1960. He received a Master's degree in 1962 in Ceramics Engineering from the University of California, Berkeley; was commissioned as a 2nd Lt.in the U.S. Air Force; and worked as a Ceramics Engineer at the Ceramics and Graphite Branch of the Air Force Materials Lab at Wright Patterson Air Force Base.

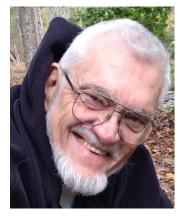
After earning a PhD in Metallurgical Engineering at UC Berkeley in 1968, Loren returned to Wright Patterson for another nine years. During that time he patented an alloy of gold, tin, and silicon for brazing electronic components, primarily for silicon chips; this invention facilitated the explosive growth of the emerging microchip industry. Always concerned with developing new talent, Jake, (as he was often called) was an excellent mentor who provided guidance and support to many young researchers who worked with him on projects. As a result, many of them continued on to graduate school, engaged in high quality research, and produced meaningful publications.

During the early 1980s he received an assignment at DARPA (Defense Advanced Research Projects Agency); at the end of these projects, he retired as a Lieutenant Colonel after 20 years in the Air Force. In 1982 he was hired by Lawrence Livermore National Lab in California; in 1986 Director Sig Hecker hired Loren at Los Alamos National Lab. He continued to do research, present papers, and prepare publications in two areas of special expertise: 1. beryllium metal as part of various alloys and, 2. rapid solidification processing.

Music, especially singing, was another great joy in Loren's life. The beauty and richness of his voice led to many singing engagements. One of his musical highlights was performing as Bass/Baritone soloist in the Bach B Minor Mass with the Oratorio Society of Washington, D.C., at the Kennedy Center.

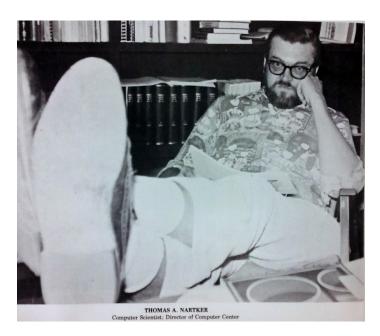
Loren is survived by his loving family: wife, Linda Goodman of Santa Fe; daughter, Barbara Jacobson of London, England; sister, Margaret Coxwell of Santa Fe; grandson, Nathan Jacobson; niece, Megan Coxwell; nephew, Mark Coxwell; former wife, Joanne Lithgow; and numerous friends and colleagues. His warm, generous, loving spirit will be deeply missed by all of us. No funeral or memorial service is currently planned, at Loren's request. Donations may be made in his memory to any charity of choice.

Dr. Thomas A. Nartker, former NMT faculty member, passed away on August13, 2018, surrounded by loving family. In the 1960s and 1970s he established the Computer Science Department at New Mexico Tech before moving to UNLV in Las Vegas, Nevada.



Tom was born December 16, 1936 in Warren, Ohio to the late Leo J. and Anna E. (Bloemer) Nartker. Tom is survived by his wife of 54 years, Susan; three children and their spouses (Kathryn & James of Troy, Karolyn of Las Vegas, and Thomas and Julie of Las Vegas); and three grandchildren (Jason, Aidan and Teagan). Also surviving are four siblings and their spouses (Joan and Gary Albright, Richard and Carol, Charles and Sandra, and William and Darleen), along with numerous nieces, nephews, and great-nieces and great-nephews.

Tom was a proud member of The University of Dayton Flyers basketball team during the 1957-1958 season. He was infamous for his FG percentage that year of 100%. He graduated later that year with a degree in Chemical Engineering. His love for the Dayton Flyers remained his entire life.



After earning his Master's Degree in Chemical Engineering at the University of Tennessee, Tom moved to Bryan, Texas. At Texas A&M University, he blazed frontiers when he became the first person at the

university to use a computer, rather than a typewriter, to write and print his doctoral dissertation in Chemical Engineering (very high tech at the time). He married the "cute girl" in the office who helped him handwrite the equations in his dissertation that, at the time, could not be typed.

In 1965, the newlyweds moved to New Mexico Tech where Tom established the Computer Science Department. Now a resident of the Southwest, he was determined to "learn to love" the local cuisine, Hatch green chile. He spent many a night sweating through a meal.

Following a brief stint in Houston, Tom and the family moved to Las Vegas, Nevada where he eventually became the head of the Computer Science department at UNLV. His cutting-edge research brought in millions of dollars to UNLV's Information Science and Research Institute. During their 30 years in Las Vegas, Tom and Susan spent time exploring and experiencing the stunning sights of the West.

Tom retired in 2011 and, in 2016, they returned to his home state of Ohio after a lifetime of "trying new things" and making lifelong friends.

Dr. Alexander Prusin

New Mexico Tech lost a beloved professor on August 13, 2018, when Dr. Prusin unexpectedly passed away.

Dr. Prusin joined the NMT faculty in 2001 as a history professor in the CLASS Department (then known as the Humanities Department).



He specialized in the history of Russia and Eastern Europe, nationalism, ethnic conflict, and genocide.

University President Dr. Stephen Wells said "Dr. Prusin was a great educator, colleague, and friend. On behalf of the CLASS Department and the entire institution, I want to express our deep sadness at the news of his unexpected passing. I extend my sympathies to his family, his friends, and all the students who were influenced by Alexander's wit, charm, and passion."

CLASS Department Chair Dr. Steve Simpson said Dr. Prusin will be missed dearly by everyone who knew him. "He had a way of presenting history that was very engaging. The students really loved him. His classes were difficult, but students enjoyed the rigor. He had a dry, ironic sense of humor that came out in our department meetings, and we'll miss that."

Stephanie Pick Baca graduated from New Mexico Tech and is now a lecturer in history at NMT. She noted Dr. Prusin's passing is a profound loss for his family, friends, students, colleagues and the academic community as a whole. She said, "As his student, he acknowledged my passion, challenged my beliefs through debate and was merciless in grading because he knew I could do better, and thanks to him, I always did.

"After graduation he did not hesitate to insist that I pursue a graduate degree in history - providing not only glowing recommendations to secure my spot in a program, but offering his assistance as a mentor. He read over my research, played soundingboard to my frustrations and insisted I guest lecture in his classes so he could provide me feedback and experience.

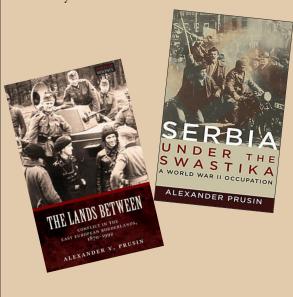
"He is the reason I am who I am, and where I am. I know I am not alone in the void his absence has created. His life was purposeful, unwavering, and succinct. His influence, guidance and tutelage were invaluable and my debt to and gratitude for him, immeasurable."

Dr. Prusin's courses were always popular with Techies – from his 100-level world history survey courses to upper-level courses on modern history, revolutions, the Soviet Union, and the Middle East. No matter which course he taught, he always received top marks from students who took his class.

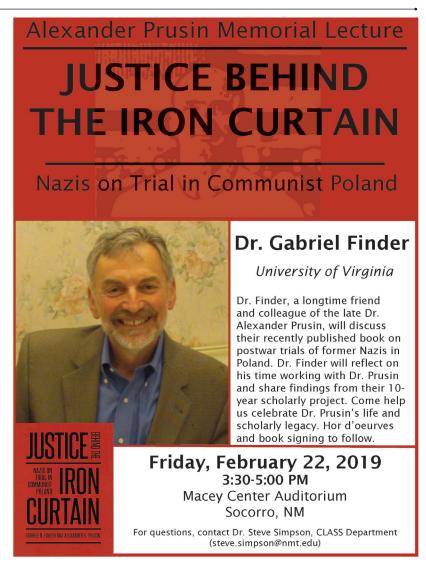
Alexander Prusin Publications

Dr. Prusin was a prolific researcher and writer, constantly on the trail of a new historical tale to tell. Recent books by him include:

Serbia Under the Swastika, published by the University of Illinois Press in 2017.



