

Summer 2002

Nova Quarterly: The University of Texas at El Paso

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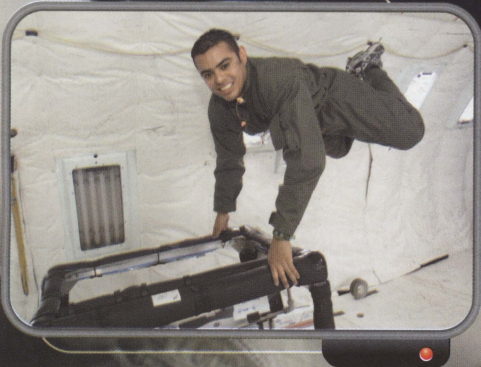
The University of Texas at El Paso University Communications, "Nova Quarterly: The University of Texas at El Paso" (2002). NOVA. 117.
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SUMMER 2002

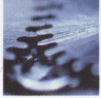
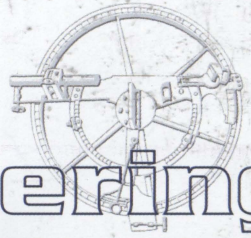
NOVA

QUARTERLY
THE UNIVERSITY OF TEXAS AT EL PASO



Zero-G
Labs in
Space

UTEP and the Changing Face of Engineering



***UTEP's
engineering
programs
continue to
be among
the best
known and
most highly
regarded on
this campus
today.***

As all our alumni will recall, UTEP was founded in 1914 as the Texas State School of Mines and Metallurgy, the third component to join the University of Texas System, after UT Austin and the UT Medical Branch in Galveston. The location of a mining engineering school in the far western part of Texas responded to the growing mining operations in southern New Mexico, Arizona and northern Mexico, and the smelting and refining industries that were associated with them.

Our first graduates completed their mining engineering degrees in 1917. They, and a majority of our graduates for many years thereafter, assumed leadership roles in mining and refining operations throughout the southwestern United States and Mexico. The university's mascot, Paydirt Pete, and our "Miners" name are enduring legacies of those early mining school days.

Another enduring legacy of those early days of the College of Mines is the strength of our academic programs in engineering and science. UTEP's engineering programs continue to be among the best known and most highly regarded on this campus today. Our traditional strengths in engineering and geological sciences continue to be recognized in national publications and awards, and faculty and students continue to compete successfully—and to collaborate—with their counterparts at universities throughout the world.

Inserted in this issue of *NOVA Quarterly* is a brief publication that welcomes readers into the labs of today's College of Engineering. It was prepared for presentation to industrial partners of the college who regularly recruit our engineering graduates, and whose investment in our programs will ensure that we continue to prepare outstanding graduates in the future. We thought that all of our alumni, and especially our many engineering alumni, would be interested in the College of Engineering's story. And, of course, we are interested in your feedback and reactions.

Engineering programs at UTEP have changed dramatically since 1914, keeping pace with the enormous technological and economic changes. In fact, UTEP is a different university today than it was just a few short years ago. What hasn't changed, however, is our institutional commitment to serve our students well, with the highest quality and most up-to-date academic programs that we can offer.

The success of these efforts to prepare UTEP students is best measured by the success of our graduates...all of you.

Congratulations on your many accomplishments, and thank you for making us proud of you and the UTEP programs that prepared you for your success.

—Diana Natalicio
UTEP President



NOVA

Q U A R T E R L Y
THE UNIVERSITY OF TEXAS AT EL PASO

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Contents © 2002 by
The University of Texas at El Paso
NOVA Quarterly (ISSN # 1041-6900)
is published quarterly by:
The University of Texas at El Paso
University Communications
500 West University Avenue
El Paso, TX 79968-0522
Periodicals Postage Paid at El Paso, Texas
Volume 38, No. 4; No. 150

POSTMASTER:
Send changes of address to:
NOVA Quarterly
The University of Texas at El Paso
1100 N. Stanton Street, Suite 201
El Paso, TX 79902

NOVA Quarterly is sent without obligation to
alumni and friends of the university.

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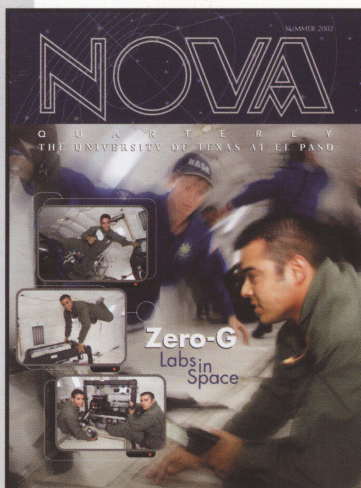
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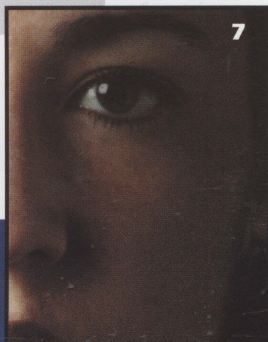
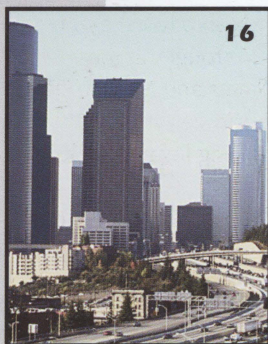
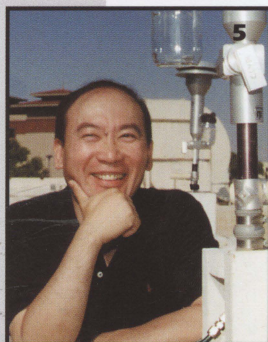
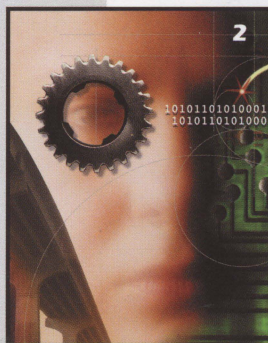
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See NOVA Quarterly on the World Wide Web at
<http://www.utep.edu/nova>.



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ENGINEERING

UTEP AND THE CHANGING FACE OF ENGINEERING

For Jesus Moncada, a simple road trip turns into a lesson about engineering and society. As the civil engineer drives along the Interstate, he comments on the expansion gaps along the freeway, bridges and road structures.

"Most people don't notice the structural marvels that surround us, but engineers notice each of the intricate details," Moncada says. "Engineering is about creating solutions for society — from the way we travel to the way we live."

The two-time UTEP graduate knows the community and its engineering needs rather well. As a researcher, Moncada focused on the desalinization of water for the underserved residents of the *colonias*. As part of his doctoral work, he researches the feasibility of using electrokinetic salt barriers to reduce the contamination of soil, therefore eliminating the need for synthetic or clay liners.

Today, Moncada is an environmental investigator who enforces compliance with state and federal laws. As a doctoral student in the university's environmental science and engineering program, he's gained professional insight into air pollution, water reclamation, geochemistry, and hazardous and industrial waste.

"By encouraging me to become involved in research that directly impacts the community at an early stage in my education, UTEP has prepared me to use the tools of my trade to tackle some of the region's most pressing issues," Moncada says. "The more I travel across the country, the more I discover that UTEP is unique among universities."

Graduates aren't alone in their recognition of the university's engineering programs. Each year, Fortune 500 companies turn to UTEP for talented engineers whose educational preparation and work ethic meet the ever-changing demands of the modern field. During a recent recruiting cycle, more

than 300 companies competed for 150 bachelor of science in engineering graduates.

The recruiters' confidence in the university's alumni has opened the door to additional support. This year, when UTEP embarked upon a multi-million campaign to expand and upgrade the research facilities of the engineering building, corporations and foundations throughout the country generously responded.



The W.M. Keck Foundation of Los Angeles awarded \$1 million to the university's Border Biomedical Manufacturing and Engineering Laboratory where bio-engineers develop anatomically accurate artificial models ranging from human spines to entire cardiovascular systems. The human-centered engineering of the Keck lab is expected to dramatically alter the way doctors approach surgical procedures and how medical researchers analyze blood flow and internal structures.

The cutting-edge laboratory is one example of why national attention — on both sides of the U.S.-Mexico border — is turning to the El Paso's university where excellence in engineering is changing the face of the field.

Fire in Free Fall

By Jessica Powers

What's it like to be weightless? Ask five UTEP undergraduate engineering students who had the experience during a 20,000-foot-free-fall aboard a flight at NASA's Johnson Space Center.

During the flight, Ivan A. Anchondo, Ricardo Gallarzo, Roman Villa and Isaac Estrada tested the effects of low to zero gravity on a new burner designed by UTEP's Combustion and Propulsion Research Laboratory. Enrique Quinones, also a UTEP undergraduate, accompanied the crew as an alternate flyer.

Were there any difficulties?

"During one of the seconds when I was weightless, I floated up above the rig," crewmember Villa explains. "I was afraid I would break a \$42,000 piece of equipment if I fell when

the plane started flying up again. When the plane starts going back up, you weigh twice as much as normal."

While being weightless provided temptation for play, the experiment was priority. After all, for three months the students worked 15-hour days, preparing to conduct the experiment with fire onboard NASA's KC-135 microgravity research aircraft in April, for the NASA's Reduced Gravity Undergraduate Student Research Program. Only two teams were granted permission to experiment with combustible materials.

The "elliptic burner," named for its shape, can reduce the emission of pollutions by 30 percent and increase fuel efficiency by 12 percent, Ahsan Choudhuri, director of the Combustion and Propulsion Research Laboratory, says.

The students built a faultless and highly reliable "rig" or experimental set-up that allowed them

to safely conduct the experiment. "We had to be familiar with a 300-page document explaining the safety procedures," says Choudhuri. "It's a very complicated experiment."

