



SCHOOL OF ENGINEERING



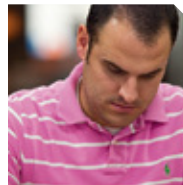
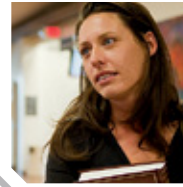
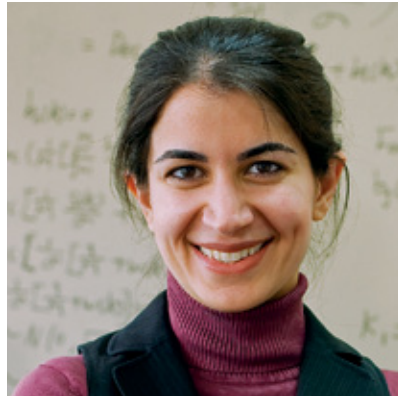
CHANGING WORLDS

—◆ the CAMPAIGN for UNM ◆—



# CHANGING WORLDS

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## —◆ THE SCIENCE OF INGENUITY, THE ART OF SOLUTIONS ◆—

Engineering is justly celebrated as the discipline at the core of designing, building and maintaining a more productive, more sustainable society. Worlds don't change without the science and art of making things work, and UNM School of Engineering is home to some of New Mexico's—and America's—most inventive people and innovative projects.

For more than 100 years, UNM School of Engineering has educated professionals who have contributed so much to New Mexico, our nation and the world. Our infrastructure, our businesses, our economic prosperity—each of these owes much to engineering and computer science, and our future will be shaped by the forward-looking engineers and scientists engaged in everything from our vital transportation network to the complex machinery, systems and grids that power our lives, and from groundbreaking nanotechnology to inspired biomedical and information breakthroughs.

Today's focus at UNM School of Engineering is on the process of shaping a better, more sustainable

tomorrow. The alumni, faculty and students of the School both clarify and implement that focus, with the understanding that an extraordinary number of uphill battles face our society, and with a powerful commitment to the cutting-edge engineering practice and computer innovation that define the science of ingenuity and the art of solutions in our truly interconnected world.

But even after a century of success, the School is not immune to funding shortages, greater demands and international competition for the best and brightest students, teachers and researchers. We need your support and generosity to continue to improve and deliver relevant, cutting-edge academic programs, perform innovative research and graduate the talented engineers and scientists who will join our successful alumni. A vision is in place for the future of engineering and computer science, and now is your moment to invest in and help power that vision.

⇒ **UNM SCHOOL OF ENGINEERING** ⇐

*Changing Worlds Today*

With its unique blend of internationally acclaimed teaching and research and a diverse, highly motivated learning community, UNM School of Engineering stands apart. It is the nation's only engineering school located at a university that is ranked in both the prestigious "Carnegie Very High Research" category as well as at the top of America's "Hispanic Serving" institutions. With more than \$31 million in research funding annually, the School builds upon its interdisciplinary collaborations, and its proximity to the country's leading national laboratories, to change the landscape of discovery and implementation.

The School is showing the way with dramatic advances in nanotechnology, biomedical engineering and biocomputing, environmental restoration and rehabilitation, national security, computer information technology, intelligent systems, robotics—the list is long and exceptional. At the same time, an internationally prominent faculty with real-world experience engages and inspires some 1,700 students. The result is the impressive group of engineering and computer science graduates who will continue to change our lives.

*Changing Worlds Tomorrow*

UNM School of Engineering has identified priorities where your support will power the greatest change and address the most urgent among many needs. We invite you to share our vision and step forward to enable the future of engineering and computer science and the solutions they provide in New Mexico and beyond.



Most of the School's students require some form of financial aid to complete their degrees and begin their careers. There is a critical need for **Endowed Student Support**, which will enable the School to recruit and retain the brightest students, regardless of their economic backgrounds. These are the vital funds that ensure exceptional talent and hard work translate into the engineering professionals who will build New Mexico's future and help power our economic prosperity.

There is also a corresponding need for **Endowed Faculty Support**, because the best and brightest students require us to continue to recruit and retain the best faculty, mentors and researchers. With your support for both students and faculty, you set in motion an upward spiral of learning, research and achievement that will fuel ingenuity and solutions for generations to come.

This essential funding for teaching and learning leads to a third critical need: cutting-edge laboratory and education infrastructure. **Renovation of Engineering Buildings and Laboratories** will enable us to better educate our current students and better compete for those to come. The renovation and construction of teaching and laboratory space are among the most costly efforts at the School, requiring the most modern engineering tools and technologies to enable productive learning and cutting-edge interdisciplinary research, and we can only accomplish it with your help.





