

Summer 1992

Nova Quarterly: The Magazine of the University of Texas at El Paso

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NOVA

THE MAGAZINE OF THE UNIVERSITY OF TEXAS AT EL PASO

Q U A R T E R L Y



SUMMER • 1992

FROM THE EDITOR

The perceived ineffectiveness of the U.S. educational system is fueled by the alarming dropout rate (as high as 40% in El Paso), growing illiteracy among teen-agers and young adults, and low test scores of U.S. students compared to those of other industrialized countries. Even in the field of education, our coveted position as a world leader appears to have eroded unsuspectingly. In a country that boasts one of the largest gross national products, less than 2% of the federal budget is allocated to the Department of Education.

While it is generally agreed that throwing money at a problem alone will not solve it, any enterprise requires adequate capitalization, in addition to creativity and vision, to flourish. In the case of public universities, government support is dwindling in the face of increased demand for quality education programs. Business and industry need a steady flow of qualified technical personnel, and they see a skilled and educated work force as the key to improving our competitiveness in world markets.

In Texas, investments in higher education have increased by only 1% (after inflation) in the last eight years, compared to 101% for health and human services and 127% for public safety and corrections.

Even so, universities remain central to promoting long-term economic development. In the United States, an individual with a B.A. degree earns twice as much as an individual with a high school diploma, and salaries triple or quadruple for people with graduate or professional degrees.

The fact is that higher education is a bargain for Texas taxpayers. They pay only \$4,000 per student per year at U.T. System institutions compared to a national average of \$5,500 to \$6,000 at similar institutions.

At UTEP, taxpayers spend even less: about \$2,212 per student in fiscal year 1991-92.

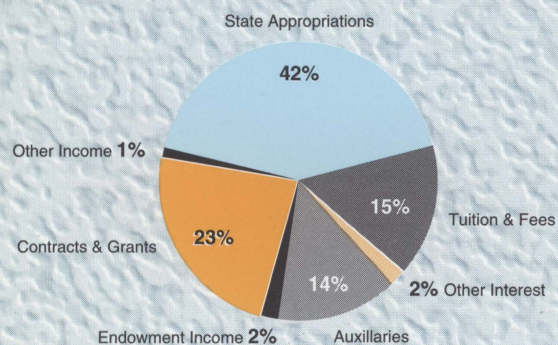
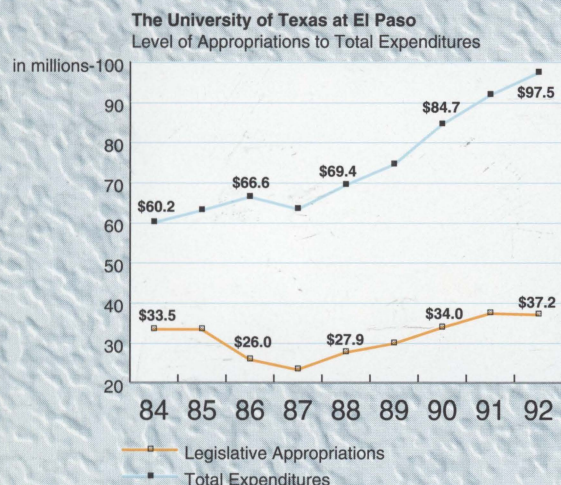
With virtually no new dollars for higher education in Texas since the mid- 1980s, UTEP has been forced to stretch the capacity of its infrastructure, staff and faculty to meet the growing demand from the region. Enrollment has grown from 14,110 in 1985 to 16,830 in 1991.

UTEP's answer to increased regional demand has been an aggressive development campaign to fund research, student support services and community outreach. Today, only 42% of the university's annual budget is operated with state dollars. The rest comes from the entrepreneurial efforts of the university. UTEP has leveraged local and national dollars by demonstrating excellence in academic and research programs and a commitment to the region.

Research expenditures, for example, have grown to \$9.62 million in 1991 compared to \$2.3 million in 1985. Grants and contracts that totaled \$5.19 million in 1986, jumped to a whopping \$26.18 million in 1991; and a phenomenal response from alumni in 1992 boosted the Alumni Fund for Excellence by 17% over the 1991 contributions.

Nevertheless, because state support provides the foundation for UTEP's ability to serve the region, further erosion of legislative funding could have far reaching implications. A cap on enrollment and reductions in course offerings could be unpalatable, but possible, courses of action.

Beginning this fall, NOVA will initiate a series on education funding issues and their impact on UTEP, its students and regional economic development. If you have concerns or questions about this important topic, write to us and we will attempt to cover them in the upcoming series. —Arturo Vásquez, Editor



NOVA

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On the cover:

*Shannon Colleen Jordan,
May '92 College of Nursing
Graduate dons a white nurse's
cap.*



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*UTEP hosted the 1992 SAE
Mini Baja Student Competition
(April 25) at Charlie Davis
Park, the only "baja" course on
a U.S. university campus.*



Wounded

*Alone again, Lord, can I make it
on my own again?*

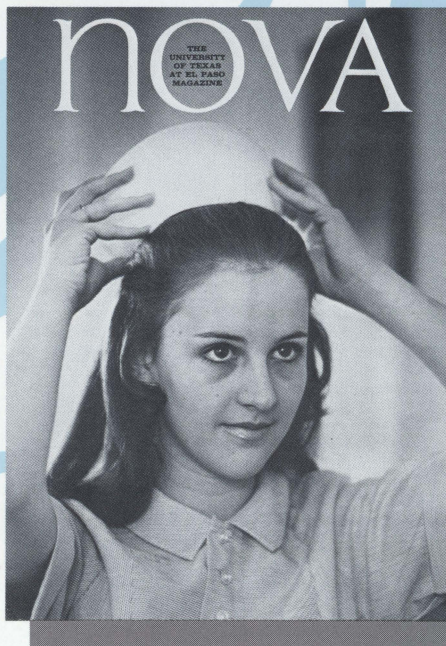
Will I survive? I wonder.

*Is there a friend who will dry my
tears, and will they end?*

Comes Your reply: "Just listen . . ."

*And I hear my Father gently say,
"The night is almost gone.*

*The morning sun will shine again,
Take hope, my child, and carry on."*



An 18-year-old Shannon Colleen Roach as she appeared on the cover of NOVA in 1971.

The poignant lyrics of Shannon Colleen Jordan's song, "Sounds of Restoration," barely hint at the recent UTEP graduate's struggles to overcome hardships that would have devastated most people.

Music, a lifelong pursuit, is but one creative form of therapy for the 39-year-old nurse whose deep religious convictions shepherded her through a fiery baptism of emotional and physical pain the past few years. Colleen's painful story of domestic strife, divorce and cancer unfolds in the solarium of her mother's white brick home on El Paso's west side on a sparkling spring morning.