The Lands Between: Conflict in the East European Borderlands 1870-1992, published by Oxford University Press in 2010.



research: department tidbits

computer science & engineering

http://nmt.edu/academics/compsci/index.php/

Summer 2018 NSF REU program

The Department of Computer Science and Engineering (CSE) hosted seven undergraduate students who participated in the 10-week Research Experiences for Undergraduates (REU) program from May 30 to August 3, 2018. This program is supported by a \$287K, three-year grant from the National Science Foundation REU program. The seven students were recruited from six colleges in five different states including California, Colorado, Kentucky, Michigan and New Mexico.



Summer 2018 CSE REU Team

The theme of the REU program is emerging issues in cybersecurity. The students were supervised by four department faculty to work on various cybersecurity research projects. The faculty mentors are *Dr. Jun Zheng (PI)*, *Dr. Dongwan Shin (Co-PI)*, *Dr. Subhasish Mazumdar*, and *Dr. Ramyaa*. In addition to research activities, the program provided a series of technical training mini-courses and professional development workshops. The program also organized field trips to a cybersecurity company (RiskSense, Inc.) and the Very Large Array (VLA).



Summer 2018 CSE REU field trip to RiskSense, Inc.

\$20 million NSF EPSCoR grant for New Mexico's SMART grid center

The National Science Foundation (NSF) recently awarded a \$20 million, five-year grant for New Mexico's SMART Grid Center under its Established Program to Stimulate Competitive Research (EPSCoR). The research program seeks to transform existing electricity distribution feeders into interconnected microgrids and will utilize multiple testbeds across New Mexico.

This NSF EPSCoR Research Infrastructure
Improvement (RII) Track 1 grant will support
researchers and students from the University of New
Mexico, New Mexico State University, New Mexico
Tech, and Santa Fe Community College with researchers
and scientists at Sandia Laboratories and Los Alamos
National Laboratory, as well as other organizations in
New Mexico such as the Microgrid Systems Laboratory
and Explora Museum.

New Mexico Tech is the leading institution to address the security and privacy challenges of the proposed SMART grid infrastructure. *Dr. Jun Zheng* from the CSE Department is the PI of the program at New Mexico Tech. The NMT research team also includes Dr.

Dongwan Shin (CSE), **Dr. Kevin Wedeward** (EE) and **Mike Smith** (ICASA). New Mexico Tech will receive \$1.7 million from this EPSCoR grant.

\$3.9 million NSF Scholarships in STEM Grant

Dr. Dongwan Shin, in partnership with researchers from New Mexico State University, has been awarded a \$3.9 million, five-year grant from the National Science Foundation Scholarships in Science, Technology, Engineering and Mathematics (NSF S-STEM) program. New Mexico Tech will receive \$1.4 million from the S-STEM grant.

The goal of the project is to prepare students for careers in computing and cyber-security and provide scholarships for academically talented community college students in the computer science field who need financial help. New Mexico Tech will partner with Eastern New Mexico University's campus in Ruidoso and San Juan College. About 30 scholarships will be awarded during the project.

earth & environmental science

http:nmt.edu/academics/ees/

Dr. Daniel Jones joins E&ES and NCKRI

The Earth and Environmental Science (E&ES) Department is pleased to have *Dr. Daniel Jones* join our faculty in January 2019. Dr. Jones works at the interface between geomicrobiology and aqueous geochemistry. His



research interests in cave and karst science often bring him below Earth's surface (*see photo*). He will be the Academic Director of the National Cave and Karst Research Institute (NCKRI), an organization whose academic home is New Mexico Tech.

Dr. Jones comes to New Mexico Tech from the University of Minnesota, where he was a Research

Associate and the Industry Liaison for the MnDRIVE Environment initiative. There he worked to increase collaboration among academics, industry, and the state of Minnesota to address water quality concerns and improve the environmental outcomes of mining, agriculture, and other industrial practices.

Welcome to NMT, Dr. Jones!

materials engineering

http:nmtedu/academics/mateeng/

Joint appointment of Dr. Youngmin Lee

The Materials and Metallurgical Engineering Department welcomes *Dr. Youngmin Lee* as a member of our graduate program (a joint appointment with his home department, Chemical Engineering).



Dr. Lee brings expertise in the areas of functional polymeric materials, organic solar cells, polymeric dielectric materials, and scalable processing methods.

mechanical engineering

http:nmtedu/academics/mecheng/

Capstone Aerospace Leadership Program

Professor Julie Ford has been awarded an Education Enhancement Grant from the New Mexico Space Grant Consortium to support a Capstone Design Aerospace Leadership Program, an initiative to develop and integrate aerospace leadership training within the junior and senior design curriculum.

With one of the most extensive project-based engineering capstone design requirements in the nation, NMT's four-semester Design Clinic requirement includes 21 project teams. More than one-third of the 150 students enrolled in junior and senior design clinic are working on projects with an aerospace emphasis.

These complex projects mirror the dynamic and rapidly

evolving climate of aerospace research and design.

In addition to accounting for the engineering challenges involved within designing for extreme space environments, through analysis and discussion of aerospace case studies, guest lectures by aerospace leaders, and leadership training sessions, students are taught leadership skills to complement their technical competence.

2018 Discovery Festival

NMT engineering and physics students and faculty won the *Best in Show (Single Booth Exhibit)* award at the 2018 Discovery Festival, hosted by Big Brothers Big Sisters in Albuquerque, NM on November 9th. Air Force Research Lab (AFRL) won the Best in Show Multiple Booth Exhibit.



Judges' comments with the award stated "This booth had great presentations, and their college presenters were engaging. The excitement was contagious!"

The NMT participants volunteered their time to help inspire ~3,500 central New Mexico K-12 students to pursue science and engineering. What set NMT apart was the level of excitement and engagement of the NMT students, who were out in front of the booth talking with and asking questions of the attendees, showing off basic science and exciting technology and demonstrating their research projects.

Attendee comments included "I love electricity - this is so cool!" as well as many variations of "Wow!"



Discovery Festival NMT Mechanical Engineering students (l to r) Kody Willis, Tyler Mobraten, Mya Longmire, Julian Bojorquez, and Dominic Fascitelli

NMT students and faculty from several departments (Electrical Engineering, Materials Engineering, Mechanical Engineering, and Physics) and student clubs (ASME and SAE Baja) showed their commitment to encouraging and motivating the next generation of scientists and engineers.

New Faculty

The Mechanical Engineering Department welcomed a new faculty member, *Dr. Mostafa Hassanalian*, in August 2018.

His research areas include biomimetics and bio-inspired aerial and aquatic robots; design, optimization, and performance enhancement



of aerial vehicles; drones; and new new concepts for planetary and space exploration.

Like us on Facebook! www.facebook.com/ NMTAlumniInteraction

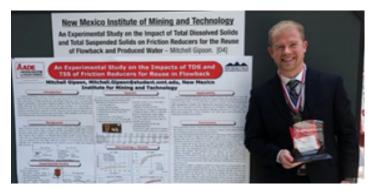


petroleum engineering

http://nmt.edu/academics/petreng/

Kudos!

NMT Petroleum Engineering was ranked *Number 1* in *Best Petroleum Engineering Degrees* in the U.S. for 2019 by CollegeChoice.net.



Mitchell Gipson (M.S. Petroleum Engineering, 2018) won 1st place Student Poster at the April 2018 AADE

The NMT Society of Petroleum Engineers (SPE) student chapter has won the *SPE Outstanding Student Chapter* for the second year in a row. This is the highest honor a student chapter can receive; only 10% are recognized.

Research Reports

Dr. Tan Nguyen is the new Department Chair of Petroleum and Natural Gas Engineering. He is also the director and founder of the Production and Drilling Research Project (PDRP) at NMT.

In the past few years, Dr. Nguyen's group has collaborated with Chemplex Solvay Group to extensively study how to reuse the flowback and produced water from hydraulic fracturing. In addition, the research group also experimentally investigates characteristics of guar and borate crosslinked gels under various hydraulic fracturing conditions.

Dr. Hamid Rahnema is the lead faculty member of the Reservoir Research Group (RRG), which has been investigating interactions between flowback water and formation of porous media during disposal injection operations.

The RRG also focuses on the experimental analysis

of steam, solvent and hybrid extraction of a Tar Sand Formation with an overlying brine layer.

New Faculty

The Petroleum Engineering Department welcomed two new faculty members in August 2018.