 **Fiore Industries Inc.**  
Making technology come to life.

“With both training and inspiration, the School made it possible for me to accomplish my goals, build a business in our community and create new technologies.”

## CHANGING HIS WORLD

—◆ Bill Miera ◆—

Imagine that instead of engaging in a dangerous high-speed chase of a fleeing vehicle, law enforcement could use high-power microwave technology to kill the engine of the suspect’s car. Imagine that, in the event of a terrorist attack using toxic chemicals or biological agents, responders could use focused microwaves to irradiate and destroy the toxic agent, minimizing the scope of the attack. These are just some of the technologies being developed and tested at Fiore Industries, the leading-edge company founded by a local kid who once discovered that he liked math and science. Imagine that.

Bill Miera put himself through UNM School of Engineering, earning bachelor’s and master’s degrees in mechanical engineering, with a concentration in robotics. Along the way, his eyes were opened by teachers and mentors like former Dean Bill Gross, whose course in entrepreneurial engineering convinced Miera that not even the sky was the limit.

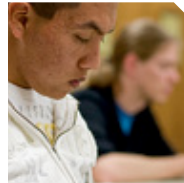
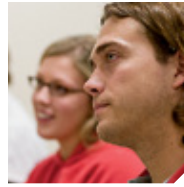
“At UNM, I had the opportunity to spend a semester working at Rockwell International, building engines for the Space Shuttle,” Miera says. “I also had the opportunity to work at the Air Force Research Laboratory, which turned

me on to R&D and set the course for my career. With both training and inspiration, the School made it possible for me to accomplish my goals, build a business in our community and create new technologies. It didn’t just change my world, it changed worlds for the people I employ, the clients I work with, and the people we’re able to help our clients serve.”

Miera worked on high-level projects at Rockwell for nearly a decade; then with a dream, a second mortgage, his retirement fund and a few maxed-out credit cards, he founded the successful company he runs today. He also helped found and lead the UNM chapter of the Society of Hispanic Professional Engineers, which helps young kids (much like the one he once was) find successful careers in engineering. You could say that while his company develops technologies to make bad things stop, Miera gives equal time to making good things begin.

How many worlds, small and large, will School of Engineering alumni transform, and will yours be one of them? With your support, the answers are “many” and “yes.”





## —> WHOSE WORLD WILL YOU CHANGE? <—

Many of today's practicing engineers and computer scientists can remember being thrilled and inspired by the Apollo missions and the landings on the moon. Looking back more than 40 years, these endeavors were responsible for huge technological leaps forward—on an almost weekly basis. Engineers and computer scientists were breaking new ground with extraordinary confidence, ingenuity and success. Space exploration was a classic example among many, from Hoover Dam to the internet to nanotechnology, of innovators' changing our world and enhancing our lives.

Today's students are every bit as passionately focused on this planet's future as many of us once were on the journey beyond. Sustainability, energy resources, water resources, nano- and biotechnology, information access and security—these are the new

frontiers for our students on a shrinking planet with growing challenges.

As well as addressing global issues, the School's priorities are led by our mission to educate the professionals who will help the community create jobs and opportunities for our citizens. Exciting opportunities surround us, in emerging fields, business and entrepreneurship—and we must pave the way for even more. This is where your support is so critical. What funding does come to UNM from the state must go first to providing access to education. Providing quality of education falls to the community—both educators and donors. By generously supporting our students, faculty and facilities, you help us offer that quality of education, which will lead to innovation and economic development benefiting everyone.



## —◆ CHANGING WORLDS: THE CAMPAIGN FOR UNM ◆—

Can one gift change our community? How about one student or one professor, one aha! moment or one life saved or one new building?

We're absolutely sure the answer is yes, because we have seen it happen. It's been happening on this campus, in fact, for 120 years. We're sure because we know that it only takes one passionate idea to change a community. And because we know the power of your vision and generosity.

That, in one leap of faith, is the true definition of *Changing Worlds: The Campaign for UNM*.

To move the world, Archimedes said he needed a place to stand. To change the world, you need to take a stand. The University of New Mexico is the flagship—the place that will transform New Mexico, and indeed the world, by crafting a new paradigm of

health, education, knowledge, harmony and prosperity for our multicultural society. Through the force of your conviction and giving, UNM will emerge, grow and transform. And so will you.

Together we will change endless worlds, student by student, teacher by teacher, idea by idea, breakthrough by breakthrough. And gift by gift. To change lives, you must first believe, then act. Today and tomorrow, UNM is the pathway for that action, and the hope for that change.

### *How You Begin*

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