The KC-135 aircraft, aka "Weightless Wonder," flies in a parabolic pattern, climbing to 40,000 feet and then dropping 20,000 feet, simulating microgravity for 29 seconds.

For two days, UTEP students, in teams of two, experienced 40, 29-second periods of microgravity each flight. The data derived from the once-in-a-lifetime experience will be invaluable to their future studies. They learned that fire in microgravity is circular, rather than elliptical as on earth. They also learned about combustion and how to conduct experiments in microgravity, as astronauts do.

Choudhuri would eventually like to experiment on the International Space Station, where there is continual microgravity.



Cross-Country Air Quality

By Jessica Powers

"Air has no boundaries," says Wen-Whai Li, associate professor of civil engineering.

Nations may erect borders, but countries such as the United States and Mexico must cooperate in environmental research because environmental elements impact both communities.

At the Southwest Center for Environmental Research and Policy, Li is the technical director of a binational project that measures the solid or liquid particles in the air. The particulate matter levels are associated with health issues, including the high asthma rates in the Hispanic population.

Ten undergraduate and graduate students at UTEP assist Li in data collection and analysis on both sides of the border at two stations in El Paso and three in Ciudad Juárez. Their research reveals that particulate matter pollution along the border is related more to dust than to vehicle emissions, with peaks between 6 and 9 p.m., as well as during low- and high-wind conditions.

"I wouldn't suggest that people jog at night," Li says. "That is when joggers are likely to inhale more particles."

The four-year project, which concludes this summer, is a lesson in binational cooperation, involving scientists and students from the Universidad Autónoma de Ciudad Juárez; the Instituto Nacional de Investigaciones Nucleares in Mexico City; and Monterrey Tech. The UTEP project has served as a model for Mexico City. The Mexicali Border region is also looking to adopt the protocol and implement similar research.



Building Binary, Binational Communities

By Walli Haley

David Novick came to his profession in computer science in an unorthodox way: he started out as an attorney.

But when he found practicing law wasn't as fulfilling as he hoped, the Harvard-educated lawyer searched out a field where he could solve problems and help people more directly — and after earning a Ph.D. in computer science at the University of Oregon, he began a new career.

Novick, chair of UTEP's computer science department, focuses his research on building systems that make computers more intuitive, useful and safe.

"Computer science holds my interest because it's concerned with problem-solving," says Novick, formerly director of research at the European Institute of Cognitive Sciences and Engineering in Toulouse, France.

"These problems have great significance for the real world. For example, if the time to compute a weather forecast could be cut in-half, people might have more time to evacuate from the path of a hurricane. Or if telephone interfaces could be designed to eliminate those awful, complex menus, then people would be able to do more while being less frustrated and angry."

Novick is putting his philosophy of human-centered computer engineering into practice, developing methods for documentation and operating procedures for airliner cockpits to make sure that pilots can easily understand and follow the procedures required to operate the aircraft safely.

"The techniques I develop include new ways of testing manuals and procedures early in the design process," he says.

UTEP's computer science department, which has doubled in size since 1995 and offers twice the number of majors, has attracted nationally recognized faculty who offer strong research capabilities.

Andy Bernat, Ann Gates and Patricia Teller developed the Affinity Group approach to computer-science education that has made the department a model for other universities. The Affinity Research Group concept and model provides an innovative way to involve undergraduate and graduate students in research and technical activities outside the classroom.

Working with faculty advisers, graduate and undergraduate students research satellite image processing, computer security, robotics, Artificial Intelligence, structural integrity of aerospace structures, neural networks, fuzzy logic, interval computations, quantum computing, software engineering, high-performance computing, and human-computer dialogues.

The students also are developing a program to exchange money electronically via the Internet. Theoretical and applied computer science students are working on grants from the National Security Agency to detect threatening messages in web pages. In these applications, they use algorithms developed by other students and faculty for more peaceful applications such as geophysics-oriented satellite image processing.

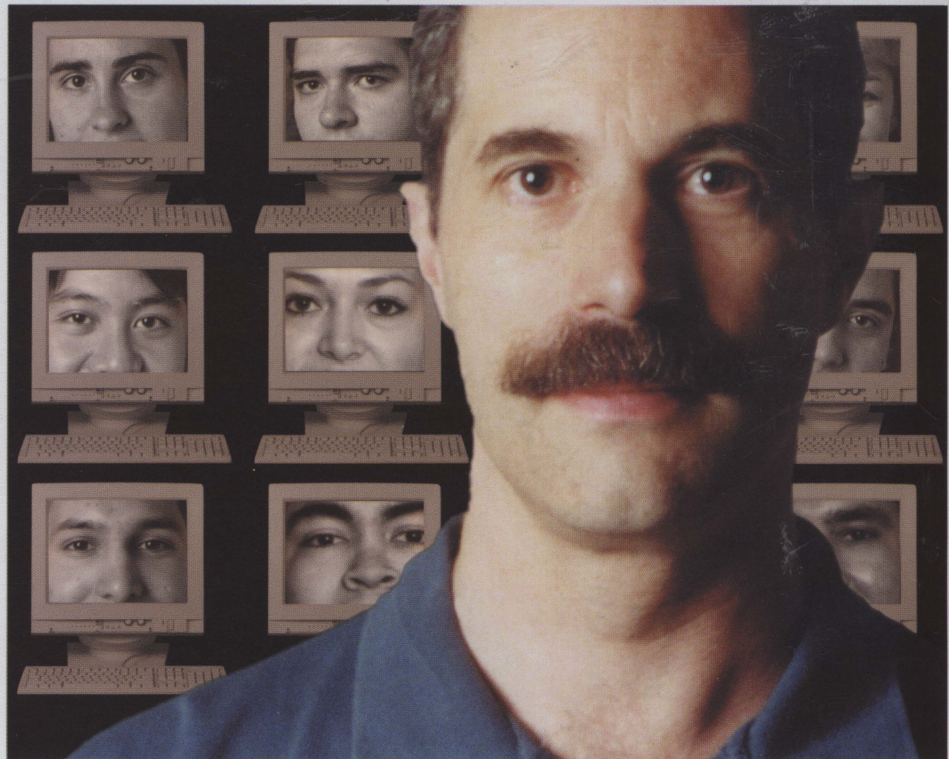
"We mentor our students to help them develop into productive researchers who can one day lead our field," Novick says.

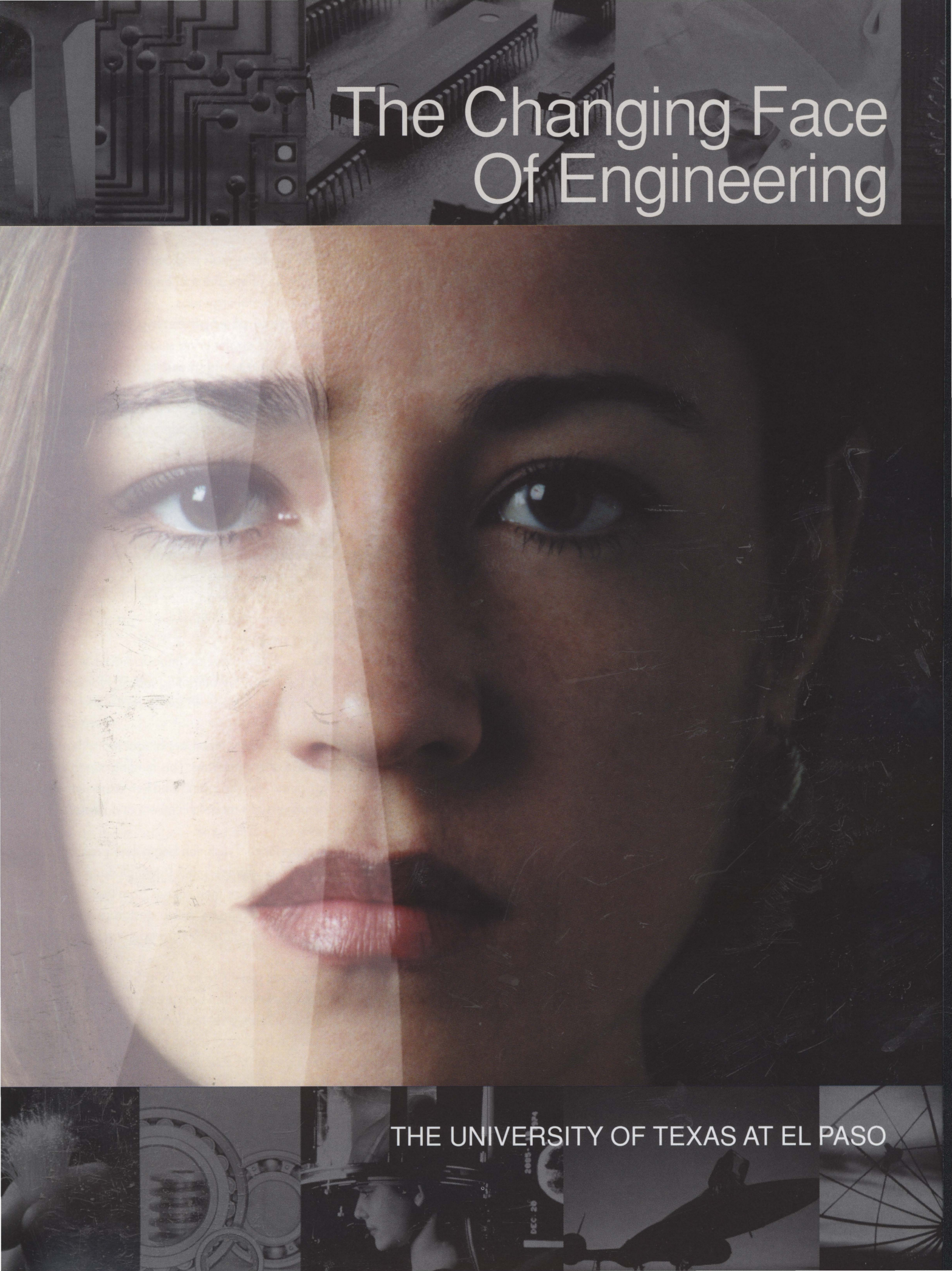
UTEP researchers also are engineering interactive systems that draw from knowledge of human-computer interaction, computational linguistics and spoken-language systems.