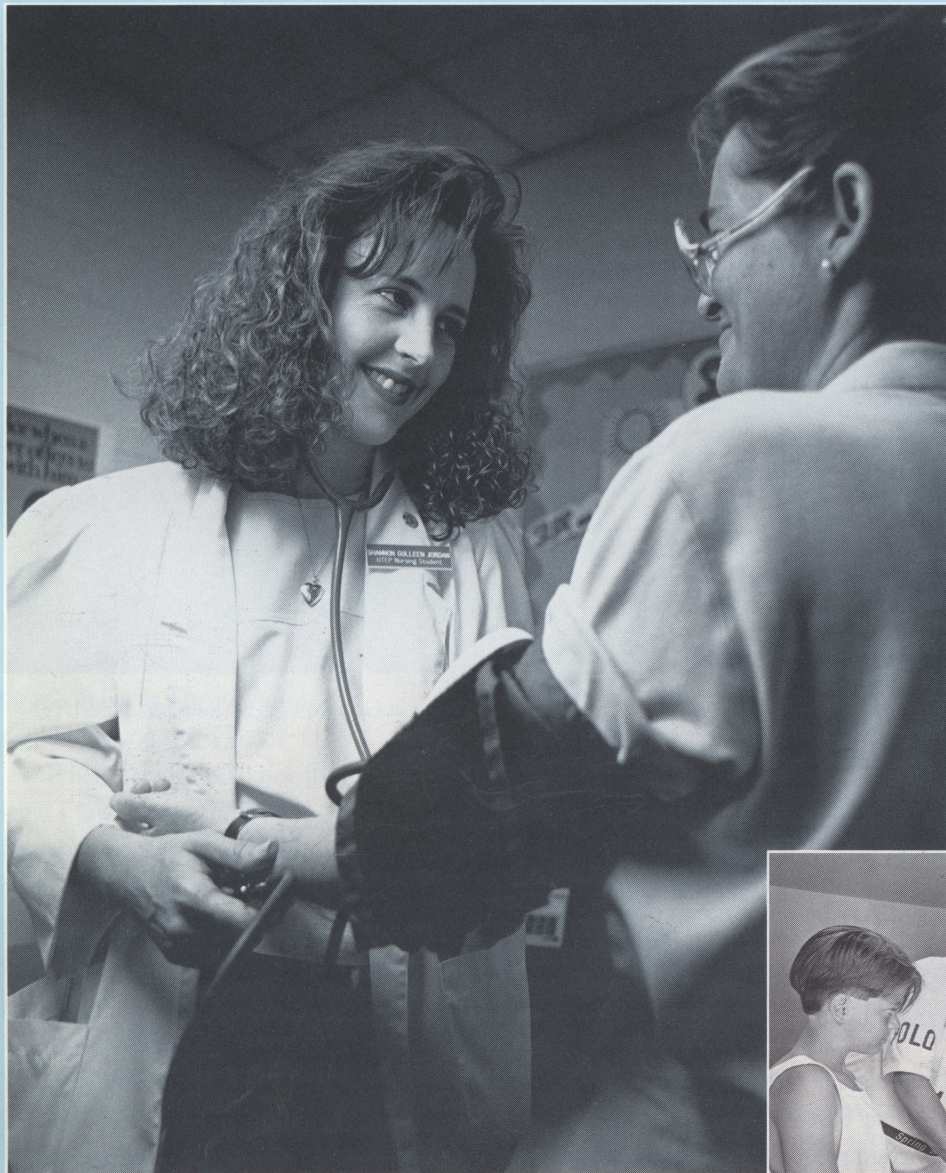
Stylishly dressed, attractive and vivacious, the mother of four projects poise, confidence and well-being. A closer look, however, reveals a hint of pain and sadness in Colleen's chocolate-colored eyes – eyes framed by long, curly, auburn tresses that cascade past her shoulders.

Her resemblance to the doe-eyed, 18-year-old coed who appeared on the cover of NOVA magazine in 1971 is unmistakable. In the photograph, a youthful Shannon Colleen Roach, one of 35 freshmen enrolled in the first class of the University of Texas Undergraduate Nursing School at El Paso, dons a starched white nurse's cap.

Inside the magazine, a profile of the Florence Nightingale-to-be reveals the former Coronado High School student's lifelong desire to become a nurse. The last line of the story concludes: "Since slender, five-feet-four-inch Shannon Roach has all the other requisites for being a nurse – intelligence, dedication and determination principal among them – the only thing she lacks is the nursing degree, the earning of which in her case, is certainly just a matter of time."

“Angel of Mercy” Flying High

By Robert McCorkle



At work: Shannon Colleen Jordan's personable nature comes across in her interaction with patients.

Now, 21 years later, with her Bachelor of Science in Nursing (BSN) degree finally in hand, Colleen smiles at the irony of that closing statement.

Nonchalantly, this girl-grown-into-a-woman recites a chain of life events that have taken her to a personal hell and back. Colleen's amazing story of personal trials and the triumph of the human spirit illustrates how the song of life is orches-

trated by one's choices and will power.

Instead of continuing her studies at UTEP after her freshman year, Colleen did what many 18-year-olds do – she fell in love, married and dropped out of school. It was a decision her nuclear physicist father and schoolteacher mother discouraged, but let their determined daughter pursue.



At play: The Jordans enjoy a quiet family moment at their El Paso home. Gathered around Colleen and her Yamaha synthesizer (from left) are sons: Sabian, Dominic, Simon and Peter.

Of her marriage to Bruce Jordan in 1971, Colleen says, "If I had it to do over again, I probably would have married him but I would have waited until I got out of school. I envisioned finishing school and having a beautiful home with a white picket fence and secret garden – a garden where I'd have flowers, flowers and flowers; a place I could write."

But the realities of life and serendipity intervened in the newlywed's life as she embarked on a career as a professional singer, composer of Christian music and evangelical speaker along with her musician husband, his brother and wife. Known as *The Jordans*, the Brownfield, Texas-based group performed throughout the U.S. and made a number of popular recordings.

Though busy with her music career, writing, church work and family – she had one son and another on the way – Colleen still harbored a desire to become a nurse. She enrolled in 1978 at Texas Tech where she earned 10 hours of credit despite the long commute from Brownfield. Little did she know that she would not resume her education for more than a decade.

Tired of touring for eight years while trying to raise a family, the Jordans moved in 1985 to Taos where they formed a partnership and opened an art gallery. A creative writer and accomplished lyricist, Colleen busied herself with composing music and writing sentimental and often religious verses for nature greeting cards illustrated by her artist brother-in-law, Jerry Jordan.

Beneath the Jordans' patently settled New Mexico existence, suppressed marital discord tore at the tentative fabric of a marriage of more than 15 years. When efforts to repair the crumbling marriage failed, Colleen packed up her four sons and left town.

After the divorce was final in 1988, a disillusioned Colleen and her four sons moved back to El Paso to live with her mother, Ethel L. "Scotti" Burns. After 17 years of marriage, the new divorcee found her emotions and finances in shambles. She applied for and received food stamps and



Nurse-to-be Shannon Colleen Jordan examines the ear of a patient at Canutillo High School as part of the UTEP Nursing School's hands-on training.

AFDC payments of \$221 a month, and qualified for Medicaid coverage. The latter turned out to be fortuitous because in April of 1989, Colleen was diagnosed with breast cancer.

"The last five years of married life I believe had a significant effect on my body and may have had something to do with my contracting cancer. I lost a lot of respect for myself during my married life," she says.

Colleen underwent a modified radical mastectomy on April 17, 1989, followed by six months of chemotherapy and six weeks of radiation treatment. Remarkably, during that period, Colleen picked up six hours at El Paso Community College and enrolled in the UTEP College of Nursing and Allied Health the following fall with the aid of a Pell Grant and academic scholarship.

Nauseous from the chemotherapy and losing her hair, Colleen dauntlessly plowed ahead with her studies, informing her professors that her cancer treatment might force her to miss class. A classmate, Sherrita Garland, to whom Colleen refers as her "bosom buddy, mentor and friend," became her confidante and study partner.

"Colleen has been wonderful and taken notes for me for three years," says Garland, who suffers from a learning disability that makes note-taking difficult. "I don't think I would have made it through nursing school without her. She's always been there for me and I've tried to be there for her. Colleen always thinks about others and she'll be a wonderful nurse."

Colleen credits the support of friends like Sherrita, professors and her family, and most significantly, her unabiding faith in God, for helping her through her tragedies.

"Friends from all over the U.S. heard of my illness and sent flower bouquets to my hospital room. And people sent me money that first year. I couldn't believe it. It was such a wonderful thing because I had no child support. God's been so good to me."