Dr. Jihoon Wang specializes in reservoir geomechanics for unconventional petroleum and geothermal reservoir development. He has three years of professional experience with the Korea National Oil Corporation, performing geomechanics-related reservoir engineering projects.



Dr. Miao Zhang's research focus is unconventional reservoir characterization and modeling, advanced rate transient analysis, reservoir simulation and thermodynamics of petroleum fluids.



physics

http://nmt.edu/academics/physics/

Climate and Water Consortium (CWC)

A year ago the CWC (https://www.cwc.nmt.edu) was formed with a goal of bringing theory (i.e., academic research) and the real world closer together, particularly when it comes to the impact that weather and climate have on our economy, society, and ecosystems.

During the past year the CWC has secured several government-funded research projects. One of them is the Organization of Tropical East Pacific Convection (OTREC) that is now funded with \$5.4 million from the National Science Foundation. OTREC will help us determine the unknown physics in weather models, i.e., the convection parametrization, providing us with better weather forecasts and climate assessments.

A video to see is the TEDx talk given by *Dr. Zeljka Fuchs-Stone* on *Storms and Hurricanes, How Storms Became Satisfaction in My Life* (https://youtu.be/qJ8EqGQQiRk).

faculty spotlight brian borchers, ph.d.

by Lisa Majkowski

We caught up with Dr. Brian Borchers, Professor of Mathematics, for this issue.

Where did you grow up? And do you miss it?

I grew up in Omaha, Nebraska. Yes, I miss it but my mother still lives there so I get to go back and visit several times during the year.

Where did you go to college?

I attended Rensselaer Polytechnic Institute (RPI) in the early 1980s for computer science. During my time as an undergraduate, I hosted a show on the college radio station, WRPI, in the 6 am to 9 am slot. It featured folk music and jazz. I graduated in 1984 and worked at RPI for another year as systems administrator, followed by a move to Motorola in Boston for a couple of years as a software developer working on firmware for packet switches.



Dr. Borchers working at WRPI in 1982

I decided to return to RPI to get a graduate degree in math. Originally, I planned to complete a MS degree and return to Motorola. However, after a few months in grad school, I became interested in optimization and decided to stick around and get a PhD.

What prompted the change from computer science to math?

I've always been skating on the edge between computer science and math. At RPI, the computer science degree was in the Math Department. Math and computer science are pretty closely connected – a continuum of the same discipline.

What led you to become a math professor at NMT?

I went on the job market in 1992 and I was invited to interview with New Mexico Tech. I had never been to New Mexico. Everyone in the Math Department was very nice. Clyde Dubbs was the department chairperson at the time – I remember that he made me feel at ease and suggested that I take my suit jacket off, saying something along the lines of "you won't need that here."

I appreciated that NMT was a science and engineering university, similar to RPI, and thinking that I could teach a lot of the same classes that I had previously taught at RPI. Tech's Math Department was impressed that I had already taught Introduction to Differential Equations. And that is how my career at Tech began.

Dr. Alan Gutjahr and Dr. Bill Stone were my mentors (both excellent). The Math Department was in Weir Hall when I started, but we were moved to Cramer Hall during the 2000 renovation of our building. We moved back into Weir Hall in 2003, which also happens to be the same year that I became a full professor.

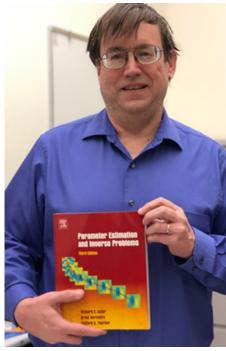
What are your focus areas?

My original background is in computational optimization; I still do research in that area. Since I've been at Tech, I've been interested in working with earth scientists and have done research with Dr. John Wilson, Dr. Jan Hendrickx, Dr. Fred Phillips, and Dr. Rick Aster. As it happens, a book came out of a course that I co-taught with Rick in 1999, titled "Parameter Estimations and Inverse Problems." The third edition

was published in 2018.

What has been your most rewarding experience at New Mexico Tech?

The thing that I like the most about my job is that I get to work with graduate students. This allows me to work more in depth with these students over several years, and I get to see where they go on to.



Dr. Borchers with the third edition of his book

Several of my

graduate students have become faculty at other universities and I am very proud of that. For example, I was Dr. Taylor Dotson's advisor when he was doing his MS in Math at New Mexico Tech.

Another of my former graduate students, Dr. Richard Hahn, is now an assistant professor of statistics at Arizona State University. I have been the research advisor for 24 graduate students (so far – there are more on the way).

Any other interesting personal facts you'd be willing to share?

I've been married to Sue for a wonderful 25 years. We regularly attend major league baseball spring training games in Phoenix. We also have a new cat, Mattie. I'm a book nut and I help run the Friends of Socorro Public Library book sales. I do a lot of yoga. And a few years ago, I became very serious about running. I have run marathons, and I consistently run 5Ks now.

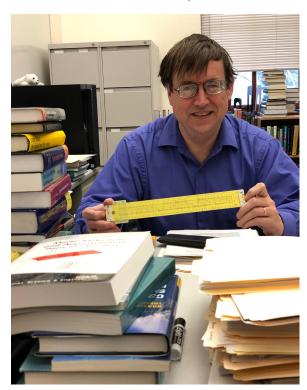
Taking this conversation in a completely different direction – you are known as the slide rule expert on campus. How long have you been interested in slide rules?

I received my first slide rule as gift from my father while I was in junior high school. There was a point in time when digital calculators were available but expensive, so slide rules were still used. Engineering students would use a slide rule to do their homework. High schools used to run pretty intense slide rule competitions. Sadly, I just missed that transition (we were already using the TI-30 calculator at my school).

The slide rule is a good way to learn how logarithms work. It provides a perfect visual illustration of the laws of logarithms. I was entranced by that. They're neat.

How many slide rules do you have? Can you tell us about the slide rule that you brought in today?

I have two or three dozen slide rules in my collection. This is "My Precious" - a Pickett N-525-ES. In addition to the usual scales, it has special scales for statistics (chi-squared and normal distributions).



Dr. Borchers with "Precious" Pickett N-525-ES

Were you surprised by the turnout for the slide rule competition during last year's 49ers?

I was amazed! We initially had Vice President for Academic Affairs, Dr. Doug Wells, and one Math Department faculty member, Dr. Oleg Makhnin. We then added an alumnus, Rick Mayes, and a math undergrad, Eric Binnendyk, so it was a great representative group. I developed the questions (and to be honest, I cheated and got the answers using a computer). We got through the regular questions for the

competition and had a four-way tie. We went into the supplemental questions – everyone missed the first one but the second question broke the tie (Rick Mayes, B.S. Physics and B.S. Mathematics, 1968, was the winner).

The thing about slide rule calculations is that as the equation or formula becomes more complex, the process for solving it becomes more complex. You need to keep track of the powers of ten by yourself – the slide rule doesn't do that. In the 49ers competition, the contestants had to give the first two digits of the answer and the power of ten (and the most mistakes were made on the power of ten).

What advice do you have for people wanting to enter the 2019 49ers slide rule competition?

Get yourself a slide rule to practice with – you can find them at garage sales, thrift stores, or online – you should be able to find a \$5 slide rule. Then practice. Once you understand the basic operations, practice chaining those operations together. Instructions are easy to find.

There is a difference to understanding the theory and actually using the slide rule. Being quick is the key to winning the competition. Be accurate and quick. The first correct answer wins.

you know you're a techie when... you get homework AFTER you graduate!

Dr. Borchers has provided a link to an online slide rule emulator and the rules and questions from last year's 49ers slide rule competition so that our readers can train for the 2019 competition:

http://www.antiquark.com/sliderule/sim/n909es/virtual-n909-es.html

NMT Slide Rule Competition Rules (Live Audience Version)

You will be given a series of 10 challenging calculations to be performed using the slide rule. The first contestant to raise their hand will get a chance to answer the question.

If the answer is correct (2 significant digits and the power of 10), then that contestant wins the point. If not, other contestants can raise their hand and try to answer until all contestants have made an attempt or 2 minutes have elapsed.