In addition to the university's successful advanced degree programs, Novick points to the new master of information technology program, offered jointly with the information and decision sciences in the College of Business Administration that is seeing increased enrollments.

Novick sees his department, which is already working on facilitating the growth of software oriented business in the El Paso/Juárez area, as a key component that can help stimulate economic development along the border.

"We are looking at what we can offer in both education and research," he says. "We want the computer science department to make a difference for UTEP and the border region, and to get there we're developing a long-term strategy for providing value."





The Changing Face Of Engineering

THE UNIVERSITY OF TEXAS AT EL PASO

Although Mexican-Americans are the fastest-growing segment of the population in the United States, only 4.9 percent of bachelor's degrees in engineering were awarded to Latinos. As the largest Mexican-American university in the country, UTEP has earned a national reputation for providing a quality education to all students.

"UTEP is a model for other engineering institutions who say that today's minority young people from low-income families can't succeed in a rigorous math- or science-based discipline.

"If there is commitment from the top and accountability throughout the institution, you can be successful. UTEP is proof. While the number of Latino engineering graduates fell nationally last year, UTEP increased its yield by a third."

— John Brooks Slaughter
CEO, National Action
Council for Minorities in
Engineering

THE CHANGING FACE OF ENGINEERING

At the University of Texas at El Paso, the face of engineering is changing.

Mining has given way to fuzzy logic, digital signals and aerospace design. Bio-engineering is at home among the motors of mechanical engineering and music sings from the purified steel shaped in metallurgy labs.

UTEP students are changing the face of engineering as well:

- Almost 70 percent of the university's engineering students are Latino;
- UTEP awards more bachelor's degrees in engineering to Hispanics than any other university in the continental United States;
- Seventy-five percent of students work while they attend school; and
- Women hold up to 50 percent of the student leadership positions in the college.

Each year, Fortune 500 companies turn to UTEP for talented engineers whose educational preparation and work ethic meet the ever-changing demands of the modern field. During a recent recruiting cycle, more than 300 companies competed for 150 bachelor of science in engineering graduates.

Increasingly, national attention — on both sides of the border — is turning to U.S.-Mexico border communities where the countries' social and economic future is being forged. Together, El Paso and its Mexican sister city of Ciudad Juárez form the largest binational metropolitan area in the world — a rapidly growing metroplex of more than 2 million people.

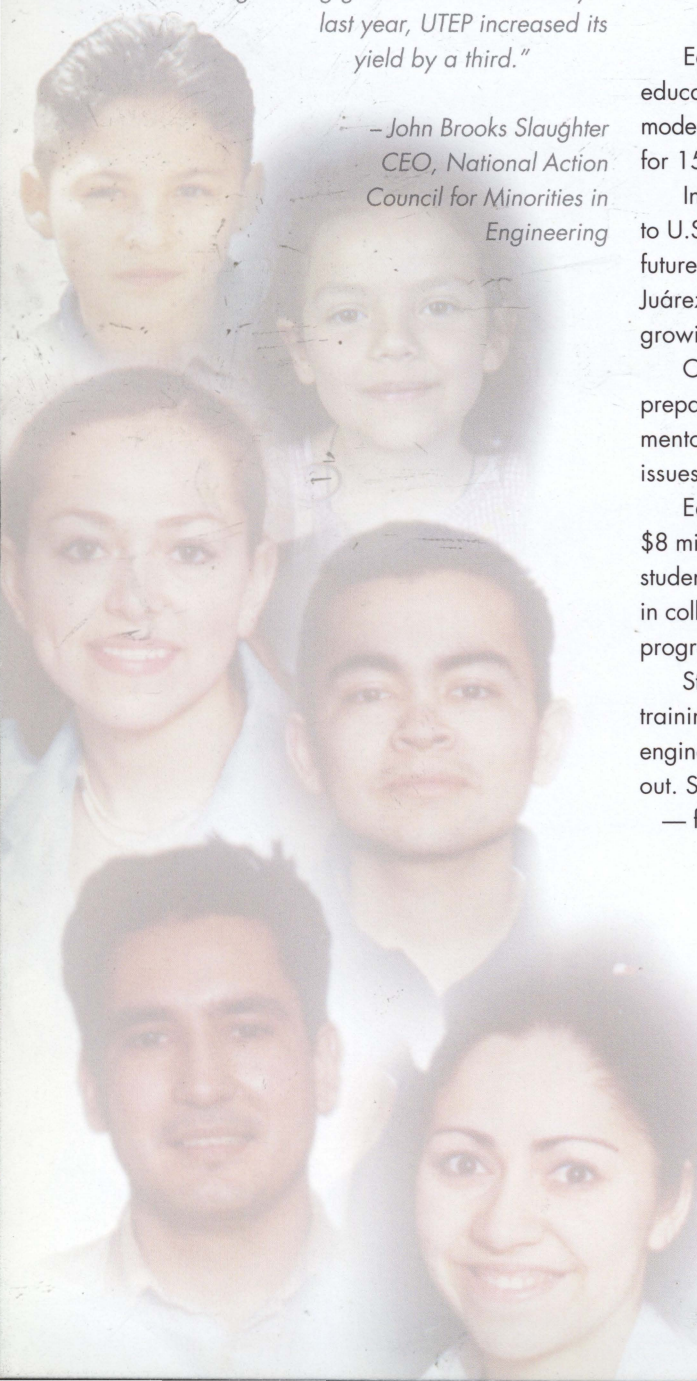
Capitalizing on its international setting, UTEP plays an important role in preparing future engineers for the global economy by attracting industry-focused mentors from across the country who work with students to tackle real-world issues.

Each year, UTEP's nationally competitive faculty members attract more than \$8 million in research awards to the College of Engineering. This funding supports students — both undergraduate and graduate — who gain hands-on experience in college laboratories connected to the university's research centers and doctoral programs.

Student research is key to the UTEP experience. Freshmen begin their practical training in innovative classes such as "reverse engineering," in which fledgling engineers constructively de-construct products to learn their secrets from the inside out. Seniors at the threshold of their professional careers tackle design projects — from smart boards to electric bicycles — that attract media and commercial interest, alike.

Imaginative teaching methods gave rise to CirCLES, Circles of Learning for Engineering and Science, that brings entering freshmen together in groups of 25 in a team-oriented learning community. The results: higher retention rates and grade point averages, and an increase in the number of science and engineering graduates during the past 10 years.

From creative classes to industry-responsive research, UTEP has become a national leader in producing engineers whose real-world experiences and intellectual talents are changing the face of engineering.



CIVIL

HYDROLOGY, SOIL MECHANICS, PAVEMENT DESIGN, STRUCTURAL, GROUNDWATER RECLAMATION, OXIDATION-REDUCTION

At UTEP, civil engineers pound the pavement for academic solutions to make driving on the interstate a safer experience. Using technology equivalent to an ultrasound scan, researchers created a seismic pavement analyzer. The street-smart invention has been used to test resurfaced portions of the interstate and detect flaws during construction that would have interrupted the flow of traffic.

During their morning commutes, UTEP researchers watched drivers instinctively switch lanes, placing distance between their smaller cars and oversize vehicles, some of which carry "super-heavy loads" weighing up to 1 million pounds. To lessen the burden on the roads, the engineers developed an award-winning Geographic Information System that automates the route selection process for overweight and oversize vehicles traveling through the federal highway system.

Environmental engineering students abandon the pavement-covered roads to travel along dirt stretches that lead to the Rio Bosque Wetlands Park, a 372-acre wetland conservation and migratory bird sanctuary on the banks of the Rio Grande.

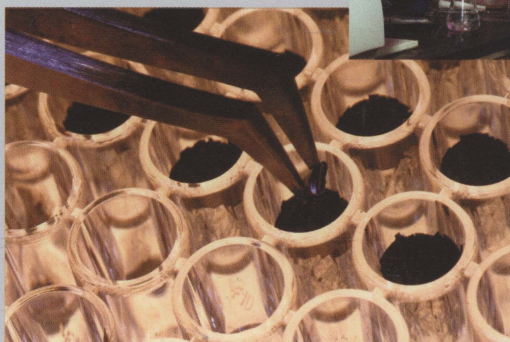
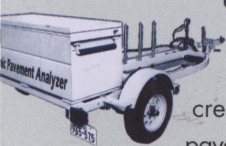
University research takes flight at the FAST Center for Structural Integrity of Aerospace Systems where students work alongside their professors to pinpoint defects in an aging space shuttle's vertical tail that may keep the spacecraft flying safer, longer.

Back on earth, UTEP's sea-minded engineers are paving the way for different kinds of concrete discoveries. Developing a lighter and stronger version of the cement used for sidewalks, civil engineers build canoes that use microspheres or glass bubbles to float. This exercise is not only a lesson in innovation, but also part of a yearly competition, which UTEP has won eight out of nine years.

Researchers probe beyond the surface to focus on groundwater contamination and reclamation, identifying pollution sources and improving radioactive waste management. Researchers create innovative water treatment systems to remove contaminants through

advanced design processes for disinfection, ion exchange and membranes.

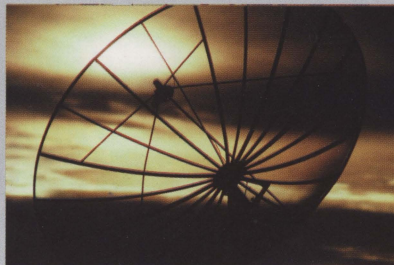
The work is key to the university's environmental science and engineering Ph.D. program in which student researchers work side-by-side with their professors in both urban and rural settings, including *colonias* where residents have no potable water.