Nonetheless, Colleen confesses to dark moments during her illness when she came close to giving up the battle.

"There were a few times, especially during chemotherapy, when I said, 'Dear Lord, let me go.'"

Colleen recalls a particular visit to the doctor's office during her chemotherapy treatment. She could still taste the toxic chemicals in her mouth and dreaded the next few days she knew would be spent in and out of the bathroom vomiting from the side effects of the powerful drugs.

As she wept in self-pity, a scripture in Phillipians came to mind. Colleen opened her Bible to the words of a suffering Paul who was weighing whether death would be better than a life of misery: "For me to die is gain; for me to live is Christ. And it is needful for you that I stay."

"When I read those lines, in my mind I saw my four little boys standing in front of me and I thought it's needful for them that I stay. At that point, I made a decision that I would fight the cancer and do the best I could."

Though she beat the disease, Colleen's cancer and divorce had a profound effect on her sons: Dominic, 15; Peter, 12; Sabian, 10; and Simon, 7; especially the eldest who last fall went to live with his father and has undergone therapy for conduct disorders. The other three are doing well in school and are adjusting to their changing circumstances. Important family bonding activities take place on Friday nights that Colleen sets aside exclusively to spend with her children watching movies, eating pizza and doing special things. This summer to celebrate her long-awaited graduation, Colleen will take her children to Disneyland.

Colleen credits her mother, who also suffered from breast cancer, with providing the emotional and pragmatic support crucial to her and her children's survival. "Scotti" Burns, who was divorced from Colleen's dad when Colleen was 9 years old, has been an art teacher in El Paso schools for 26 years.

"She's well loved and a great lady," Colleen says of her mother. "I couldn't have done it without her."

There is no shortage of accolades for Colleen either, who is held in high esteem by friends and college teachers alike.



Professors and fellow students marvel at her perseverance despite her series of hardships.

Says Janis Depauw, clinical nursing instructor: "What impresses me is how she's been able to separate personal burdens and problems from her professional life. She has a positive outlook on the future and never says no to any request. I wish all the students over here were more like that."

Not content to just get by in college or to use her cancer as an excuse, Colleen pushed herself to the limit – getting up at 5

a.m. every day and studying until 11 a.m.. She would take an hour break and then head for an afternoon and evening of classes and student nursing, returning home to study before turning in past midnight.

But the hard work paid off: a 3.98 grade point average; dean's list, 1970-71 and 1989-1992; Golden Key National Honor Society; Alpha Chi National Honor Society; Sigma Theta Tau International Nurses' Honor Society; National Collegiate Nursing Award; Men & Women of Mines; and Top Ten Seniors.

Dr. Maria Amaya, who taught Colleen and supervised her research on a human papillomavirus study of Hispanic women on the border during her final semester, concurs with Dr. Depauw's views.

"She was an exemplary student, academically oriented and very highly motivated. She's a class leader and role model. I don't think I'd ever be surprised by her achievements. I expect her to continue with graduate school."

That's exactly what the UTEP nursing school graduate intends to do a year from now. Meanwhile, Colleen will work as a post-surgical graduate nurse at Thomason Hospital, polish her medical skills and prepare for the state licensing board exam in July. Ultimately, she would like to become a staff nurse for a cardiovascular surgeon. Colleen,

however, also admits to a "second love" in her field – public health nursing. Self-taught in Spanish, the multi-talented nurse enjoys working in public health with the border's Spanish-speaking population.

Colleen attributes her love of nursing to her grandmother, Louise Hartsfield, who was a private duty nurse for 45 years. "She lived with us for a while and I emulated everything she did. I thought she was the greatest," says the adoring granddaughter.

Interestingly, Colleen's family nursing roots date to 1777 on her mother's side to

(continues on page 15)

HIGH LIGHTS

IN THE RUNNING

The once-mighty UTEP track program has revived and is showing encouraging signs of regaining its championship form. First, the surprising Miners sprinted, leaped and tossed their way to a fourth place finish in the NCAA Indoor Track & Field Championships. Then, at the NCAA outdoors meet in Austin in June, UTEP placed fifth in the nation.

Four-year track coach Bob Kitchens has assembled a talented core of quality athletes from overseas who recall the heyday of the 1970s when Ted Banks' "foreign legion" of such Kenyan runners as James Munyala, Suleiman Nyambui and Wilson Waigwa who ruled the boards.

Though UTEP's biggest headline-grabber – 100-meter record-setter and NCAA outdoor 100

and 200 meter champ Olapade Adeniken – hails from Nigeria, most of the current high-octane tracksters sport homegrown or European roots.

Overseas transplants Arne Indrebo (javelin), Mika Laaksonen (hammer), Kjell Ove Hauge (shotput) and Jim Svenoy (1500 meters) join with El Paso products like former Irvin high jumper Howard Williams and former Coronado distance runners Kenny Lucero and Marcel Laros to give the Miners a well-balanced attack.

"Nationally, we've been ranked as high as second and as low as fifth in the nation after the indoors," Kitchens said. "So, people know that UTEP track is back in business."

FORENSICS STUDENTS NATIONALLY RANKED

Junior Joe Medina recently placed fifth in the dramatic interpretation category at the nation's most prestigious national forensics conference held April 10-13 in St. Louis. Medina is the 1992 Texas state champion in dramatic interpretation.

Other UTEP forensics students invited to the American Forensics Association-National Individual Events Tournament (AFA-NIET) were Kevin Cummings, 1992 Texas state champ in extemporaneous speaking; and John Magni, 1992 District IX Rocky Mountain States champion in prose interpretation.

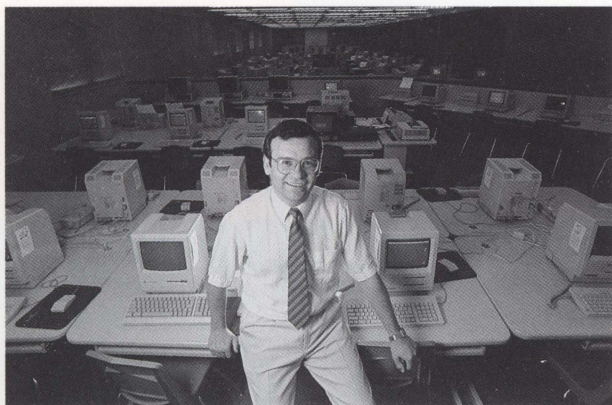
The AFA-NIET is considered the nation's toughest competition. Explains Dr. Mary Trejo, director of UTEP forensics: "Literally every student who enters must qualify by winning at least three separate tournaments with an average ranking of at least third place. In other words, each participant must be a champion in his/her own right before entering the tournament."

UTEP debaters also took home the Top 80 Trophy in March from the Cross Examination Debate Association National Tournament held at the University of Texas at Arlington. Taking top honors out of 250 colleges entered was the UTEP team of freshman Chris Lucy and sophomore Kevin Cummings. UTEP placed higher than Emory, American University, Ball State and Appalachian State.

\$800,000 COMPUTER LAB DEBUTS

Today's generation of liberal arts students – weaned on television's high tech special effects and video wizardry – now has access to an impressive, new computer/language lab that puts the latest microelectronics technology at their fingertips. The Liberal Arts Center for Instructional Technology (LACIT) was unveiled this past spring to much acclaim during a special grand opening attended by corporate contributors, city dignitaries, faculty, staff and students.

"You may recall that liberal arts had a language lab and a sepa-



Jamie Nuñez, LACIT Associate Director

rate computer lab, both too small and located in unattractive classrooms," said Dr. Jon Amastae, chairman of languages and linguistics. "Our goal when we started planning this four years ago was a state-of-the-art laboratory. We believe we have that, as well as room to grow to keep up with the ever-advancing state of technology."