Sample Problems

1.) 8.
$$15 \times 0.0906$$
 3.) $\frac{\sqrt[3]{57.1} \times 2.22}{0.374 \times \sqrt[3]{2810}}$

2.)
$$\sqrt[4]{62.5 \times 0.0422}$$
 4.) $\frac{4.42 \times \frac{4\pi}{\sqrt{7.48}} \times \sqrt{0.000602}}{\sqrt[3]{3.11}}$

Answers are available on the NMT.edu/Advancement/49ers website, or you can call us at 575-835-5292.

you know you're a techie when...

54744' Qapla!

...the Proem at 2012 Commencement is a poem, given by a highly respected Cave & Karst professor (who's now with NASA) – in Klingon.

...you stop and look around (and then up) if a plane flies over Socorro. You don't stop – or react at all – when there's an explosion at EMRTC.

...graffiti on bathroom walls is in equation form. With corrections.

...you use a calculator app as your phone screensaver so that instead of "butt dialing" you'll "butt calculate."



Some of these have been previously posted on <u>www.Facebook.com/NMTAlumniInteraction</u>
Share your true "You Know You're a Techie" stories! Email <u>rebecca.clemens@nmt.edu</u>

eSports @ Tech

New Mexico Tech started an eSports Club in Fall 2018 and it has quickly become the largest student club on campus, with 154 members. The eSports Club operates under Tech's Club Sports, which oversees and coordinates all of Tech's sports teams and individual activities at both the recreational and competitive collegiate levels.

Through a collaborative effort by Tech's eSport Club members, Student Government Association, Office of the President, Information Technology & Communications department, and Student and University Relations division, Tech has allocated space in Gold Hall for an eSports training and competition facility. It should be completed Spring 2019 and will be equipped with 13 high-performance gaming stations and peripherals.

Tech's eSports members have volunteered to mentor and help fundraise for Socorro High School (SHS) in their inaugural year in eSports, and have offered to allow SHS eSports teams to use NMT's faster computers for competition until SHS gets their training facilities established.

NMT plans to join the National Association of Collegiate eSports (NACE), a competitive conference of more than 70 colleges and universities. Tech will compete in various eSports; there will be online competitions and the top teams will advance to NACE Nationals, where there are potential scholarships available for the winning institutions. These schools can then use the scholarships for recruitment or retention.

As eSports Club president Damian Banks said, "It's amazing, because here at Tech we have such a low student population compared to other universities, but some of our players are ranked very highly and have a lot of skill.... We've grown so much so fast, and there are so many people involved, it's very exciting."

scholarship spotlight Donna Kuklinski scholarship



Donna Kuklinski (B.S., Mathematics, 1983) passed away in October 2016, in Albuquerque, N.M. While pursuing her degree at New Mexico Tech, Donna made many friends and participated in various Tech activities (both curricular and extracurricular). After NMT, she went to the University of Wyoming, earning a Master's in Mathematics in 1989 and completing two years of atmospheric science studies.

Her interests and passions included fantasy (literature and games), music, Albuquerque festivals, and cats (her favorite quote was "God created the cat so man might caress the tiger").

Tech friends Brian Davis and Johann Lindig started the Donna Kuklinski Scholarship in 2017 to honor her memory by supporting future women math majors at Tech.

To donate to this scholarship fund, call the Office for Advancement at 575-835-5616 or visit the NMT Giving Page (https://www.nmt.edu/, then click on Give at the top).

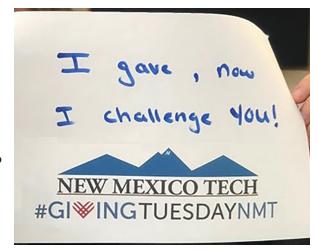
#GivingTuesdayNMT 2018

On Tuesday, November 27, 2018, New Mexico Tech participated for the first time in the global day of giving know as **#GivingTuesday**, the more charitable counterpart to consumer-crazed Black Friday and Cyber Monday.

#GivingTuesday is observed on the Tuesday after Thanksgiving and kicks off the charitable season with a call to celebrate and encourage the act of giving.

We called on NMT alumni, employees, and students to support **#GivingTuesdayNMT** - and they did:

- **Alumni and donors** (YOU!) contributed more than \$3,500 to ten different NMT funds
- **Employees** donated over \$3,000 to 16 NMT scholarships, departments, and funds



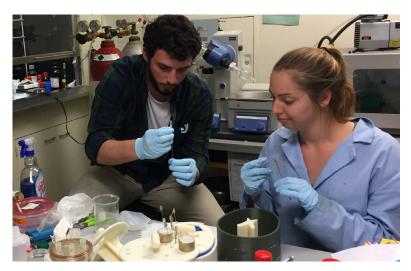
• Students, along with several employees and alumni, gave more than \$1,000 to the Young Alumni Fund

Thanks to all of our NMT family who supported #GivingTuesdayNMT in 2018.

thank you...

...to everyone who made a donation to New Mexico Tech in 2018!

Your financial support is critical in helping our students excel and enables our faculty, academic departments, programs, and university to go above and beyond. If you didn't have a chance to make a donation in 2018, or you want to do more to support your alma mater, think about starting the new year with a donation to your department.



Donating to your department is easy!

Donate Online – go to the New Mexico Tech homepage (www.nmt.edu) and click on



GIVE at the top right, then use the dropdown **DESIGNATION** menu to select your department.

Give Us a Call - if you want to phone in a donation, please call LaVern Robinson at 575-835-5616

Send a Check - if you want to mail your donation, please make the check out to "New Mexico Tech" and indicate the department on the memo line.

Questions? Contact us at <u>advancement@nmt.edu</u> or 575-835-5352

Thank you for your ongoing interest in and support of New Mexico Tech!

president's golf tournament

By NANCY BILDERBECK, Class of 1976

Imagine that your graduation is in sight. To date you embraced all New Mexico Tech had to offer: enjoyed the student camaraderie, explored the extracurricular activities ... but mostly hit the books. Then the sobering reality hits – your funding has run out!!

Unfortunately most government scholarship programs only fund four years of university study; the New Mexico Lottery Scholarship is also time sensitive. Funding agencies do not take into account the rigors of completing a STEM degree, which often takes 5 years.

On September 13 - 14, 2018, golfers took to the links at the New Mexico Tech Golf Course to enjoy the challenges of golf and to raise funds for the President's Tuition Assistance Scholarship. It is this fund which makes tuition assistance available to students nearing completion of their degrees.



Attendees at this year's tournament included students, alumni, friends, employees, and spouses ... all with a link to the University and all committed to supporting NMT student scholarships. Some were golfers ... some were NOT!

Golf was played in 3 flights; one on Thursday and two on Friday. Teams of 4 played a format where the "best ball" was selected. Golfers were fueled by buffet breakfasts, lunches, and dinners ... enhanced by stories of miraculous golf shots!

Thursday afternoon offered a chance to join in a NMT golf tradition: that of playing off of M Mountain. Two challenges, "longest drive" and "closest to the pin," are appropriately named the Cliff Challenge (*below photo*).



Dr. Dan Lopez started the tournament in 1993 and Dr. Stephen Wells proudly continues the tradition. Since the tournament started more than 175 students, mostly 5th-year seniors, have received tuition assistance.



Editor's Note: In addition to helping students complete their education, proceeds from the President's Golf Tournament are used to steward donors and support fundraising

2018 Founders club banquet president's medal awarded to Dr. Corale Brierley

New Mexico Tech President Dr. Stephen Wells presented the second President's Medal to Dr. Corale Brierley (B.S. Biology, 1968, and M.S. Chemistry, 1971) on August 25, 2018, at the Founders Club Banquet at the Magdalena Ridge Observatory (MRO).



President Wells presenting to Dr. Brierley

Brierley is internationally known for her pioneering research and contribution to applications in bioleaching and metal remediation. She has won numerous industry awards, served as editorial board member for journals, and has been elected as an officer of national committees and organizations.

Guests at the event enjoyed afternoon tours of the MRO facilities, including the 2.4 meter



Dr. Corale Brierley

telescope, before an enjoyable evening of delicious food and beverages, the presentation of the President's medal, and fun science demonstrations from NMT and MRO employees.

Congratulations to Dr. Brierley!

and Beth Wells, and Brian Deen enjoy a tour of the MRO



Post-tour refreshments with a view of the MRO dome in the background

2.4m telescope with guide Dr. William Ryan (front).