COMPUTER SCIENCE

ARTIFICIAL INTELLIGENCE, COMPUTATION, QUEUING THEORY, MEMORY ALLOCATION PARADIGM, DATABASE SYSTEMS, SECURITY

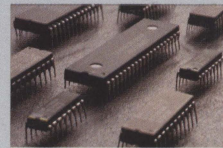
In the cybernetic world of computer science, knowing whether something is "live" is critical. Nowhere in the field of computers is this sort of problem-solving more important than in the area known as data mining.



Through the Theoretical Research and Applications in Computer Science project, UTEP researchers focus on theoretical questions that place real-world problem-solving at the forefront.

Each morning, computer scientists decipher the data held in high-resolution images of earth. Each photograph contains such a large amount of information that it is difficult to make useful comparisons between several images at once.

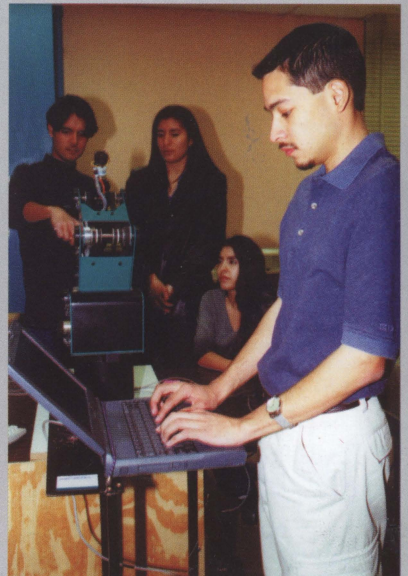
UTEP computer scientists and their students are developing a better way to handle the information stored on a database, understanding that the

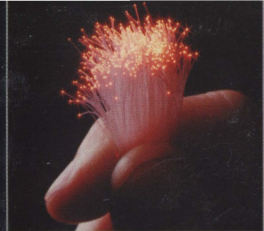


ability to mine the desired information from an image or any data

stored in the photo form the basis for both intellectual and commercial inquiry.

In addition, the Interactive Systems Group researches human-computer interaction, computational linguistics and spoken-language systems. The research team is determining how comfortable people are talking to a machine and whether the man-made creation can decipher spoken language that is complicated by annunciation and pronunciation.





ELECTRICAL AND COMPUTER

DIGITAL SIGNAL PROCESSING, NETWORK PROTOCOLS, COMPUTER ARCHITECTURE, SEMICONDUCTION, FIBER OPTICS

The dot, dot, dash of Morse Code is to Digital Signal Processing what 8-track tapes are to Compact Discs — historical novelty.

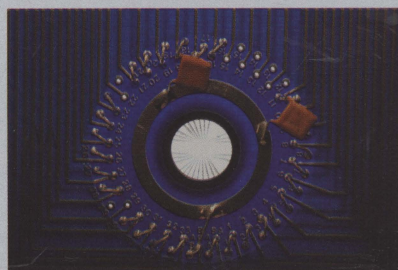
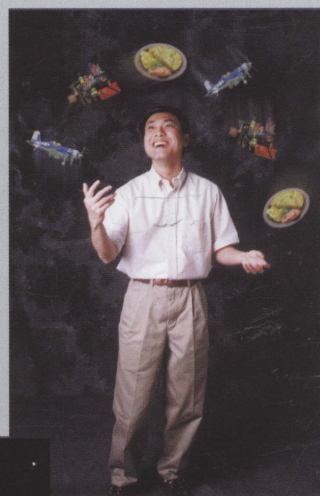
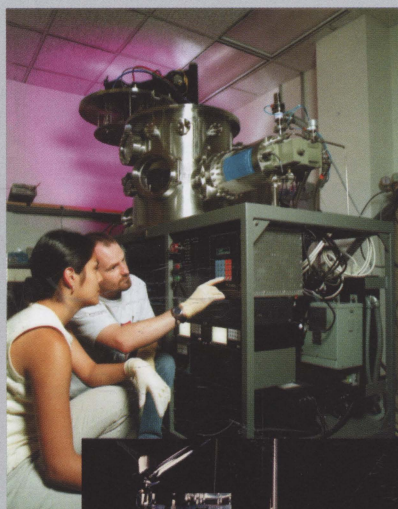
Today, electrical and computer engineers lead a new generation of studies, delving into digital signal processing that forms the technological foundation for mobile phones, modems and personal computers.

As these electronic architects blueprint their way to building better technologies, corporate leaders are taking note. The Texas Instruments Foundation awarded more than \$1.4 million to UTEP electrical and computer engineers who work with both U.S. and Mexican students to tap into the heart of digital communications.

University researchers also are engineering improvements to digital computing through the Neuro-Fuzzy Group, which explores alternative methods of computation by combining artificial neural networks that "learn" a solution and fuzzy systems that eliminate complex math solutions using simple "If-Then" rules.

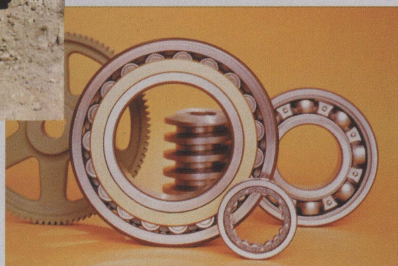
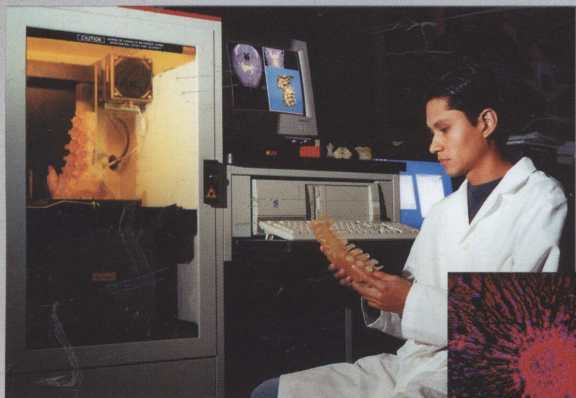
In UTEP simulation labs, engineers conduct research that impacts the bottom line. Faculty members challenge their students to find the practical applications of their academic lessons, including reducing

energy costs, modernizing production processes and discovering how electrical power can be converted to make better planes, trains, automobiles — and stovetops.



NCAI MECHANICAL AND INDUSTRIAL

STRUCTURAL DYNAMICS, MAN-MACHINE SYSTEMS, FLUID MECHANICS, RISK MANAGEMENT, HEAT TRANSFER, SAFETY



Among the alternative fuels, cylinders and spark-ignition engines, UTEP researchers are developing anatomically correct, artificial models of body systems.

The W.M. Keck Border Biomedical Manufacturing and Engineering Laboratory is home to the university's human-centered engineering, which is expected to dramatically alter the way medical researchers analyze blood flow and internal structures and how doctors handle difficult surgical procedures.

Researchers begin with medical imaging data such as magnetic resonance imaging, computed tomography and ultrasound to generate three-dimensional geometric computer models.

After being combined with the lab's rapid prototyping technologies, the models are used to manufacture three-dimensional replicas of clogged aortas, frail hearts and other human body parts in various stages of disease.

In addition to medically significant investigations, mechanical engineers drive the university's research into alternative fuels and engines and investigate the buoyancy of jet diffusion flames.

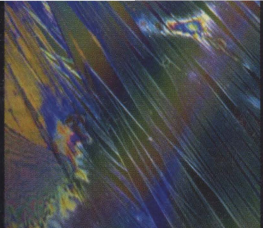
Students follow suit, shifting into gear to design racecars to tackle the

mountainous terrain of the Mini Baja competition. And fuel research teams cruise into the national Ethanol Vehicle Challenge, developing engines that run on compressed natural gas, electric power and propane, as well as ethanol.

Working in a binational environment, UTEP researchers naturally focus on international engineering issues, including manufacturing. Students push modern concepts of robotics and flexible automation. Using real-life manufacturing problems, students analyze material handling systems and processes such as plastic injection and metal casting. Hands-on research in a business setting provides the engineers with unique insight into material properties, tolerances, tool interchangeability and cost.

Sky-bound engineers leave the ground behind. During a 20,000-foot-free-fall aboard a KC-135 flight at NASA's Johnson Space Center, UTEP students go weightless to put their research to the test. The undergraduates run experiments while floating inside the aircraft cabin to test a novel, low-pollution burner technology developed at the university's Combustion and Propulsion Research Laboratory. The burner concept is designed to reduce emissions from aircraft engines and power plants.





METALLURGICAL AND MATERIALS

EXTRACTION SYNTHESIS AND PROCESSING, THERMODYNAMICS, COMPOSITES, PHASE EQUILIBRIUM FUNDAMENTALS

The bell-like warbling of the steel drums draws in listeners who stay for the engineer's explanation on how heat treatment affects the hardening of low carbon steels, or, simply put, the metallurgy of the Caribbean steel drum.

At UTEP, music and engineering have come together in an uncanny alliance to create the much-lauded steel drum musical group, "Pandemonium." But the engineers-turned-musicians' work is much more than a form of entertainment. It is metallurgy and materials in practice.

The research sheds light into the mysterious and popular 55-gallon steel drums, addressing intellectual questions about the structure, properties, processing and performance of materials, including the development of new and improved materials and advanced processing methods.

UTEP's scientific music-makers are trained to seize opportunities involving a vast array of metals and materials in this high-tech age. As industries adopt increasingly complex processing technologies, engineers must understand the casting and molding of metals and plastics and the metallurgy of microelectronics and microchip fabrication.