Located on the fourth floor of the Liberal Arts Building, the \$800,000 facility encompasses 10,000 square feet and houses more than 100 personal computers, many configured to interface with VCRs, CD and laser disk players.

Dr. Carl Jackson, dean of liberal arts, believes that a "learning revolution is finally at hand for liberal arts students" in this brave, new world of speedy microchips that process millions of bits of information in nanoseconds, placing UTEP students and faculty on the

cutting edge of computing.

The latest generation of personal computers and audio visual equipment will enhance both classroom and lab instruction in foreign languages, English as a second language, composition, journalism and statistics. The multimedia center, which opened last fall, is used by students and faculty for word processing, computation and foreign language studies.

"Computers are everywhere in today's work place," says LACIT associate director Jamie Nuñez. "Computer literacy is essential for most of today's jobs. This center will allow us to catch up to the rest of the state."

Epifanio Solis, a 25-year-old senior from Chihuahua City, says the new computer lab has helped him tremendously and permitted him to expand his learning opportunities as he works to-

ward his education degree. He gives high marks to the lab's helpful staff.

"I have found a lot of ways using computers to put my ideas down on paper," Solis says. "It's a lot easier than using a typewriter or writing out assignments, and it saves me time that I can spend on other classes."

The lab's amazing array of technology includes: 48 Memorex-Telex (IBM compatible) computers; 48 Apple Macintosh units; 7 Commodore Amiga 3000 computers for use with disk and VCR players; a 30-station portable wireless audio lab; a Visipitch/386 for teaching tone languages such as Chinese; a Toshiba computer/word processor for Japanese and Chinese characters; and a media room with newspapers and journals in various languages.

In addition, foreign language students have access to 15 VCR/monitor carrels with headsets, as well as a viewing room where foreign-language newscasts from around the world are transmitted via satellite and projected onto a large screen.

Funds and equipment were donated by El Paso Natural Gas, (through the Burlington Resources Foundation), Apple Computers, Inc., Commodore Business Machines and monies from the state's

Permanent University Fund.

Commodore business products representative Larry Schultz says the new lab will facilitate learning for today's college students who grew up in video arcades and watching slick animation and music videos courtesy of MTV and other television networks.

"When students come to the classroom, they have to put up with chalk and textbooks, so there's a great disparity between what students are experiencing in the classroom and the real world," Schultz explains. "The Amigas allow students to synthesize their own video like European kids are doing. Five years from now students may not have any books."

Sophomore Isabel Luevano has worked with personal computers since high school, so she enjoys using them as often as possible. But the computer information systems major, who also works part-time at LACIT, concedes many students are intimidated by the computers.

"A few," she comments, "really love it, but most students are hesitant about using computers and complain about having to do so. At first they're really frustrated because they don't know what they're doing, but I know later they'll get used to it."



DESERT DUNES DAY CLASSIC

By Arturo Vásquez

Photography by Franklin Muñoz
and David Flores

Desert scrub drapes the rugged hills of andesite, volcanic rock exposed by erosion over the millennia. In early spring, breezes from the west gather strength, swoop down and cut through foothills that form a natural bowl cradling mesquite, creosote, Mormon tea, and the animal life invisible to city dwellers. Silhouetted Mount Cristo Rey beckons to the west. To the east, the Franklin Mountains reflect haze-filtered reddish light of late afternoon. Serenity rules here most of the time. But with the breeze that rides the light of sundown, anticipation descends on tranquility.

This is the site on the north campus of the University of Texas at El Paso where over 50 “mini-baja” cars built by student engineers from around the United States and Mexico compete in the Desert Dunes Day Classic—one of three Society of Automotive Engineers (SAE) Mini-Baja Student Competitions. This is not just another desert dune buggy race for the hobbyist who can afford to buy ready-built machines.

The SAE Mini-Baja is a test of ingenuity, endurance and commitment. Student engineers design, manufacture and test their roadsters for the glory, yes, but car design projects offer an opportunity for students to apply theoretical knowledge in a practical setting.

“It’s not like we wasted four years studying mathematical equations for nothing. So it feels pretty good to be able to work on something real,” says Rick Lugo, mechanical engineering senior at UTEP.

Lugo used his CAD (Computer Assisted Design) program skills to conceptualize designs, identify different stress points and check ground clearance.

Manny Pacillas, a metallurgical engineer who recently left the steel industry to direct student engineering programs at UTEP, says the Mini-Baja is “engineering in a microcosm.”

“It takes everything that you’ve learned in classes and forces you to apply it. Finite element analysis, dynamics, materials, you name it, it’s all in these little machines and the students get in there and get dirty,” explains Pacillas with his student-inspired enthusiasm.

Some student competitors see in their car designs the opportunity for practical applications and possible solutions to urban problems.

Carlos Rivera, from the *Universidad Nacional Autónoma de México* in Mexico City, cites two challenges his student team of five has contemplated.

“We apply our knowledge to designing vehicles with smaller engines with lower horsepower and consider solutions to congestion and environmental pollution in Mexico City,” says Rivera.

Identical lawn mower engines donated by the



Briggs and Stratton Company power all Mini-Baja cars in the competition. Briggs and Stratton District Manager Tony Springer notes that while his company receives some publicity from its sponsorship of four Mini-Baja events around the country, the firm's primary objective is to help engineering students.

"Every year the students get better," says Springer. "They realize that when they make changes that we suggest it helps them with the endurance race."

THE COMPETITION

On Wednesday evening and Thursday morning small transport trucks and pick-ups hauling two-wheel, flatbed dollies from as far

ties enter their prized creations: midget cars weighing less than 300 pounds with rear mounted engines on steel body frames full of purpose. The array of patently similar cars parked on the lawn of the Geological Sciences Complex is anything but homogenous when inspected closely. Browsing spectators can discern the craftsmanship of novice and veteran student participants.

"This is a sweet looking car, but they're going to have problems with their design," Pacillas observes, pointing out a car whose engine is tightly encased in painted sheet metal. "On the surface that seems like a good idea, right? You don't want stones and dirt hitting the engine. But when you're out there running in high temperatures you're going to

"Yeah, well, when we first shot it on there it looked like orange peel," says one of the California State University at Sacramento team members. "But we re-did it and it came out nice," he adds modestly.

The finish is more than nice. It is showroom quality.

Last year's first place overall winner, Cal-Poly Pomona, returns with a refined vehicle, sporting a boxy driver's compartment, a coat of gleaming white paint and red steel rod-arms that connect to the wheels.

While some teams look relaxed, waiting for Briggs and Stratton personnel to equalize RPM's on all competing engines, other teams hover around their cars, making last-minute inspired adjustments, dismantling entire front-end suspensions or fine-tuning transmission systems.

The SAE Mini-Baja boasts a 15-year tradition that has evolved into a three-day event including safety, design and sales competitions. Acceleration and maneuverability tests, and a 40-degree-angle hill climb try the merits of the designs, hinting at which cars will endure the four-hour race on Saturday.

THE EVENT

Not satisfied to keep the excitement of the Mini-Baja to themselves, UTEP engineering students decided to expand the scope of this year's event.

"What's impressive about UTEP's Mini-Baja is the visioning of the students who organized the event. This is not just a race, but a reaching out to the community," says Barbara Pontello, manager of SAE's Communications Division, which promotes eight regional SAE student competitions.

"This year we're taking the event to the community," explains John Miranda, UTEP mechanical engineering graduate student and chief organizer of the Desert Dunes Day Classic. "We have assembled a team of over 100 students who planned and executed the logistics for the Mini-Baja and its promotion through print, radio and television advertising."