2018 49ers - Game On

The 2018 49ers celebration, with its theme of "Game On," saw hundreds of alumni, students, employees, and community friends participate in a variety of festivities from October 17th to 21st. Several competitions were held, some long-time classics, some brand new.

2018 49ers Parade

Saturday's parade was both well-attended and well-populated with floats, vehicles, mounted riders, walkers and more reflecting the "Game On" theme, with plenty of Angry Birds and Mario Brothers floats and other game-related entries (*below and right*).



Heritage Mining Events

The Cooney Mining Club returned this year with two days of heritage evenets, with competitions in Gold Panning, Jackleg Drilling (*below*), Mucking, Single Steel, and Swedish Sawing.





'M' Mountain Run

More than 300 people conquered the hike up 'M' Mountain (*below*) to give the iconic letter a fresh coat of marble dust. The first 20 NMT students who carried 50 pound sacks of marble dust each received \$50 for their efforts; all participants were treated to lunch.



Slide Rule Challenge

NMT heritage includes more than mining! Alumni, Students, and employees were challenged to a slide rule competition. More than 30 attendees enjoyed the fierce, too-close-to-call-until-the-last-round event.

Alum *Rick Mayes* (B.S. Mathematics & Physics, 1968) emerged triumphant - kudos to him!

New Mexico Tech Chile Day

The inaugural NMT Chile Day featured a variety of enjoyable activities, appealing swag, and tasty food. Cornhole and Chopped competition winners each received a beautiful hand-carved wood chile pepper mounted on a plaque.

The **Chopped Cooking Competition** (open to NMT alumni, students, and employees) included two rounds: one incorporating green chile and ramen, then a finalist round requiring the creation of a dessert using chocolate and red chile. The three-member panel of judges invited the appreciative audience members to also sample and enjoy some of the dishes.



Chopped winners (l to r): 2nd Place, Cameron Kimber (student); 1st Place, Liz Lyons (NMT employee and alum); 3rd Place, Jack Rains (student); and Honorable Mention, Kevin Donovan (alum)

Memorial Tree Planting

Sunday morning NMT alumni, students, and employees gathered for a peaceful and healing ceremony to remember friends and fellow alumni who have left us too soon. At the conclusion of the ceremonies, a tree was planted as a permanent tribute.



Ristra making class



Student Cornhole Contest Winning Team (l to r): 1st place, Geoffrey Knox & Christopher Ramirez; 2nd place, Dominic Fascitelli & Jeremy Gallegos



Chile Day swag available: cookbooks, t-shirts, and more! Contact rachel.montoya@nmt.edu

Save the Dates!
2019 49ers - 100th Anniversary
October 17 to 20, 2019

2019 ALUMNI EVENTS

All events brought to you by NMT Office for Advancement & Alumni Relations

February

February 21st

Silver City, NM Alumni Dinner @ Vicki's Eatery (6:30pm-8:30pm)

February 26th

Denver, ČO- Alumni Dinner @ Rock Bottom Brewery (6:00pm-8:00pm) Hosted by Dr. Navid Mojtabai

March

March 12th

Seattle, WA Alumni Dinner @ Elephant & Castle

March 14th

Portland, OR Alumni Dinner @ Mother Jones

March 27th

Dallas, TX Alumni Dinner @ Dickey's Barbecue in Addison, TX Hosted by alum Bill Marble

March 29th

Roswell, NM Alumni Dinner @ Peppers Grill (6:00pm-8:00pm)

Keep up-to-date with our events on our Facebook page! https://www.facebook.com/NMTAlumniInteraction/



April

April 8th

Las Vegas, NV Alumni Dinner, location TBA

April 9th

Ridgecrest, CA Alumni Dinner, location TBA Hosted by Dr. Van Romero

April 10th

Huntington Beach, CA Alumni Dinner, location TBA

April 11th

San Diego, CA Alumni Dinner, location TBA

April 24th

San Jose, CA Alumni Dinner, location TBA

April 25th

Oakland, CA Alumni Dinner, location TBA

April 26th

San Francisco, CA Alumni Dinner, location TBA

April 27th

NMT Alumni Days of Science & Exploration at Muir Woods, CA, led by Dr. Ben Duval

May

May 4th

NMT Alumni Days of Science & Exploration at White Sands National Park, led by Dr. Peter Mozley

May 8th

Houston,TX @ John Crum residence Hosted by John Crum

May 10th

Socorro Alumni Reception @ President Wells' residence

May 11th

NMT Commencement

June

lune 7th

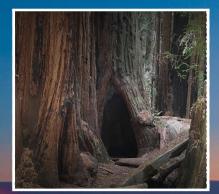
Farmington, NM Alumni Reception, location TBA

June 15th

NMT Alumni Days of Science & Exploration at Hayden Planetarium, NY, led by Dr. Van Romero

NMT Alumni Days of Science & Exploration

Alumni field trips led by your favorite New Mexico Tech experts – NMT faculty! Bring your family and enjoy one of the many things that make New Mexico Tech great, our faculty. Spend a day learning what Tech professors have to say about the topics they know best.



Mingle, relax, and enjoy time with your immediate family and your Tech family. We hope to see you at an adventure:





Enjoy a day with experts from
New Mexico Tech.
Not your ordinary alumni reception.

APRIL 27, 2019 MUIR WOODS NATIONAL MONUMENT, CA

Dr. Ben Duvall
Assistant Professor, Biology

MAY 4, 2019

WHITE SANDS NATIONAL MONUMENT, NM
Dr. Peter Mozley

Associate Vice President for Academic Affairs; Professor of Geology, Earth & Environmental Science

JUNE 15, 2019
HAYDEN PLANETARIUM, NEW
YORK CITY

Dr. Van Romero

Vice President, Research and Economic Development;
Professor, Physics

OCTOBER 26, 2019

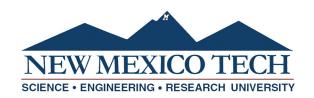
CAVERNS OF SONORA, TX

Dr. Daniel Jones

Academic Director, NCKRI; Assistant Professor,
Earth and Environmental Science

INTERESTED IN ATTENDING?

email: advancement@nmt.edu or phone: 575.835.5278



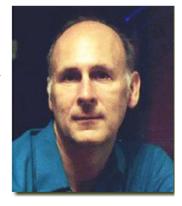
Brought to you by the Office for Advancement & Alumni Relations

people you know

1960s

Tim Long (M.S. Geophysics, 1964) Experiences at New Mexico Tech never seem to leave. There are the

memories of hiking down M Mountain, friends that have stayed in touch and experiences like the triple on the first pitch of the faculty/student softball game. Most importantly the academic and research experience was the beginning of a life-long study.



One of my tasks while working for my MS degree in Geophysics was documenting and logging the continuing swarm of small earthquakes under Socorro Mountain. With Dr. Al Sanford we looked at many aspects of these small events trying to understand them. Our analyses ranged from an unbelievable positive correlation with tidal phases to the realization that the strangely strong phases exhibited by many were being caused by reflections from a fluid zone in the crust. That fluid zone is now known as the Socorro magma chamber. That became one of my first publications.

Those small and relatively shallow earthquakes have not left me alone. In Georgia, I discovered that many of the earthquakes were near-surface events and so I continued to think about their explanation. Finally after many years, some publications, and the help of many students, I have put an explanation for the mechanics of shallow and induced earthquakes into a paper.

"The Mechanics of Natural and Induced Shallow Seismicity: A Review and Speculation Based on Studies of Eastern U.S. Earthquakes" will appear in the *Bulletin of the Seismological Society of America* in 2019, doi:10.1785/0120180134. The many principles and ideas presented in the paper could also be relevant to the Socorro seismicity. The qualification of the paper as *A*

Review and Speculation was a concession to the editor's reluctance to publish concepts deviating somewhat from conventional contemporary thought.

1970s

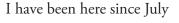
Nancy Bilderbeck (B.S. Biology, 1976) and *Mitch Bilderbeck* (B.S. Petroleum Engineering, 1977) have made London their home since leaving NMT.