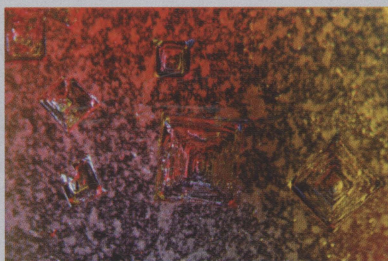
At the university's Material Center for Synthesis Processing, researchers

explore thin film and multiphase processing, which delves into the materials used for semiconduction and electroluminescence.

Through UTEP's Ph.D. in materials science and engineering, researchers contribute to the technological, industrial and economic development of Texas, the United States and Mexico. Metallurgists tap into unique manufacturing processes such as

friction stir welding that joins unlike materials without creating smoke or residue.

From the labs of discovery to the limelight of the stage, UTEP researchers are uncovering the mechanical behavior of materials while searching for answers as to why a hammered piece of steel sings.





Workforce Diversity: During the past 30 years, only 3 percent of bachelor's degrees in engineering were awarded to Latinos. UTEP awards more engineering degrees to Hispanics than any other university in the continental United States.

Bottom-Line, Top-Notch Research: At UTEP, professors emphasize the real-world applications of intellectual inquiry at all levels. Freshmen deconstruct popular consumer items in "reverse engineering" while those at the doctoral level and threshold of their professional careers engineer their own creations.

Teamwork Trademark: UTEP students begin working together in teams early in their education. Students also work side-by-side with their professors, conducting cutting-edge research in labs where project goals and company standards are the driving forces.

Latinas Enter the Field: Last year, one out of every 20 Latina engineers who received a bachelor's degree in engineering, graduated from UTEP.

A Civil Issue: Although Latinos are the fastest-growing segment of the population, no Hispanics earned doctoral degrees in civil engineering in Texas. UTEP is developing one of the nation's first infrastructure-focused doctoral program in civil engineering, which will develop Hispanic talent and address binational needs.

Have Degree will Travel: Recruiters from across the country consistently rank UTEP engineering students tops in academic preparation and work ethic. UTEP graduates are prepared to engineer solutions in any setting — from nuclear submarines to Silicon Valley.

COLLEGE OF ENGINEERING INDUSTRIAL AFFILIATES GROUP

Agilent Technologies
Boeing
CH2M Hill
Dell Computers
Delphi Automotive Systems
El Paso Tool and Die Co. Inc.
General Motors
Hewlett Packard Company
Navarro and Associates

Phelps Dodge Refining Corporation
Raytheon
Raba Kistner Consultants [SW] Inc.
Sandia National Laboratories
SME Foundation
Texas Instruments Inc.
TRW Space and Electronics
White Sands Missile Range

For more information, contact:

College of Engineering
The University of Texas at El Paso
Engineering Building, Room 230
El Paso, Texas 79968

Phone: 915/747-5460
Fax: 915/757-5616
E-mail: engineer@utep.edu

www.utep.edu/engineer/dept.html



"The Changing Face of Engineering — 2002." Statistics from recent reports by the National Action Council for Minorities in Engineering, the Engineering Workforce Commission of the American Association of Engineering Societies and UTEP's Center for Institutional Evaluation, Research and Planning.

Career Path 101

By Sonny Lopez

UTEP's Engineering Programs Office promotes career awareness, job placement, outreach and diversity.

"The office really prepares students for what's out there in the workforce," says Nohemi Rodriguez, who received a bachelor's degree in electrical engineering from UTEP in December and worked in the EPO office for about a year.

"The staff members helped and supported us, but never told us what to do. We were simply given options and allowed to select and then follow a project through. If there's an office that encompasses engineering, it's the EPO office," says Rodriguez, who works at White Sands Missile Range, testing the effects of nuclear explosions and radiation on military equipment.

"But it's really more because they take on issues involving Hispanics and women in engineering. It's really much more than just a programs office."

EPO sponsors a yearly student recruitment and job fair known as the Engineering and

Science Expo. Students not only work with each other, UTEP faculty and staff, but with area middle- and high-school students and engineering company representatives.

The EPO office brings together thousands of students, several hundred professional companies and UTEP engineering students at the Expo, which is more aimed at recruitment, outreach, internships and jobs.

During the event, employers seeking candidates meet prospective engineering students. Area students receive hands-on training and information about UTEP and a network of students to jobs and academic possibilities is created.

Last year, about 300 recruiters from professional companies such as Agilent Technologies, Hewlett Packard, Shell, General Motors, Boeing and Exxon competed for 150 UTEP engineering graduates.

"We come to UTEP to recruit because of the quality of the programs, which translates to quality students," says Isadore Davis, a top manager in Houston for Raytheon. "UTEP has an excellent program and leadership. That's why we want to continue to build and sustain a pipeline to our company."



Career Connection: Elsa Villa and Gabby Gándara bring engineering students and professionals together through the outreach activities of the Engineering Programs Office.



Pablo Antonio Trejo, a 2000 electrical engineering graduate, puts his engineering education to work at Lockheed Martin Aeronautics in Fort Worth. Trejo conducts an electromagnetic compatibility safety of flight test for an F-16, which ensures that all of the airplane systems function properly. The test is one of the last stops for the F-16 before it is cleared for take-off.



PROFILES IN GIVING



Alumni Academy of Civil Engineers board members (right column, from top): Ed Drusina, Bill Quinn, Henry

Welcome to the Academy

by Walli Haley



A sign on the nearly complete multi-million-dollar Larry K. Durham Sports Center reads, **"Built by UTEP graduates."** But UTEP civil engineering graduates design more than sports complexes.

Today's civil engineers also analyze the integrity of buildings, formulate ways to protect the environment, and work to understand corrosion and how to prevent it in aging aircraft.

To encourage more students to pursue careers in civil engineering and to support their *alma mater*, a group of UTEP civil engineering graduates formed the Alumni Academy of Civil Engineers in 2000.

"AACE is important to the university and community because it provides an outreach program that taps expertise that's available to help promote civil engineering," says AACE President Ed Drusina, a civil engineer who graduated from UTEP in 1974.

"It also improves the quality of the education by having a direct interface with civil engineering professionals active in their professions that can share their knowledge with staff and students."

The organization is made up of UTEP civil engineers who have been out of school for at least 10 years.

"We are trying to establish a distinguished organization," says Bill Quinn, a 1954 UTEP graduate. Each year the organization may admit 10 new members, but only one member can be a non-UTEP graduate.

The 29-member organization works closely with the civil engineers, responding to departmental needs. In the past two years, AACE has awarded \$3,000 in graduate scholarships, and helps fund faculty members' travel to engineering society meetings.

"We recently had our fund endowed," says Quinn. "Every year as people join that endowment would grow, creating more opportunities for students to earn civil engineering degrees."

Members of AACE also have served on the department's advisory board and judged senior design projects.

"They help promote the profession and improve the image of the department," says Carlos Ferregut, chair of the civil engineering department.

"I have had younger grads come and talk to me to see how they can get involved in the organization," he says. "Now we have a lot of champions who feel they are part of the department, and they promote the department with their colleagues."

The professional expertise AACE members bring to the civil engineering department is not only a valuable resource, it provides a means to bring alumni together with faculty, staff and students, says Ferregut.

"We feel it is important for UTEP's engineering community to become attuned to the activities of professional engineers," says Quinn.

The civil engineering department was recently visited by the accreditation team from the Association Board for Engineering and Technology, and the academy's existence and their input impressed the team, says Quinn, who retired from El Paso Natural Gas Company in 1997.

The success of AACE is spurring its members to reach out to other UTEP civil engineering graduates, who tend to be fiercely loyal to UTEP.

"Civil engineering impacts so many different parts of our daily life," says Drusina, who is the director of Public Works for the City of El Paso. "That's part of its attraction for students. We have a very strong allegiance to the civil engineering department because of what it has offered us as professionals," he says.

"Many of us have not only been successful financially, but we are also fulfilled. UTEP has afforded us that. Most of us who have joined AACE are hoping to foster that spirit in civil engineering graduates in the future." **N**

Robert Navarro.

Homecoming 2002



Alumni Association Distinguished Alumni Reception

October 14-19

Oct. 18, Don Haskins Center

Golden Grads Luncheon

Noon, Oct. 19, Tomás Rivera Conference Center

Alumni Association Pre-game Party

4:30 p.m., Oct. 19, de Wetter Center

Homecoming Game:

UTEP vs. Rice University

7:05 p.m., Oct. 19, Sun Bowl

For a complete calendar of Homecoming events, log on to homecoming.utep.edu.

Alumni Association Pre-game Parties

Aug. 31
Sacramento State

Sept. 21
Hawaii

Oct. 19
Rice (*Homecoming*)

Nov. 2
Boise State

Nov. 16
Southern Methodist University

Wanted: Miner Fan Updates

Whether you are part of an official chapter or just get together with a few Miner fans, we want to know about your activities from watching Miner games on TV to participating in online chat rooms. Send your information and pictures to:

**Alumni Relations
de Wetter Center**

El Paso TX, 79968-0724

E-mail updates to: alumni@utep.edu.

Visit us online at: utep.edu/alumni

TOP 10 SENIORS



Asedeko

Nigerian native Gbenga Asedeko came to UTEP in 1997 with a straightforward ambition — to do well academically. Not only

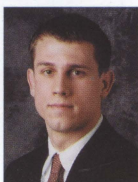
did he succeed, but he proved to be a leader as president of the UTEP Student Government Association in addition to membership in scholastic and service organizations.



Daw

Jessica Daw is a fourth-generation UTEP graduate who received the Lola B. Dawkins, SC Group Inc., and Judith K. Solis scholarships.

Daw graduated in December with a BBA in computer information systems with a 3.85 GPA.