With guidance from Pacillas, Miranda and Mireya Fernandez, an undergraduate mechanical engineer, coordinated all aspects



Michelle Maidman and Cesar Alcantar, Mini-Baja senior design team leaders.

as Alabama, South Dakota and California, converge on the UTEP campus. Mexico, too, is well represented with teams from Cd. Juárez, Monterrey, Guanajuato, Querétaro, and the State of Mexico. Fifty-two teams of the best student engineers from 38 universi-

ties enter their prized creations: midget cars weighing less than 300 pounds with rear mounted engines on steel body frames full of purpose.

"That's some nice work on this one," continues Pacillas as he turns to a dark olive-green body with bright yellow accent on the three-quarter-inch steel pipes.

The paint job is expertly applied.

of the event.

"All of the logistics, from communicating with participating teams before they arrived in El Paso, arranging campus facilities for the competition, to the awards banquet and cultural entertainment, were handled by a dedicated corps of engineering students," says Fernandez. "This year we've even added a fiesta atmosphere for the race. We've got live music, refreshments and student and community information booths."

THE ORGANIZERS AND COMPETITORS

"If Miranda is the passion of this year's Mini-Baja, Fernandez is the glue," remarks Pacillas.

Miranda, who comes from a family of engineers, transferred from Austin to UTEP to finish his junior and senior years.

"I was a discus and shot-put athlete on the U.T. Austin track team," says Miranda. "But what I really wanted was to earn my engineering degree and UTEP's got a great engineering program."

This summer he is one of 15 students selected from 331 applicants to serve as a research specialist with the Texas governor's Energy Intern Program.

Fernandez, a graduating senior, is headed for a summer co-op position with Boeing, and later plans to pursue graduate studies in environmental engineering. In a family of two brothers and three sisters, she is the first to receive a technical degree.

A key member of UTEP's senior design team and principal driver, Michelle Maidman exemplifies the spirit of Mini-Baja students. Intense yet controlled, Maidman trusts the team and the car design.

"This year we changed our suspension to AA arms in the front to help distribute the



Mireya Fernandez and John Miranda, senior mechanical engineering students and Mini-Baja event organizers.

force and minimize breakage. We also added a five-speed transmission where last year we had a torque converter," she explains.

"It is more complicated and we're afraid we're going to burn out the clutch."

The senior mechanical engineer has already landed a job as utilities engineer with Alcoa Aluminum. Maidman is the first in her family to earn a college degree.

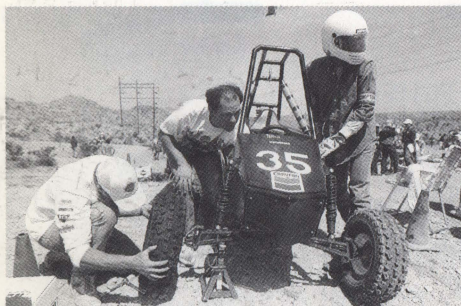
Cesar Alcantar, mechanical engineering major and a leader in several student organizations, directed the Mini-Baja senior design team for UTEP.

"If anything works against us it's going to be limited resources," he says. "Some of these teams have a lot of money to work with."

THE RACE

Saturday morning is chilly and gusty. But by 10 a.m. the mercury climbs for the start of the endurance race. Mini-Baja cars line up in single file—50 of them compressed against the surrounding desert hills that frame a scene of painted metal and expectant, youthful faces.

Pit crews strap in their first drivers, who rev up engines; freeing the horsepower that cranks the low-pitched hum of the Mini-Baja. Adrenaline pumps. Finally, as the green flag signals the start of the race, drivers floor their accelerators and unbridle the expectations of student engineers, some of whom invested as many as eight months on design and testing.



(continues on page 17)



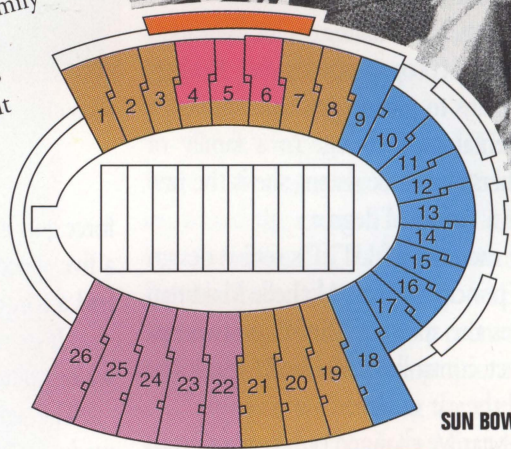
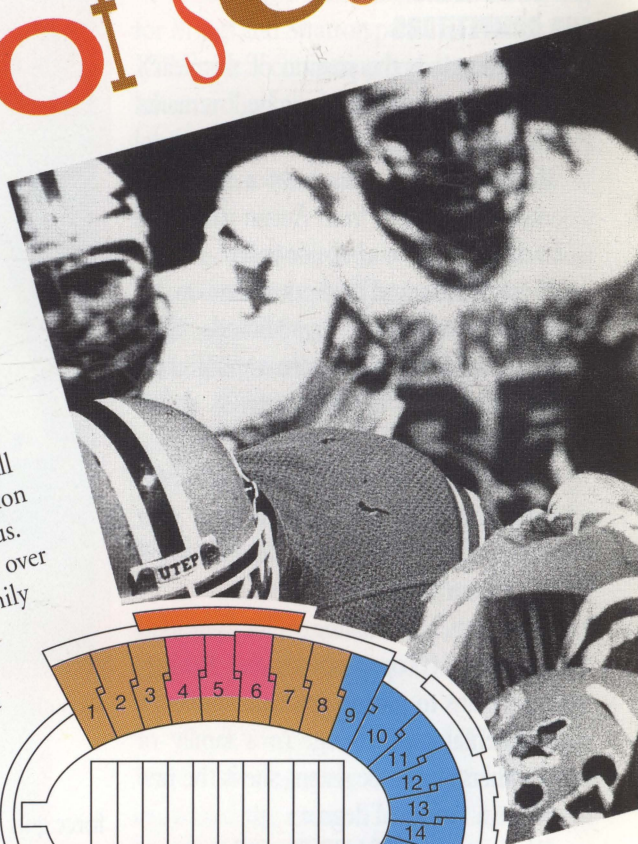
We have your kind of season

Football and basketball action returns to El Paso in September so it's not too early to purchase choice seats at the Sun Bowl and the Special Events Center. This year, UTEP has restructured the season ticket program with you in mind. First, the university created the Miner Foundation to offer the top customer service our Miner fans deserve. The Foundation is raising scholarship funds to attract the high caliber athletes that bring excitement and pride to UTEP and El Paso. Second, ticket prices for all games have been reduced by as much as 35 per cent for different seats.

Foundation supporters still get the benefits of preferred seating, invitations to all special athletic events, and a new and improved newsletter with the latest information on Miner athletes, coaches and upcoming events. Priority parking is an added bonus. We'll even put you on an installment plan so you can spread out your contribution over 12 months. Kick in our children's football and basketball competition awaits entertainment bargain in town.

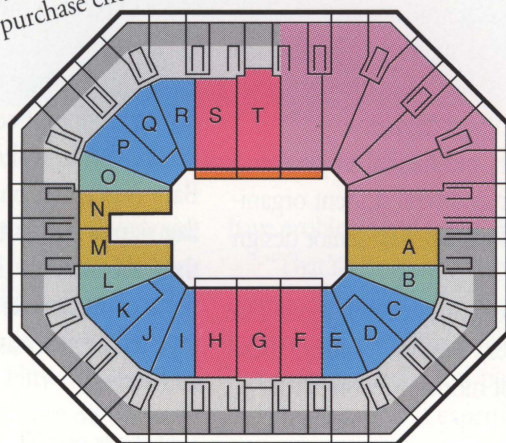
Seven months of exciting collegiate football and basketball competition awaits you. Become a Miner Foundation member and support the academic development of the best and brightest student athletes.