Mitch works for Gaffeney, Cline and Associates, a division of Baker Hughes...but retirement is fast approaching. Nancy retired from Primary School Teaching in 2014 and stays active doing charity work. She is a guide/caddie for England and Wales Blind Golf and this season her golfer, Jason Bastable, WON the World Championships held in Italy! Nancy also oversees the care of an allotment and sculpture garden in Oxford.

Nancy and Mitch are avid golfers and travel back to NMT each September to support the President's Golf Tournament. Nancy is also working with NMT to increase the number of student applications from women and minorities.

Both are thrilled with the recent Alumni Relations developments spearheaded by President Wells and appreciate the opportunity to "give back to NMT" as Tech has given them so much since graduation!

Michael DeLollis (B.S. Chemistry, 1973). I earned my M.D. from UNM in 1977. I am currently teaching psychodynamic psychotherapy to psychiatric residents at Samaritan Health Systems in Corvallis, Oregon.





2016, after 25 years in private practice of general adult psychiatry in Fresno, California.

In this position 60% of my time is teaching and 40% is patient care. Corvallis is a beautiful university town of 60,000 inhabitants on the west bank of the Willamette River in the farming and logging country of central Oregon. For now it is very green.

However, if global warming doesn't kill us the big earthquake will (I understand the latter thanks to Geology 201 and Christina Balk).

David Elsbernd (BS Biology, 1976) I've been busy lately acquiring a string of DNFs. That's 'Did Not Finish,' which means I failed to finish a race in the time allowed (I run ultramarathons).

For instance, I got lost at the Moab 240 in 2017 and finished an hour over the time limit. Getting old, maybe? But I do have a finish at Western States 100 in 2018, as well as finishes at several shorter races. As for my family...they think I'm nuts!



For those who remember that I had little athletic talent while at Tech, that hasn't changed. Instead, I've discovered we all have the evolutionary ability to run very long distances; we've just become farmers and merchants and scientists and have forgotten that as a species we have amazing endurance abilities. I'd encourage everyone to go out and exercise their abilities, even if it means just walking around the block every day.

Randall "Randy" Hanson (B.S. Geology, 1976) I retired from the U.S. Geological Survey back in January, 2018 after 37 years as a research hydrologist, and started my own consulting firm One Water Hydrologic, LLC. We offer modeling and climate analysis services with our new USGS code called One Water.

Still playing and writing lots of new great music with

my San Diego-based band MohaviSoul after the release of our third CD, "Hometown Blues" in August, 2017. Anne and I are enjoying being empty nesters and have been taking a few trips too!!



A reunion at the Hansons' with some NMT alumni and other friends in 2017: front row (l to r) Randy Hanson, Caitlin Rother, Anne Shaw-Hanson, Anna (Marshall) Nelson, and Tom Dillon; (back row) Joe Stewart, Geza Keller, and Larry Nelson.

Kenneth "Ken" Kloska (B.S. Environmental Engineering, 1974) The big day came on April 1, 2018, when I retired from full-time employment with Freeport McMoRan. It was a long time in coming and after almost a year and a half spent mentoring my successor, out I went.

Relinquishing my corporate environmental director's role was not easy, but it was time to let someone else do the globetrotting. What a great feeling! The new



role as a retired guy has exceeded my expectations and has opened many doors on the world.

More time to spend with my wife of 43 years, Beth, and my five grandchildren. Much more time to expand our RV'ing career. And especially more time to ski. We plan to remain in Colorado and recently purchased a new home in the Redlands area of Grand Junction. Milder climate there and it is wine country. We expect to visit

the Denver area frequently, as the grandchildren are all there, and keep our Morrison house for a while.

Beth and I visited the NMT campus in April 2018 and met with Dr. Mojtabai and Dr. Chavez (both Mineral Engineering) for an hour to catch up on future directions the Environmental Science program at NMT will be taking, and I gave my input on the needs of the mining business from my perspective. The program is in very, very good hands.

Those of us who graduated from NMT in the 1970s must keep in touch with each other. Those years at NMT during the early and mid-1970s were priceless and I remember everything like it happened yesterday. Looking forward to seeing some of you at NMT's alumni reception during the SME/CMA conference in 2019 in Denver!

1980s

Peter "Pete" Copeland
(M.S. Geology, 1986) is a
Professor in the Department
of Earth and Atmospheric
Sciences at the University
of Houston. His research
focuses primarily on
continental tectonics and
has allowed him to travel to
the Rockies, the Himalayas,
the Caribbean, Africa, and
Europe.



From 2001-2004 he was the editor of the *GSA Bulletin* and in January 2019 he begins a term as the editor of *GSA Today*. He is the author of *Communicating Rocks:* writing, speaking, and thinking about geology (2012, Pearson).

For many years he taught the UH geology field camp in the Silver City area and enjoys introducing his students to the wonders of the geology of the land of enchantment.

He lives with his wife, Beth, in Houston, where he enjoys woodturning and sailing in Galveston Bay.

Editor's Note: Mr. Copeland's "Ode to the Reunion, 2017" appears at the end of this issue, page 34.



John Laskin (M.S. Geochemistry, 1982) visited Rapa Nui (Easter Island), Bolivia, and southern Peru in 2017.

Along the way he visited a silver mine in Cierra Rico, Potosi, Peru (above).

He braved the North Yungas

Road, El Camino De Muerte (above).

Other stops included Fish Island at the Uyuni Salt Flats, Bolivia, and Colca Canyon, Peru (with a view of the erupting Sabancaya Volcano).

Sean Lynch (B.S. Physics, 1985) currently works as a systems analyst on the largest data warehouse of commercial medical claims in the United States. He has been an employee of the non-profit Blue Cross Blue Shield Association (BCBSA) for 10 years, spending the last eight years doing data analysis



and systems design on the National Data Warehouse and its Blue Health Intelligence line of products.

Sean spends his spare time racing sailboats on Lake Michigan in Chicago and commuting to and from work by bicycle (only occasionally getting hit by cars). *Major life change:* In the Fall of 2018 Sean's son, Charles Lynch, started his freshman year at New Mexico Tech, majoring in Electrical Engineering.

Dr. Vannetta Perry (MS Chemistry, 1986) retired from public school administration in 2017 and is now a certified professional travel director and guide for Road Scholar. She will be leading Road Scholar Southwest US group tours in 2019 and is available to lead private domestic and international groups. Her favorite places to lead group travel include Cuba, Brazil, Mexico, and Ghana.

Dr. Perry is on the Board of Directors of the Middle Rio Grande Economic Development Association and the Board of Directors of the Alumni Association.



She spends most of her time traveling, visiting her three children and five grandchildren (*shown above sharing the excitement of science, and Einstein, with granddaughter Quincey*), kayaking, rafting, hiking, and seeing and learning about unique, off-the-beaten path locations for her next tours!

1990s

Ellen (Limburg) Santistevan (M.S. Geology, 1990) I have come a long way from my days as a grad student in geology. The political climate under which I graduated was one of governmental cutback, particularly in the Department of the Interior, and my incipient career at the USGS fizzled out pretty rapidly.

I spent a pretty long time working from home, raising children, and learning about/working in construction, artwork, and permaculture.

A personal epiphany in 2009 led me down a new path in the healing arts, and now I am a fairly well-established massage and craniosacral therapist in Albuquerque.

I love doing this work because, in many ways, I get to use the same investigative skills as I did doing research.

I love the analytical aspects of bodywork, especially in cases of complex medical diagnoses and trauma. I have developed a capacity for subtlety and for listening more than speaking.



Also too, there is so much that remains unexplainable and yet effective (such as "energy work"), and the mysteries of that continue to intrigue me every day. I am still pursuing advanced studies in craniosacral therapy; I find it the most profound way of therapeutically interacting with all kinds of people.

Karen Stafford-Brown (B.S. Environmental

Engineering, 1997)
joined the DallasFort Worth office of
Wade Trim as a Senior
Project Manager for
Municipal Services in
October 2018. She
will be responsible for
coordinating water /
wastewater and roadway
projects for public sector
clients in the Texas
market.



2000s

Furqan L. Chiragh (B.S. Electrical Engineering with Minors in Math & History, 2006) is a Principle Laser Engineer at NASA's Goddard Space Flight Center. He worked on the Ice, Cloud and land Elevation Satellite (ICESat-2) mission which implemented a green laser for LIDAR measurements of the Earth's Polar Ice Caps. ICESat-2 launched on September 15, 2018.