Ingle

One of four UTEP students to participate in the Boston University Early Medical School Acceptance Program, John Walter Ingle

graduated in May with a bachelor's degree in biology with a 3.82 GPA and will attend Boston University School of Medicine.



Loya

A UTEP Presidential Scholar, Amador Loya served as the president of the Students of Pre-Physical and Pre-Occupational Therapy

Organization. Loya graduated in May with a 3.99 GPA in microbiology and has been accepted to Texas Tech University School of Medicine.



Lozano

A UTEP Presidential Scholar and Houston Endowment Scholar, Leslie Lozano was active in campus honor societies, receiving the

University Honors Council Excellence

Award in 1997 and 1998. She graduated in December with a BBA and a 3.56 GPA.



Peterson

Amanda Peterson graduated with a 3.7 GPA in microbiology in May. She has been accepted to the medical school at the

University of Texas Health Science Center at Houston. She is a member of the American Society for Microbiology and the Mortar Board honor society.



Rojo

While working up to three part-time jobs, Claudia Rojo finished the creative writing program in three years, earning a 3.6 GPA and graduating *cum*

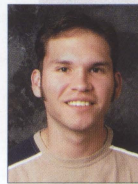
laude. She graduated in December and will enter a master of fine arts program in Houston this fall.



Samples

Linda Samples, a 23-year-old Canutillo Independent School District board member, graduated in May with a 3.6 GPA in psychology.

She will pursue a law degree at the University of Michigan.



Shindo

David Shindo graduated in May with a bachelor's degree in metallurgical and materials engineering with a 4.0 GPA. The

recipient of the merit-based Presidential Excellence Scholarship, Shindo served in at least 10 professional and honors organizations.



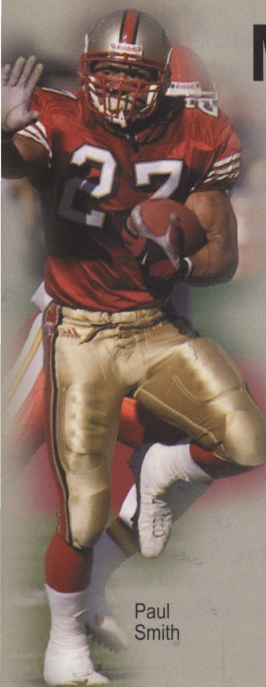
Woo

Tony Woo earned a 3.7 GPA and graduated in May with a bachelor's degree in electrical engineering. Woo received the UTEP

Presidential Excellence and Eta Kappa Nu Endowed scholarships and earned a spot on the National Dean's List.

UTEP Football Players Living the NFL Dream

by Jeff Darby



Paul Smith

Monday morning quarterbacks fantasize about it all the time. What would it be like to play in the NFL?

Surely it must be amazing. The chance to see how you stack up against the best players in the world. The opportunity to learn from the best coaches. The national television exposure. The glitzy hotels. Thousands of fans chanting your name every Sunday.

It all sounds glamorous. And it is, but not nearly to the extent that one might think.

Former UTEP standouts Brian Natkin, Paul Smith and Brian Young are living the dream. Natkin, a tight end, is entering his second campaign with the Tennessee Titans. Smith, a running back, and Young, a defensive tackle, are heading into their third seasons with the San Francisco 49ers and St. Louis Rams, respectively.

Smith and Young, both El Paso natives, were chosen in the fifth round of the 2000 NFL Draft. Natkin's road to the league was a bumpier one.

After the draft, 12 teams contacted Natkin, offering him a free agent contract. Later, the Titans called his agent, saying they needed depth at the tight end position. Natkin had found a home in the NFL.

The demands on NFL players'

time are tremendous. Between working out, going to practice, attending meetings and watching film, the former Miners are tied up from about 7 a.m. to 7 p.m. every day.

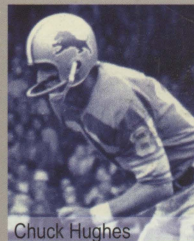
"Once the season starts, football is your life," Natkin says. Even during the off-season, players are required to lift weights at least three or four times a week, although the three former Miners spend more time in the gym than is mandatory.

The long hours pay off with playing time. Last season, Natkin snared two catches for 42 yards. Smith rushed for 27 yards on four carries with a touchdown. Young tallied 40 tackles, and rated third on the team with seven sacks.

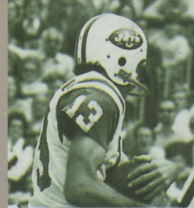
Young went on to experience the ultimate NFL thrill, playing in the Super Bowl, as the Rams took on the New England Patriots. "The whole week was really overwhelming," he says. "But once you got over all the hype, the game was just like any other."

Natkin, Smith and Young aren't sure what their NFL futures hold, but they are savoring every day that they spend in the league.

"The more players that we have in the NFL, the more high school kids will be looking at UTEP," Smith says. "It's good for El Paso." **N**



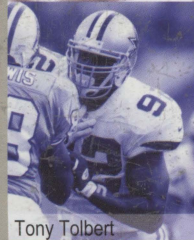
Chuck Hughes



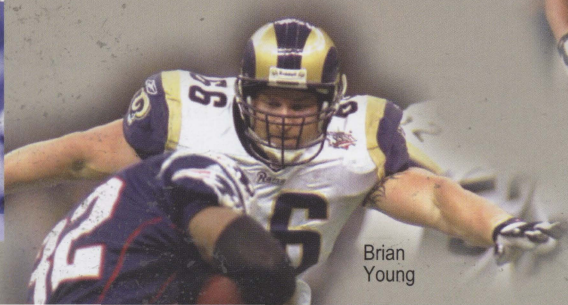
Don Maynard



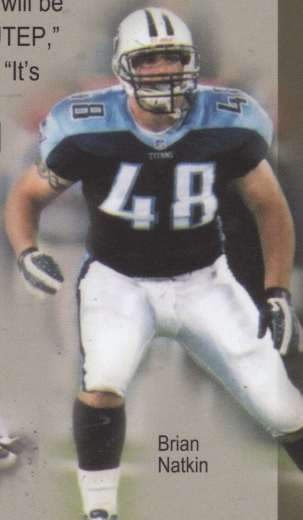
Seth Joyner



Tony Tolbert



Brian Young



Brian Natkin

UTEP Players in the NFL

Arizona Cardinals

Jimmy Carpenter, WR, 1999
 Micheal Comer, LB, 1997
 Best Ihegborow, DL, 1997
 Gary Keithley, QB, 1973-75
 Sammy Garza, QB, 1987-88
 Chris Jacke, K, 1988-99
 Seth Joyner, LB, 1994-96
 Don Maynard, WR, 1973
 Carlos Scott, C, 1983-86
 Eric Washington, DB, 1972-73
 Paul White, RB, 1970-71

Miami Dolphins

Mike Smith, DB, 1985-87
 Marshall Young, PK, 1999

Minnesota Vikings

Nikita Blair, LB, 1985
 Volley Murphy, WR, 1968
 Charlie West, DB, 1968-74

New England Patriots

Larry Linne, WR, 1987-88
 Jeff White, K, 1973

New Orleans Saints

Pete Shufelt, LB, 1993

New York Giants

Kevin Belcher, C, 1983-85
 Don Maynard, WR, 1958
 Pete Shufelt, LB, 1994-95

New York Jets

Jim Evans, WR, 1964-66
 Don Maynard, WR, 1960-72

Philadelphia Eagles

Victor Bailey, WR, 93-94
 Chuck Hughes, WR, 1967-69
 Seth Joyner, OLB, 1986-93

Pittsburgh Steelers

Eric Anderson, WR, 1986
 Russell Cotton, HB, 1941-42
 Hayden Mayhew, T, 1936-38
 Lee Mays, WR, 2002
 Albert Williams, LB, 1987

St. Louis Rams

Ken Heineman, QB, 1940-41
 Riley Matheson, G, 1939-42, 44-47
 Jesse Whittenton, DB, 1956
 Brian Young, DL, 2000-Present

San Diego Chargers

Dave Atkins, RB, 1979
 Gene Childs, FB, 1970
 Carey Clayton, C, 2001
 Jim Fabish, DB, 1970
 Bob Laraba, QB, 1960-61
 Joe MacEsler, OT, 1987

San Francisco 49ers

Menson Holloway, DE, 2001-Present
 Riley Matheson, G, 1948
 Pete Shufelt, LB, 1993
 Paul Smith, RB, 2000-Present

Seattle Seahawks

Reggie Barrett, WR, 1995

Tampa Bay Buccaneers

John Harvey, RB, 1989-90
 Darryl Moore, OG, 1996
 Keith Powe, DE, 1994-96

Tennessee Titans

Brian Natkin, TE, 2001-Present
 Barron Wortham, LB, 1994-99

Washington Redskins

Ed Bunn, P, 1992
 Gene Epps, DB, 1970
 Gonzalo Floyd, DE, 1994
 George Hillary, E, 1945
 Chris Jacke, PK, 1997
 Darryl Moore, OG, 1992
 David Terrell, DB, 1998-Present
 Larry Willis, S, 1973

Atlanta Falcons

Trey Merikens, LB, 2001
 Thurman Randle, T, 1968
 Denver Samples, DT, 1969
 Mike Smith, WR, 1980

Buffalo Bills

Don Croft, DT, 1972-75
 Clyde Glosson, WR, 1970
 Leif Larsen, DL, 2000-Present
 Don Sommer, OT, 1987

Chicago Bears

Wayne Hansen, C, 1950-59
 Demetrious Maxie, DT, 2001
 Raymond Morris, LB, 1987
 Bill Stevens, QB, 1971
 Jesse Whittenton, DB, 1957
 Bob Wallace, TE, 1968-71