Send orders to: The Miner Foundation, University Ticket Center, UTEP, El Paso, Texas 79968-0560. Make donation checks payable to The Miner Foundation and ticket purchase checks to the University Ticket Center.



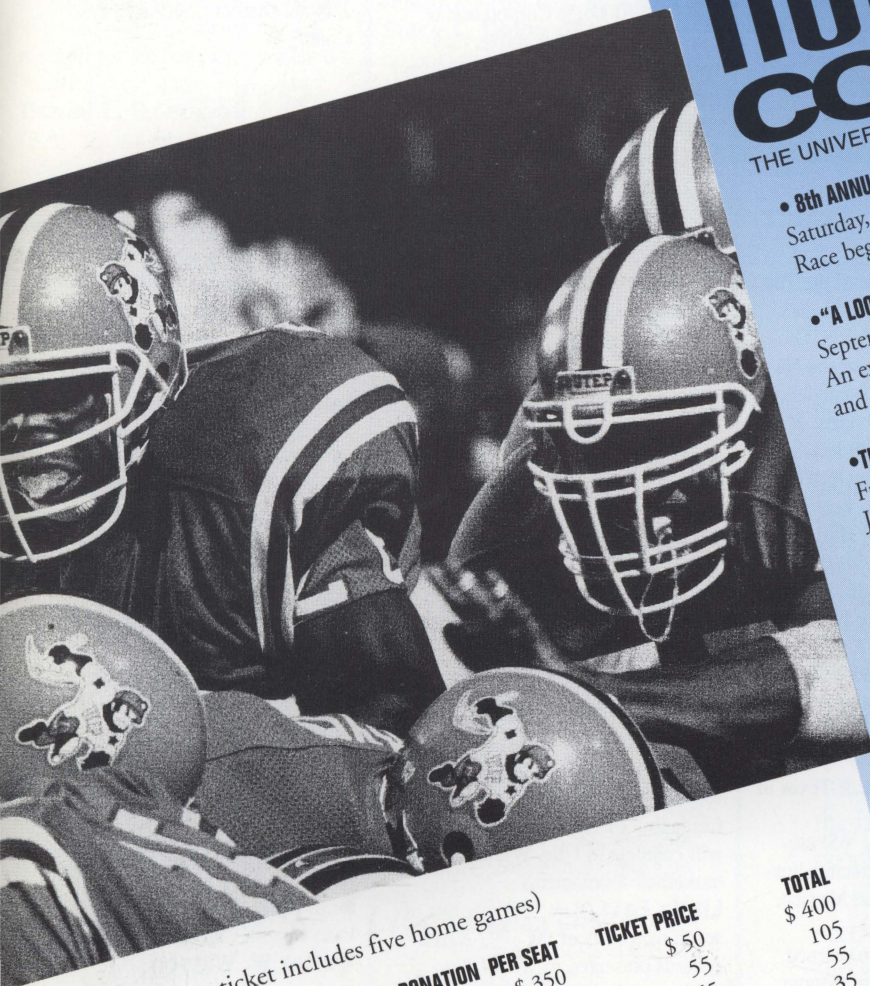
SUN BOWL

- Captain's Club
- Scholarship
- Reserved
- General Admission
- Students



SPECIAL EVENTS CENTER

- Floor
- Sections FGHST
- Sections CDEIJKPQR
- Sections BLO
- Sections AMN
- ROWS 25-34
- ROWS 35-39
- Students



HOME 92 coming

THE UNIVERSITY OF TEXAS AT EL PASO

• 8th ANNUAL 5k FUN RUN/WALK

Saturday, September 26

Race begins at 8:00 a.m. Registration 7:00 a.m.

• "A LOOK BACK AT HOMECOMINGS PAST"

September 28 - October 9, Union Gallery

An exhibit of nostalgia from the Honored Classes 1942, '52, '62, '72 and '82.

• THE ANNUAL HOMECOMING PARADE AND RALLY

Friday, October 2, 12:15 p.m.

Join us this year for the Annual Homecoming Parade, honoring our Distinguished Alum, the Homecoming Court, as well as many other surprises. The parade route will end at the Geology lawn and kick off the Homecoming Rally. The Rally will feature introduction of the Homecoming Court and the announcement of the parade winners. Come and show your support for the almighty Miners!

• THE DISTINGUISHED ALUM RECEPTION & BUFFET

Friday, October 2, 7:00 - 9:00 p.m. - UTEP Library

• HOMECOMING BONFIRE/BEACH PARTY

Friday, October 2, 9:00 p.m.

SPIRIT RALLY - 9:00 p.m.
BONFIRE - 10:00 p.m.

• UTEP MINERS vs. AIR FORCE

Saturday, October 3

Game begins at 7:00 p.m.

The Alumni Association will have a reserved section at the football game again this year. Plan to join us at the Annual Pre-Game Party at the Lodge and then join us as we cheer the Miners on to victory.

Look for your soon-to-be released Homecoming Calendar for more details.

Homecoming is a wonderful time to wear the orange, reminisce with college classmates, rekindle old friendships and make new ones, too. So, drop by the Lodge and visit ... have a cup of coffee ... and enjoy your home away from home.

See you there!

FOOTBALL (season ticket includes five home games)

DONATION	PER SEAT	TICKET PRICE	TOTAL
	\$ 350	\$ 50	\$ 400
	50	55	105
		55	55
		35	35
		20	20
		170	170

TYPE OF SEATING

Captain's Club
Scholarship
Reserved
General Admission-Adult
General Admission-Child

COMBINATION (Football & Basketball-Men and Women)

BASKETBALL (includes 19 home games)

DONATION	PER SEAT	TICKET PRICE	TOTAL
	\$ 625	\$ 175	\$ 800
	325	175	500
	225	175	400
	125	175	300
		185	185
		130	130
		15	15

TYPE OF SEATING

Floor
Sections FGHST
Sections CDEIJKPQR
Sections ABLMNO

NON-SCHOLARSHIP

ROWS 25-34 (except sec. AM & N)

ROWS 35-39 (+sec. AMN Rows 25-39)

WOMEN'S BASKETBALL SEASON

For more information call 532-8837. Donations are tax deductible.

ALUM NOTES

▼40s

John H. Gray (B.S. '48) was named recipient of the Public Service Award by the American Association of Petroleum Geologists. Gray lives in El Dorado, Arkansas, and is president of Juan Grande Oil Co.

▼50s

John Richard Chandler and his wife, the former **Sue O'Dell**, attended UTEP between 1950 and 1954. They now reside in Guymon, Oklahoma, where he serves as pastor of Oslo Lutheran Church.

Noel R. Adams (B.S. '51) was named Engineer of the Year in 1992 by the organization of Washington State Professional Engineers.

Mario A. Rochin (B.S. '51) has been promoted by Phelps Dodge Corp. to client liaison on the La Candelaria Project near Copiapo in northern Chile, South America.

William F. Quinn (B.S. '54) was presented the Texas Section Professional Service Award during the Fall, 1991 Texas Section meeting of the American Society of Civil Engineers. He has worked in civil engineering for 37 years.

Phillip W. Ward (B.S. '58) has retired from his position with Texas Instruments and is now operating his own consulting firm, Navward GPS.

Maestro Abraham Chavez (B.M. '59) recently retired as conductor of the El Paso Symphony, was one of six recipients of this year's Centennial Leadership Award, presented by El Paso Senior Opportunities and Services.

H. R. Moya (M.Ed. '59) was also one of the six El Pasoans to receive this year's Centennial Leadership Award given by El Paso Senior Opportunities and Services.