More recently, Furqan was selected to be one of three laser engineers to build three lasers for NASA's Global Ecosystem Dynamics Investigation (GEDI) LIDAR.

GEDI is a full-waveform Lidar which will be attached to the International Space Station to provide the first global, high-resolution observations of forest vertical structure.

Furqan has an M.S. in Electrical Engineering with a concentration in Opto-Electronics from the



University of New Mexico (2008) and an MBA from the University of Maryland (2016). He currently resides in Northern Virginia with his wife, Hibah, and two children, Huniyah & Zayd.

Phyllis "Geree" McDermott (Bachelor of General Studies, 2001). After graduating from New Mexico Tech in 2001, my husband Jim and I moved to Mountainair,



NM where I opened an art studio/ gallery. I belonged to the Art Council and organized the Functional Art Show in 2005, and the following year I organized the Mountainair Studio and Gallery Tour.

But being from California and landlocked in New Mexico, we missed the ocean, so in 2007 my husband and I decided to move back to the beach. We wanted to buy a house with a view of the ocean, but we could not afford California house prices so we explored the idea of moving to South America.

We studied Brazil, but we decided on Chile because is very much like California. Five days after we arrived, we bought a house on the central coast with a fabulous view of the ocean. We are very happy here.

In 2011, I lost a breast to cancer and endured a year of chemotherapy. When I began to feel better, I started writing as a form of therapy; I had a great deal of anger to release, and writing helped immensely. What emerged is a thriller suspense novel called, "The Swirling

Red Mist: A Tale of Murder." It is about a sociopath/psychopath who moves into the affluent Cedros Avenue Design District in Solana Beach, CA where she has acquaintances, a new career, and escalating mental illness. She is easily frustrated and kills on impulse, and each murder appears to be an accident. No one suspects murder and her confidence builds as she delights in the thrill.

It was my way of killing cancer, but we all know that is impossible. It is available on Amazon.com. I have also published a collection of my hand-drawn artworks, "Colorific Abstracts," also available on Amazon.com.

Amber (Owings) Wedehase (B.S. Basic Sciences, 2004). In 2003, I met my future husband, exchange student *Thomas Wedehase* from Germany, in the Tech Gym. I moved to Germany with him in 2005; we have been living in Loerrach (on the Swiss border) since 2006.

I began my work life in Germany with temp jobs, but had a bit of luck when I received the chance to work in the Quality Department at a company called A. Raymond GmbH in 2008; they make metal and plastic parts for cars.

Our daughters came in 2010 and 2015, respectively. I now work half-time and am busy in the Parent/Teacher groups in both the kindergarten and the elementary school.

Since 2017 I have been certified as an English as a Second Language (ESL) teacher.

2010s



Mika Myers (B.S. Chemical Engineering, 2014) was recently a recipient of a NASA Engineering and Safety Center award for engineering excellence.

A member of the Office of Safety and Mission Assurance (OSMA), she was involved in an environmentally-assisted cracking of weld samples of the commercial crew program.



Addison Veitch (B.S. Biology with Minor in Chemistry, 2016). I worked for 2 years at MountainView Regional Medical Center in Las Cruces, first as a Nurse's Aide, then as an Anesthesia Technician in the surgical department. I am currently attending the Frank H. Netter,

MD, School of Medicine at Quinnipiac University in North Haven, CT in pursuit of my Master of Medical Science in Anesthesiologist Assisting, class of 2020.

I am planning to return to New Mexico to practice in my hometown of Las Cruces, and hoping to get involved in developing programs at Burrell College of Osteopathic Medicine at New Mexico State University. I'm also hoping to keep a close proximity to New Mexico Tech.

Jared Waalkes (B.S. Biology with Minor in Chemistry, 2015) and Patrick "PJ" Trujillo (B.S. Chemistry, 2015) (left to right) met by chance in 2010 when they were assigned to be roommates in NMT's South Hall dorm. Staying fast friends throughout their schooling, they both graduated in 2015 and separately made their ways to Portland, Oregon shortly after.

The duo currently performs regulatory testing for cannabinoid products within the Oregon recreational market at a lab called ChemHistory, LLC. The two have found that the education and experience they gained at NMT were in high demand in the private sector.

Over the past two years they have worked their way up to becoming integral leaders of ChemHistory and figures of note in the Oregon recreational industry.



Multigenerational!

Three generations of Techies! Left to right - *Dylan Merrigan* (B.S. Electrical Engineering, 2009), *Laura (Dwyer) Merrigan* (B.S. Biology, 2009), and *Tim Merrigan* (B.S. Computer Science, 1976).

Future Techie *Maxwell Merrigan* (Class of 2040?) was born in April 2018.



2018 NMT Holiday Events

New Mexico Tech held several holiday events in December 2018.

On the 4th, forty NMT carolers brought holiday cheer to campus for the Jingle Jam. The evening concluded with the lighting of the NMT trees and (of course) fireworks.

On the 6th (the night before Fall Finals started), Santa visited campus - Santa, an elf, and a polar bear handed out treats at the Library, the Dining Hall, and at Math Extravaganza in the Office for Student Learning.

On the 14th, about 800 attendees (employees, families, and friends) had an enjoyable evening of dinner, music,



activities for the kids, and a raffle drawing at the annual employee holiday party.

in memoriam — alumni

George Anthony Aulisio (B.S. Mining Engineering, 1974) passed away peacefully June 26, 2018. He was born May 10, 1951 in Washington, DC to parents Leo

and Helen (Morris)
Aulisio. George grew
up in Greenbelt, MD.
After he graduated from
New Mexico Tech he
moved to Moundsville,
WV to begin his mining
career; there he met
and married Lucinda
"Cindy" (Hensley). His
career took them to
California, Colorado,



Saudi Arabia, and the Marshall Islands. Over time the family grew to include three children. Throughout his career, he and his family enjoyed traveling the world and visiting dozens of countries.

George had a zest for life - every day was an adventure to him. He held several US patents for coal mining apparatus methods. He was a selfless person with a kind heart for everyone. He would strike up lively conversations with total strangers even in foreign countries. He was an avid musician, playing guitar and keyboard in many local bands -his first band was in high school. He played at his sister's wedding, and his band played at his own wedding. Along with his band Rim Rock, he played at the US consulate in Saudi Arabia.

Left to treasure his memory are his wife Cindy; sons Nicholas and Thomas (wife Nicole); daughter Denise Settles (husband Robby); and grandchildren Gia, Luke, Gage, and Lachlan. He is also survived by his brothers Leander, Callixtus (wife Linda), and Julius (wife Terry); sister Rosemarie Garcia (husband Rob); and numerous nephews and nieces.

Elizabeth Ann Brunn (B.S. Biology, 1982) was born October 14, 1961 in San Francisco, CA to Robert &

Margaret (Carr) Brunn. She passed away suddenly at her home in Lincoln City, OR on October 5, 2017.

First Lt. Sonagnon Dabli (M.S. Environmental

Engineering, 2017), a bioenvironmental engineer at Keesler Air Force Base, Mississippi, died August 21, 2018. Dabli, a native of Benin, Africa, joined the Air Force in January 2018 in San Diego. He was assigned to the 81st Aerospace Medicine Squadron at Keesler. The 81st AMS



Bioenvironmental Flight ensures occupational and environmental safety standards are upheld to ensure the health of the more than 14,000 Keesler personnel and their dependents.

"We are deeply saddened by the loss of Lt. Dabli," said Col. Lance C. Burnett, vice commander of the 81st Training Wing, in a news release. "Sonagnon was relatively new to Keesler and the Air Force, but his infectious personality was known to whomever he met, and he was a treasured member of the 81st Training Wing. Our thoughts and prayers are with his family and friends."

Kady (Crist) Elkins (M.S. Biochemistry, 1992) passed away on April 19, 2018. Wife, mother, nurse, and adventurer, Kady was taken from us in a shockingly fast departure by the ravages of breast cancer. Kady fought an inspired battle against the disease but it was all for naught. Kady was known by many and was an inspiration to all who knew her.