Cleveland Browns

Bernard Chapman, DB, 1972
 John Furman, RB, 1962-63
 Eugene Jackson, DE, 1968

Dallas Cowboys

Jimmy Evans, WR, 1964
 Wayne Hansen, C, 1960-62
 Michael Hicks, DB, 1998
 Tony Tolbert, DE, 1989-98
 Barron Wortham, LB, 2000

Denver Broncos

Grady Cavness, DB, 1969
 Pat Hegarty, QB, 1989-90
 Seth Joyner, OLB, 1998
 Pete Shufelt, LB, 1996
 Charlie West, DB, 1978-79

Detroit Lions

Reggie Barrett, WR, 1991-94
 Don Croft, DT, 1976
 Chuck Hughes, WR, 1969-71
 Riley Matheson, G, 1943
 Charlie West, DB, 1973-77

Green Bay Packers

Fred Carr, LB, 1968-77
 Paul Gibson, WR, 1972
 Leon Harden, DB, 1970
 Chris Jacke, K, 1989-96
 Ron Jones, TE, 1969
 Seth Joyner, LB, 1997
 Bob Laraba, HB, 1959
 Oscar (Ed) Smith, DB, 1948-49
 Bill Stevens, QB, 1968-69
 Jesse Whittenton, DB, 1958-64

Jacksonville Jaguars

Gonzalo Floyd, DE, 1995

Kansas City Chiefs

George Daney, OG, 1968-77
 Fred De Bernardo, DE, 1974
 Bubba Garcia, WR, 1980
 Pete Shufelt, LB, 1993-94
 Delbert Thompson, RB, 1982

50s

Betty R. Wilkinson (B.A. '50; M.Ed. '77) was awarded the Distinguished Service Award by the Texas State Reading

Association. A regional representative to the TSRA, she has served as the organization's secretary for the past nine years.

60s

Arthur W. Bowman was selected by *Accounting Today* as one of the Top 100 Influential People in the accounting field.

He lives in Lawrenceville, Ga.

Walkira Maldonado (B.A. '66) is the business development officer for the Del Sol Women's Health Center in El Paso.

Robert Navarro (B.S.C.E. '62), owner of Robert Navarro and Associates, was guest conductor for the El Paso Symphony Orchestra's Valentine's Day concerts, opening both weekend performances with *Les Toreadores* from Bizet's *Carmen*.

Keithley P. Wagner (B.S.Ed. '63) and her husband Donn are the owners of Cazwellas restaurant in Telluride, Colo. The restaurant was recently highlighted in *Wine Spectator* for its Mexican cuisine.

70s

Suzanne S. "Suzie" Azar (B.B.A. '77) opened a jet refueling business in the Santa Teresa, N.M., airport, where she is a flight instructor and pilot for private flights in the El Paso area.

David Chavez Jr. (B.B.A. '73) is the director of human resources for Philips Consumer Electronics in Ciudad Juárez. He previously worked for the A.C. Nielsen Co. in production management, administration, human resource purchasing and facilities management.

Herlinda M. Coronado (B.S.Ed. '71; M.Ed. '76) is president of North Lake College in Dallas. She brings more than 25 years of community college teaching and administrative experience to her new role.

Philip R. Martinez (B.A. '79) was unanimously confirmed as a federal judge for the El Paso Division of the Western District of Texas by the U.S. Senate.

Henry K. Ng (B.S.C.E. '77; M.S.C.E. '81) was named engineer of the year by the El Paso Chapter of the Texas Society of Professional Engineers. The president of a structural engineering company, Ng's projects in Mexico and Texas, include the Helen of Troy corporate headquarters and distribution center in El Paso.

Anna A. Pabst (M.Ed. '72) is a sixth-grade resource teacher for the Roswell Independent School District who volunteers with health and teacher programs.

Dennis M. Pabst (M.Ed. '72) is a Title I migrant coordinator and the cross-country and track coach for the Dexter Consolidated School District in New Mexico.

Timothy C. Yin (B.S.C.E. '74) is the pastor of the First Chinese Church of San Antonio. He graduated in December with a master's degree in divinity from the New Orleans Baptist Theological Seminary.

80s

George P. Andritsos (B.B.A. '89) and **John A. Wenke** (B.A. '89) were listed in the *National Law Journal's* Top Verdicts for winning \$30.5 million, the largest single plaintiff employment law verdict in the nation in 2001.

Jack Ballesteros (B.A. '84) was named the top sales executive of the year at El Paso's KTSM Channel 9.

James R. "Jim" Burch II (B.B.A. '83) is the senior systems engineer and chief information officer for Aerodyne Inc. of Huntsville, Ala., an aeronautical engineering firm. He is active with the local Boy Scouts of America, youth basketball and the Redstone Arsenal Flying Club.

Joaquin Bustamante III (B.S. Met.E. '80; M.S.E. '84) is the director of continuous improvement for Parker-Hannifin Aerospace Air and Fuel Division in Corona, Calif.

Ouisa D. Davis (B.M. '85), executive director of the Diocesan Migrant and Refugee Services for the Catholic Diocese of El Paso, was one of five outstanding minority women honored at Evolution Expo 2002. She was cited for her contributions to the community, which include serving as an associate municipal court judge. She is an instructor in UTEP's African-American Studies Program and assistant to the artistic director and choreographer of "VIVA! El Paso."

Linda J. Holman (M.Ed. '89) is associate superintendent for curriculum and instruction for the El Paso Independent School District. She served as principal of Hillside Elementary School from 1992 to 2000, during which time the school received the National Blue Ribbon School of Excellence Award, and three recognized and two exemplary ratings from the Texas Education Agency.

Gerardo A. "Gerry" Licon (B.S.C.E. '86; M.S.C.E. '99) and **Margarita A. Licon** (B.S.C.E. '87; M.S.C.E. '99) have formed Licon Engineering Company Inc., a geotechnical consulting firm. The husband-and-wife team specializes in engineering, construction materials and environmental testing in West Texas, New Mexico and Mexico.

Michael D. Marin (B.A. '89) received the "Austin Under 40" award in the legal category

from the Young Men's Business League and the Young Women's Alliance. Marin, an associate at Vinson and Elkins, also was named the Outstanding Young Lawyer for 2001 by the Austin Young Lawyer's Association. Marin specializes in business and tort litigation.

Mark F. Pearson (M.S. '84) is an environmental scientist at Maxim Technologies Inc. in Bozeman, Mont.

90s

Milner Carballo (B.B.A. '93) is an assistant vice president at JDW Insurance Co. in El Paso.

Jennifer Lynn Carrasco (B.A. '97), a world geography teacher, was selected as the Outstanding New Teacher of the Year at the Lake Highlands Freshman Center in the Richardson Independent School District. She also has been featured on the district's Web site as an RISD Star Showcasing Success.

Janis A. Edralin (B.A. '99) is Texas' first appellate victims' advocate for the Bexar County District Attorney's Office in San Antonio.

Miguel A. Gamino Jr. (B.B.A. '99) is an assistant vice president at JDW Insurance in El Paso. He serves as controller and information technology manager.

Sergio Muñoz-Sarmiento (B.A. '95) will have projects displayed in the "Geopoetics: Engaging with the Spaces of Globalization" exhibition at the City University of New York that includes a traveling retrospective of past fellows from the World Trade Center's studio program. He presented a public slide lecture, "Images of America: NAFTA and Globalization on the Texas-Mexico Border," at the University of Southern, where he is a visiting professor of art and critical theory.

Raymond A. "Ray" Sanchez (B.A. '96), owner of Idea Advertising, is the new webmaster for El Paso County.

Morris M. Taylor III (B.S. '98) received a master of public health degree from the University of Texas Health Science Center at Houston.

OBITS

Betty Barbara Long Michael (B.A. '42) Jan. 17, 2001. Michael, the second woman to

serve as editor of UTEP's student newspaper, *The Prospector*, was a member of Chi Omega and an active volunteer in Los Angeles.

Maj. Duncan S. Boughner (M.Ed. '63) Jan. 2, 2002. Boughner's 20-year career with the U.S. Army, included wartime assignments in France, Germany, as well as England, Hawaii, Iceland and Scotland. He was an ROTC instructor at Texas Western College

(now UTEP). Boughner also taught at Ysleta and Hanks high schools and was a Red Cross volunteer at William Beaumont Army Medical Center for 12 years.

Hefley J. "Hef" LaFleur (B.A. '61) Jan. 7, 2002. A longtime resident of El Paso, LaFleur retired as territory manager of Economics Laboratory after 27 years of service. He managed the National Restaurant Association Annual Golf Tournament and was a member of the El Paso and Southwestern Modular Railroad Association and the Anthony Country Club.

Melba Louise Gean (B.A. '56) Jan. 8, 2002. Gean, a special education teacher who resided in Palestine, Texas, was a member of the East Texas Porcelain Association, the Iris Club, the Friendship Garden Club, the Daughters of the American Revolution, the Harvey Women's Club and the Retired Teacher's Association.

Samuel Z. "Bud" Wintroub (M.A. '67) Jan. 8, 2002. He was a resident of Chicago.

Danny Ray Klassen (B.B.A. '76) Jan. 9, 2002. Klassen, a resident of Brenham, Texas, was a buyer for the Brenham Wholesale Grocery. He served as a financial officer in the U.S. Army during the Korean War.

Emily T. Zillich (B.A. '33; M.A. '58) Jan. 12, 2002. Zillich was a retired teacher with 35 years of service with the Ysleta Independent School District. She also taught in the literacy program at the First Baptist Church of El Paso for 20 years. Zillich was a member of the Kappa Chapter of Delta Kappa Gamma and the Woman's Club of El Paso, a charter member of the El Paso Historical Society, and a former representative for the El Paso Community Concerts.