▼60s

Julius Lowenberg (B.A. '60) was named one of the Top 500 Remodelers in the country for 1991 by Qualified Remodelers. Other honors include: president of the National Association of the Remodeling Industry El Paso; vice president of the El Paso Association of Builders-Remodelers Council; and selected Remodelers Citizen of the Year by the El Paso Association of Builders and Contractors.

Allen K. Tolen (B.A. '62) is Special Agent in Charge at the FBI's Cincinnati, Ohio office.

Bea Ramirez Svamera (B.A. '64) teaches junior high school in La Porte, Texas, and was named Texas History Teacher of the Year by the Daughters of the Republic of Texas in 1991.

Pat O'Rourke (B.B.A. '65) currently owns a twin-plant manufacturing company in Cd. Juárez, Mexico.

Rosalyn J. (Morton) Scarborough (B.S. '66) earned her M.A. in education from Coppin State University in Baltimore, Maryland. She lives in Columbia, Maryland with her two daughters, where she teaches special education at Hammond High School.

Jean M. Hill (B.A. '67) teaches in the Fabens ISD. She has served as president of Fabens Educators Association for 5 years and as a state delegate to the Texas State Teachers Association for 10 years.

Cynthia Humbert (B.A. '67) has been named assistant city attorney in Stockton, California.

Lionel Nava (B.A. '67; M.Ed. '76) was named principal of Del Valle High School in El Paso.

Pedro Rocha, Jr. (B.A. '67; M.A. '69) earned his Ph.D. in Educational Administration at U.T. Austin in 1981 and is currently Dean of Mesabi Community College in Virginia, Minnesota.

John E. Schear (B.B.A. '67) has retired from C & P Telephone after 25 years of service. He resides in Alexandria, Virginia.

A. Travis White (B.S. '67) and his wife, **Sharon Grimmesey White** (B.A. '66) are currently living in Calgary, Alberta, Canada where he serves as president and CEO of LSI Logic Corporation of Canada. Prior to this move, they spent three years in London, England where he was senior vice-president of operations for LSI Logic-Europe.

Gary Crowell (B.A. '69; B.Ed. '72) was named Texas Principal of the year for 1991 by the National Association of Secondary School Principals.

▼70s

Abe Ramirez (B.S. '72; M.Ed. '78) was appointed principal of Bel Air High School in 1990 after more than 14 years as an assistant principal at Ysleta High School.

Robert LeRoy Giron (B.A. '73) is associate professor of English/ESL and chair of the Department of English, Foreign Language and Philosophy at Montgomery College-Takoma Park, Maryland.

David Inslee Terrill (B.S.M.E. '73) is employed by Boeing in Seattle, Washington. He and his oldest son will travel to Hong Kong and China this summer, where his son will compete in USA Washington basketball tournaments.

Linda East (B.A. '74) was one of seven recipients of the 1992 Reach Awards presented by the *El Paso Times* and the El Paso YWCA.

Dolores Aguirre-McAllister (M.A. '76) is an actress who also works as a guest lecturer in California and Texas high schools and universities. She specializes in marketing and producing theater for physically and financially handicapped children and adults.

Ralph Anderson (B.B.A. '75; M.B.A. '80) was promoted to assistant vice president at State National Bank in El Paso.

Bobby McKinley (B.B.A. '76) is currently a registered investment advisor for Fidelity Financial Group in Austin.

Jay A. Spickelmier (M.B.A. '76) has been named assistant to the vice president of operations at ASARCO's Globe plant in Denver. He is on the Executive Committee of the Colorado Mining Association Board of Directors and on the Board of Directors of the Colorado Mining

Association Education Foundation.

Ronald J. Hill (B.S.M.E. '78) and his wife, Mary, reside in Nashville, Tennessee where he has a private practice as a consulting engineer. He is treasurer of the Nashville Section, American Society of Engineers.

Phil Martinez (B.A. '79) was recently appointed judge of the 327th Judicial District Court in El Paso County.

▼80s

Ron Baca (B.S. '80) is a field investigator for the District 15 Field Operations Division of the Texas Water Commission.

John R. Farrell (B.B.A. '80) has been appointed to a two-year term on the six-member Texas Property Tax Consultants Advisory Council.

Luz A. Villegas (B.A. '81) has been appointed to the Women's Center of Dallas Board of Directors and will serve as chairperson for the Annual Emerging Leaders. **Cristobal de la Torre** (M.B.A. '82) earned his Ph.D. in finance at U.T. Austin in 1990, and is currently assistant professor of finance at the University of Nebraska in Lincoln.

Magdalena Lopez Levi (B.S. '82) is past president of the Dallas Chapter of the Society of Hispanic Professional Engineers. She also served as internal relations director for that organization in 1990.

Anna Quirarte (B.B.A. '82) was recently named assistant administrator of international services for El Paso Health Care System.

Walter W. Watson (B.B.A. '82) formerly with Coopers and Lybrand, has joined the professional services company INSECON Computer Systems as vice president.

Rick Johns (B.S. '83) is in his second year as an adult probation officer in Tarrant County, Texas with the Community Supervision and Corrections Department.

Matthew R. Ellis (B.B.A. '84) has been named assistant vice-president, loan officer, for the Mesa Branch of Sun World Savings Bank. He is active in the American Diabetes Association and is a volunteer for the greater El Paso Chamber of Commerce.

Sandra Nordquist (B.A. '84) has returned to UTEP to work on a BSN in nursing. She won the Spirit of Nursing Award, presented to an outstanding UTEP nursing student in 1990.

Nancy Y. Reyes (B.S. '84) is a materials engineer at the Naval Sur-

face Warfare Center in Dahlgren, Virginia. Her husband, **Robert G. Reyes** (B.S. '84) is an investigator for the Department of Justice in Richmond, Virginia.

Jose M. Gonzalez (B.S. '85) is assistant attorney general in the El Paso Consumer Protection Division.

Carlos M. Mejia (B.S. '85) works from his office in Chihuahua, Mexico as a Ford Motor Company support manager for the Sony Corporation of America.

Daniel L. Osazuwa (B.A. '85) is a fourth-year Ph.D. candidate at the Graduate School of International Studies, University of Denver. He is the Book Review Editor for *Africa Today*, a quarterly scholarly journal.

Gerardo A. Licon (B.S. '86) was named manager of the geosciences department of Raba-Kistner Consult-

ants, Inc. in El Paso.

Andres G. Morales (B.S. '87), a fourth-year student physician at Texas College of Osteopathic Medicine, has been selected for Who's Who Among Students in American Universities and Colleges.

Lisa Stipetic (B.B.A. '87) was promoted to assistant vice-president at State National Bank in El Paso.

Stacy L. Davis (B.A. '88) was honored as Woman of Distinction for 1992 in the professional public relations category by the Delta Sigma Theta Sorority.

90s

Lorenzo Eduardo Romero

(B.S. '90) is a process engineer in Cd. Juárez, Mexico.

OBITUARIES

Edith Faye Bartlett Gracey

(M.Ed. '49) June 21, 1991, in Webster, Texas. She had been a resident of El Paso over 33 years and taught in the El Paso public schools until her retirement at age 70. Survivors include a sister and a daughter.

William D. Grant (B.S. '56) September 23, 1991, in Amarillo. Survivors include his wife, Gene Ann, two daughters and two sons.

Celso Lamberty (B.S.Ed. '75)

February 14. He is survived by his wife, Delfina, a son, two daughters and a brother.

Maureen Dennehy Carson

(B.A. '59) February 18. She had been a resident of El Paso since 1949. Survivors include a daughter, a son, her mother and step-father, a sister, and two brothers.

William (Bill) W. Stringer

(B.A. '41) February 19.

Martha Ofelia Viescas (B.A.

'54) February 19. She is survived by two daughters, a son and two sisters.

Mildred Rodin Fazar (B.A.

'40) February 29, in Phoenix. Survivors include her husband and four children.