Kady was born in 1960 in Torrance California and spent her formative years in Albuquerque, New Mexico; she is survived by two brothers, Peter and Matt Griswold of Houston, TX. Kady and her husband of 25 years, Bob Elkins, were blessed to have two children together. Kaynan Elkins is a student/cadet at the Great Lakes Maritime Academy at Northwestern Michigan College, and Sydney Elkins is a junior at Grand Valley State University. Kady was also stepmother to Amber Elkins Soto, mother of Kaleb and Jude Soto, and Erin Elkins Sclafani. All of the children and her husband were by her side when she passed away on a beautiful sunny afternoon, overlooking her beloved Lake Michigan.



Kady was the heart failure nurse in the Heart and Vascular unit at Northern Michigan McLaren Hospital. Kady performed her job with great character and professionalism. She was often the one they sent in to a patient who needed a translation of what the doctor had just told them. Kady instinctively knew how to handle each individual and could explain to them in common English what they might expect going forward.

Kady loved Northern Michigan. Living on Sturgeon Bay, Kady loved the beach, her loons, and hiking with her dogs (Cody and Maggie) in the woods and trails around Cross Village. She was a powerful hiker. In her earlier years she served in the Peace Corps on the island of Yap in Micronesia in the South Pacific (the Yapee people called her "Woman who walks strong like man!").

Kady had many passions in life. If you would like to donate towards one of her causes, please consider "Kady's Climb" (benefiting McLaren Hospital's breast cancer foundation).

Richard Wayne Harrison

(M.S. Geology, 1980, and Ph.D. Geology, 1990) of Amissville, VA, died December 19, 2018. Dr. Harrison earned a B.A. in Mathematics in 1971 from Westminster College in Fulton, MO, before serving in the United States Navy. He then obtained his



B.S. in Geology from SE Missouri State University in Cape Girardeau, MO, followed by an M.S. and Ph.D. in Geology from New Mexico Tech. He worked in the mining & exploration industry from 1980-1990, then was employed as a geologist with USGS for 23 years, allowing him to travel and map the world's geological features.

Richard was an avid outdoorsman who enjoyed hiking, camping, trips to the beach, and gardening. He prized his personal collection of rocks and minerals collected during his travels. He was a lifelong fan of the St. Louis Cardinals, who won the World Series on his 57th birthday in 2006.

Richard, son of the late Robert B. Harrison, is survived by his mother, Tena Harrison from Fulton, MO; brothers John and Jim Harrison, also from Fulton; his sister, Nancy Gravemann from St. Charles, MO; daughters Caitlin Harrison and Jessica Stevenson from Richmond, VA; son-in-law, Ryan Stevenson; granddaughters Freya and Josephine Stevenson; and stepchildren Elena and Pavel Josan.

Richard's family will receive friends at Duck Run Natural Cemetery in Harrisonburg, VA, on Saturday, March 23, 2019 from 11:00 am to 1:00 pm for a celebration of his life.

Howard Criner Hodges (B.S. Geology, 1957) was the youngest of three children born to James Harris Hodges and Ruble Scroggins in Tucumcari, NM. He graduated

from Tucumcari High School in 1952 and from his beloved alma mater, New Mexico Institute of Mining aned Technology, in 1957.

He enlisted in a Critical Skill program and went through Marine Corp Boot Camp in San Diego followed by seven years in the reserves.



Through his career as a petroleum geologist, he worked for a number of oil companies in New Mexico and Texas before semi-retiring to work periodically as a very successful independent consultant. Full retirement came in 2000 with a move to Grand Junction, CO.

Howard was diagnosed with Lewy Body Dementia in 2011, and resided in The Courtyard Care Center and Larchwood Inns for four years before passing on January 12, 2019, in the wonderful care of HopeWest Hospice.

He is survived by his loving wife, Shirley Feilbach Hodges, and three children: Matthew Howard Hodges, Philip Andrew Hodges, and Susan Eileen Hargis. Also surviving him are three grandsons and several nephews and nieces.

Memorials may be directed to HopeWest Hospice Care Center, 3090 N 12th St., Grand Junction CO 81506, or the Lewy Body Dementia Association.

Alice "Cookie" Jojola (Bachelor of General Studies, 1991), a resident of Los Lunas, NM, passed away on June 19, 2018, surrounded by the love of her family and loved ones.

She was a proud graduate of New Mexico Tech and earned her Masters from UNM. Alice worked for Socorro Consolidated Schools, where she was able to touch many young lives.



She will be missed by family and many friends. Alice is survived by her loving husband Sam Jojola, daughter Theresa Marquez, and many grandchildren and greatgrandchildren, who she loved dearly.

Ode to the Reunion, 2017



by Pete Copeland (M.S. Geology, 1986)

It was the tail end of May when we all made our way to that place where we'd been long before,

Where we hoped to see, 'neath those cottonwood trees, many old friends we'd come to adore.

And as the sun got so high in that Saturday sky, one arrival came fast on another.

And oe'r the cracking of beers, one could well hear the cheers, of "oh my gosh, how the hell are you, brother?"

From one group to the next, not a soul there was vexed, with each heart lifted and bright.

Oh, there's Kevin, there's Barbie, there's Greg, Chris, and Marcie, and from each shone a wonderful light.

Some were the same, others a bit changed; here and there with the black turned to gray,

But with memories sublime — do you remember the time? — all the decades just melted away.

In the four 'o clock hour we summoned the power but it had been at least twenty years since

Some, if not all, had played any softball and this time no one swung for the fence.

Yet despite the long while, there was a field full of smiles, though the quality this side of heaven,

And in reunion lore, we'll remember the score — a close one — Geos 8, Hydros 7.

Then the chatting went on as great stories sent on new laughter and old recollections,

Each conversation, without complication, highlighting long-standing affections.

Then we rose from our seats — it was time to eat! — and Hemi took charge of the grill,

And we had a great time while standing in line at El Rancho de Nelia y Bill.

Then as the moon shown its light on that Saturday night, the projector was turned on the wall

As Charles, Steve, and Tina showed many a scene. Ah, a good time was had then by all.

Then with bonfire lit, the group felt close-knit and the evening just ended too soon,

But before it was done we had all shared great fun and some tales of the vinagaroon.

Then as dawn broke on Sunday we knew that a fun day was clearly still part of the plan

With brunch and a dinner the day was a winner with a trip past alluvial fans,

And after 30-odd years there were just happy tears and our friendships so finely reflect

That 'round' 85 it was great to be alive and enrolled at New Mexico Tech.

the last word

meet our new advancement & alumni relations team members!

Rachel Montoya Alumni Relations Manager



Born and raised Magdalena, NM

Education

B.F.A., emphasis in graphic design and photography; NM Highlands University

Why return to this part of New Mexico?

I wanted to be close to my family

Recent employment / life

NMT Auxiliary Services, graphic designer NMT Academic Center for Technology (ACT), smart classrooms manager

Most enjoyable surprise of this job

Alumni stories about NMT's past (they could come from movies!) and seeing the results of their education.

Biggest challenge of this job

Creating programs from the ground up. Laying a path for current students and alumni.

Favorite parts of this job

Developing the Young Alumni program: planning activities (Balloon Fiesta, Bosque del Apache)

Developing the Science & Exploration program for alumni (note: 5th trip added! Watch your email for details)

Meeting alumni and learning about their lives during and since their NMT days: their successes, challenges, stories, and memories

Megan SchwingleMajor Gifts Officer

Born and raised

Outside Roswell, NM, on a cattle ranch

Education

B.A. Political Science; NMSU M.A. Public Administration, concentration in nonprofit management; University of Colorado at Denver



Why return to New Mexico?

I wanted to be near my family

Recent employment / life

Leadership NM (state non-profit focusing on adult education issues), communications
Married an NMT alumnus last year (B.S. Electrical Engineering, 2014, now working toward an M.S.)

Most enjoyable surprise of this job

Meeting the high-caliber graduates of NMT and learning about their successes.

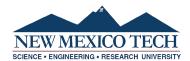
Biggest challenge of this job

Developing a program with new initiatives and activities need flexibility, energy, and creativity

Favorite parts of this job

Making NMT's history, stories, and accomplishments known to more of the world

Keeping alumni involved and connected – this really is about the New Mexico Tech family!



New Mexico Institute of Mining and Technology 801 Leroy Place Socorro, NM 87801

www.nmt.edu/advancement www.nmt.edu