Patty Sue Jordan (B.S.N. '80; M.S.N. '87) Jan. 15, 2002. Jordan, a resident of Odessa, Texas, was an assistant professor of nursing at Odessa College and a doctoral student in higher education at Texas Tech University. A surgical nurse for 25 years, Jordan was nationally certified as a clinical nurse specialist in medical surgical nursing. A former president of the Permian Basin Chapter of the Association of Operating Room Nurses, she was also a member of Sigma Theta Tau and the American Nurses Association.

Mike Escontrias (B.A. '63) Jan. 16, 2002. Escontrias, a lifelong resident of El Paso, was a teacher with the Ysleta Independent School District and the High School Equivalency Program at UTEP. He also taught at Escontrias Elementary School and Slider Middle School and was a volunteer for the Peace Corps in Guatemala.

Tobin Vasquez (B.A. '85) Jan. 16, 2002. Vasquez was employed with the U.S. Customs

Service in El Paso. He served for four years with the U.S. Army 82nd Airborne and retired as a master sergeant from the Texas Air National Guard, 204 Security Forces Squadron in 1999.

Armando Marquez (B.B.A. '80) Jan. 21, 2002. He was a program analyst for the International Boundary and Water Commission and a lifelong resident of El Paso.

George "Dyna" Clarence Thomas (B.A. '37) Jan. 21, 2002. Thomas was a resident of Santa Teresa, N.M.

Constance "Connie" Hulbert (B.A. '45; M.A. '49) Jan. 24, 2002. Hulbert, a former UTEP instructor and the recipient of the College of Education's 2000 Gold Nugget Award, was a longtime El Paso educator and education administrator.

She started her career as a second-grade teacher with the Socorro Independent School District, then became a translator for the U.S. Army Bureau of Censorship during World War II. In 2001, The Constance Hulbert Elementary School was named in her honor.

Antonio R. Payan (B.A. '74) Jan. 24, 2002. Payan was a longtime resident of El Paso, where he was a program manager for the Department of Human Services.

Tommy Lee Marcee (B.A. '68; M.Ed. '74) Jan. 26, 2002. Marcee, was a retired assistant superintendent of human resources with the Laredo Independent School District, serving more than 30 years in the Texas education system.

Carolina Melendez Ortega (B.S.Ed. '75) Jan. 30, 2002. Ortega was a bilingual teacher at Aoy Elementary School in El Paso for more than 20 years.

Lucille Sword (B.A. '37) Feb. 3, 2002. She was a retired teacher, with 30 years of service, including 24 years at Clardy Elementary School in El Paso.

Susan J. Mundy (B.I.S. '93) Feb. 5, 2002. Mundy was a teacher at Parkland Elementary School.

John E. Reichert (B.B.A. '84) Feb. 10, 2002. Reichert was a teacher at Father Yermo High School. He served in the U.S. Air Force and was a member of the El Paso Umpires Association for more than 15 years.

Nell Harlston Michel (B.A. '37) Feb. 16, 2002. She owned Michel's Learning Center in Santa Ana, Calif., where, for 40 years, she taught remedial and speed-reading and helped children to overcome learning disabilities. In 1940, she began teaching at Lowell Elementary School in Santa Ana.

Marie Christine de Monye (M.A. '92) Feb. 17, 2002. de Monye, a professional ballet dancer and teacher, was the director of the Academy of Arts in El Paso. She also ran ballet schools in Alamogordo and Las Cruces

while teaching at New Mexico State University and El Paso Community College. She taught foreign languages at Gadsden High School in Anthony, N.M., and served as chair of the Department of Foreign Languages.

Welton James Fulps (M.A. '54) Feb. 21, 2002. Fulps, a teacher and coach in El Paso public schools for more than 25 years, was a resident of Columbus, Ga. He served as a sergeant in the U.S. Army at Fort Bliss during World War II, and was a longtime member of the Elks Lodge #187.

Mitzi Yvonne Hargrove Bond (B.S.Ed. '73) Feb. 27, 2002. Bond was the principal of Lindbergh Elementary School and was employed with the El Paso Independent School District for 28 years. Bond taught elementary and secondary education, was a teacher certification officer and an assistant principal of Whitaker Elementary School and principal of Beall Elementary School. She was a member of the El Paso Baptist Disaster Relief Team, Gideon's Auxiliary, and the Delta Kappa Gamma Society International.

Marie Ann Emerson (B.S.Ed. '70; M.Ed. '72) March 5, 2002. Emerson, a resident of El Paso, worked with the Red Cross during World War II. She taught at St. Joseph's School, and was employed in the Education Department at Texas Western College (now UTEP). During the 1970s, she taught children with learning disabilities in the Ysleta Independent School District. After retirement, she taught English as a second language and Spanish classes to the elderly.

Ernesto Rojo (B.S. '92) March 7, 2002. Rojo, a lifelong resident of El Paso, was a math instructor at El Paso Community College.

Marian H. Chavez (B.M. '69) March 22, 2002. Chavez, a resident of DeSoto, Texas, retired from her work as a music teacher with the Dallas and El Paso independent school districts.

Kay M. Howsley (M.Ed. '69) March 27, 2002. Howsley was a longtime resident of El Paso.

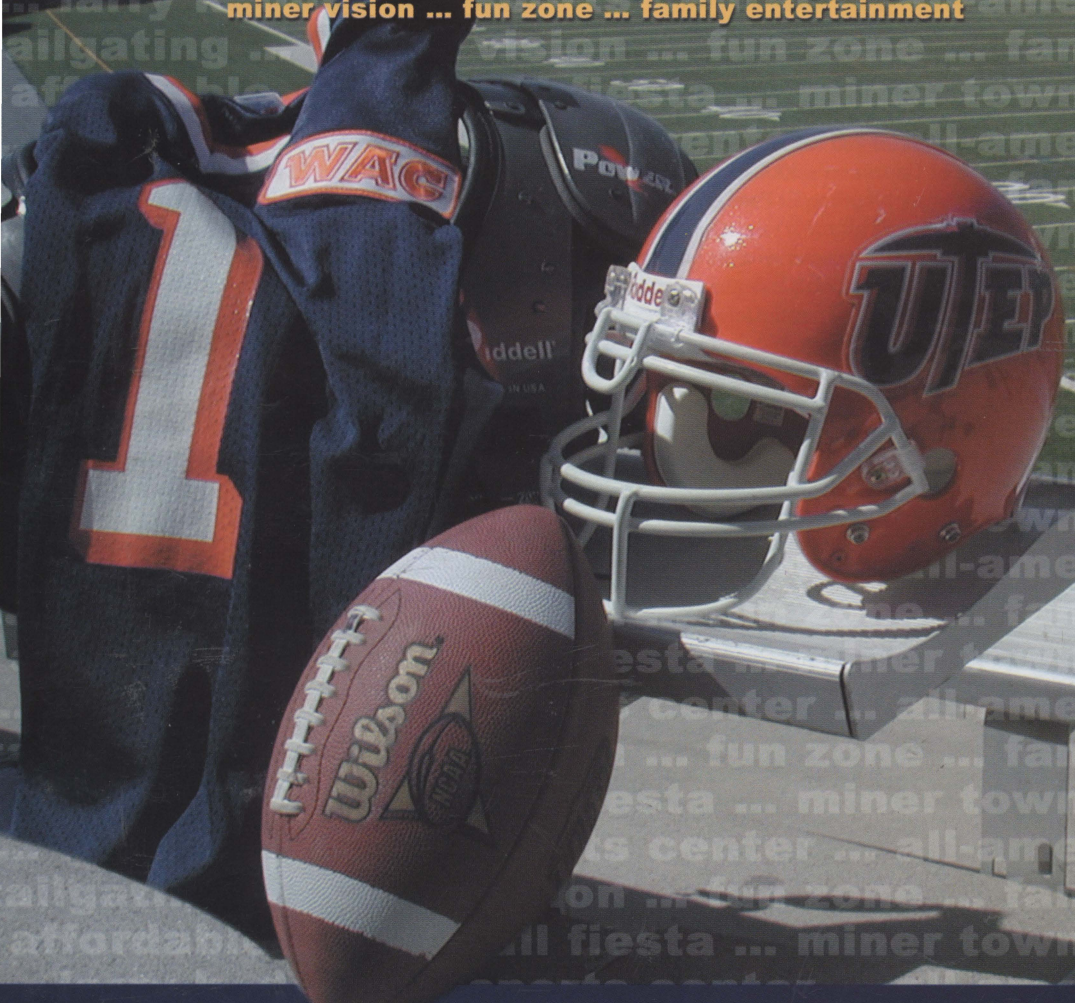
Irma Fierro (B.S.Ed. '64) March 28, 2002. Fierro retired from the El Paso Independent School District in 1997 after 33 years as a second-grade teacher. She was a member of Alpha Delta Kappa International Honorary Sorority for Women Educators XI Chapter, and the El Paso Retired Teachers Association.

Donald A. Shearer (B.A. '61) March 31, 2002. Shearer played the organ at El Paso's Plaza Theater in the 1960s and was the coordinator of the Plaza Theater Organ Project for the El Paso Community Foundation. He also was the organist for St. Patrick's Cathedral and St. Luke's Catholic Church.

Rodolfo A. Anchondo Sr. (B.A. '55) April 2, 2002. He was a lifelong resident of El Paso.

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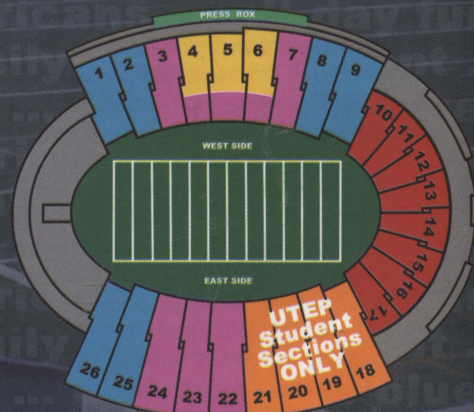
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