Shirley Lynch Mueller (B.A.

'48) March 1. Survivors include her husband, Daniel, and ten children.

Fay Wynn Nelson (B.A. '35;

M.A. '56) March 4, in Odessa, Texas. She was a retired teacher from the El Paso Independent School District.

Survivors include a son, a daughter and two brothers.

Carl Hertzog, Jr. (B.A. '58)

March 7. He was the son of the late J. Carl Hertzog, book designer, printer and founder of Texas Western Press. He is survived by his mother, a stepson and stepdaughter.

Robin Anthony Quarm (B.A.

'77) March 10, of cancer. Survivors include his wife, Theresa, two sons, his mother, three brothers and a sister.

Victor George Coppinger

(B.A. '52) March 16. He is survived by a son and a sister.

Ellen Light Bennett (B.A. '39;

M.A. '51) March 19. She had been a resident of El Paso since 1928. Survivors include a daughter and a son.

Lorenzo Eduardo LaFarelle

(B.S.Ed. '76) April 1. He is survived by his wife, Martha, a son, his father and step-mother, and a brother.

Paul Lozano (B.S. '84) April 2.

Robert Gabriel Chavez

(B.S.Ed. '81) April 3. Survivors include his parents, three brothers and a sister.

David Stone (B.B.A. '82), the date of death has not been determined. Stone had been missing for more than three years when his body was recently discovered near Lordsburg, New Mexico. Survivors include his parents and a sister.

(Wounded Angel... from page 5)

a Margaret Steinbremner, who is listed on the family tree as an "angel of mercy at Valley Forge."

Genealogy, however, is the only aspect of the past upon which Colleen cares to dwell at this juncture of her once-chaotic life, preferring to look ahead to a brighter future filled with promise and hope.

"I feel like I've been on an emotional roller coaster though the humps keep getting farther and farther apart," she confesses. "But the past is the past, and you have to make a decision to go on or sit in the pity and sorrow."

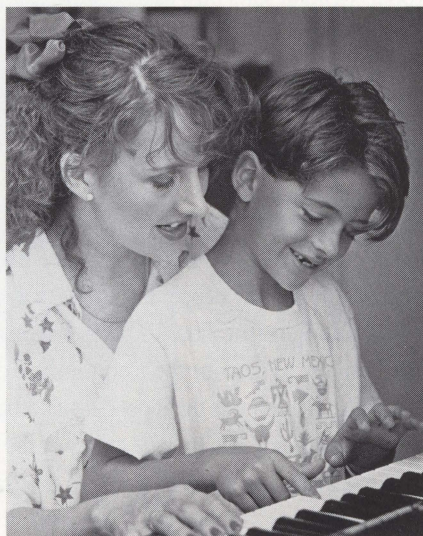
Colleen has "gone on," dating an old family friend and planning for a brighter future. She has resumed her professional music career as well, laying down tracks for her "Sounds of Restoration" album whose title track was inspired by her West Texas travels.

"I was crying as I drove through Guadalupe Pass between here and Carlsbad on the way to pick up my children, and was thinking, 'Lord, will I ever feel restored.' I saw the mesas like three stairsteps leading toward the peak. I felt like I was on the bottom mesa personally, but knew that I would finally achieve final restoration."

And what would she tell others suffering from personal torment and tragedies?

"In every storm there is a rainbow," Colleen says with a beatific smile. "Joy can be found in any situation because life is worth living. When we go through intense times, we have to turn inward and find the strength within us - whether it's the Lord, music or the family. Don't be afraid to lean on people."

El Paso's sick and suffering are fortunate in their days of need to have in Shannon Colleen Jordan a compassionate and skilled "angel of mercy" on whom to lean. For she has suffered great pain and stared death in the face, emerging victorious to share with the sick her nursing talents, empathy and enduring message of hope. ■



The Quest for Artificial Intelligence

DR. MICHAEL GELFOND

Described as a person for whom the quest for knowledge is an essential part of his personal and professional life, computer science professor Michael Gelfond is renowned internationally for his research in the field of artificial intelligence.

Dr. Gelfond was honored recently at Spring Convocation with a \$3,000 Burlington Resources Foundation Award for "distinguished achievement in research."

"I knew I had been nominated and was very happy to receive the award," the Russian-born scientist says.

In nominating him for the prestigious award, his colleagues sang Gelfond's praises, noting his publishing prowess, stellar research with other internationally respected researchers and an agreeable nature. One commented eloquently: "In the sea of individuals who swim in the opaque water of impreciseness, Dr. Gelfond is one of very few who are always precise and realize sound ideas with an equal logical rigor."

Gelfond, who earned his doctorate in Leningrad in 1974, was instrumental in developing UTEP's computer science program, which in 1984 became a separate department within the College of Engineering. His findings and research over the years have put the UTEP computer science program in the forefront of research in artificial intelligence.

"There can be no higher praise for a scholar than to have his work called 'definitive,' and we are privileged to be associated with such an individual," UTEP President Diana Natalicio says of Gelfond.

Gelfond worked as a software engineer and systems programmer for two years in California's Silicon Valley before coming to El Paso in 1980 to visit a friend and UTEP professor. "I came to visit, but I didn't think I'd be able to teach because I didn't know much English," the bearded, bespectacled professor recalls. "My friend asked me to give a talk and I did, and they offered me a job in the mathematics department."

Gelfond says his move to the computer science department has been a fulfilling one. He finds it to be a good working environment and speaks highly of the students' motivation. "I find the students here to be very hard-working. In the beginning, they may not be that good sometimes, but they become much better. It's a rewarding experience for me to teach," he says in a thick Russian accent.

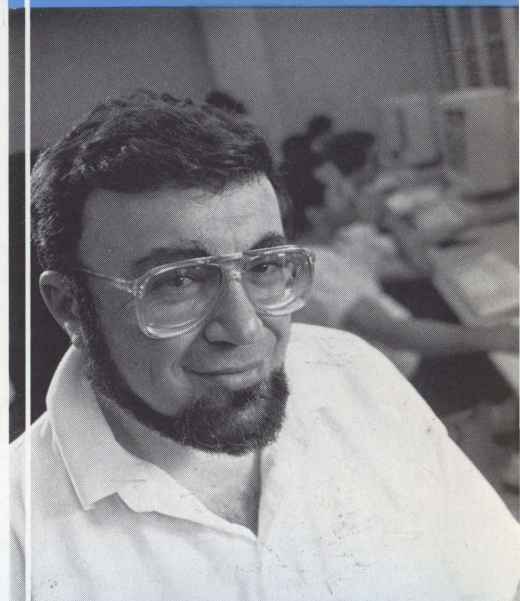
Outside of the classroom, Gelfond stays busy with writing, editing and research. His papers are frequently cited in textbooks, monographs and other scholarly publications. He has been principal or co-principal investigator for four prestigious National Science Foundation grants totaling \$1.8 million. In addition, he is executive editor of the *Journal of Logic and Computation* and serves on editorial or review boards for 10 other publications. Most of his work is in his favorite field—artificial intelligence.

Gelfond seeks to understand intelligence—how humans draw conclusions from a host of information—and to program computers to be able to duplicate that process.

He explains: "I'm interested in the way people think, especially in common sense reasoning. I'm trying to discover the basic principles that allow people to make usual, common sense decisions, and to find a language that I can use to describe these principles to computers so they can do it."

The 46-year-old says learning English was the most difficult aspect of emigrating to America. The second toughest thing, he confesses, has been adapting to the Texas summers.

Now, if the industrious researcher can just find a way to program the heat out of El Paso's weather ...



"I'm trying to discover the basic principles that allow people to make usual, common sense decisions, and to find a language that I can use to describe these principles to computers so they can do it."

FACULTY

PROFILE

UTEP's Mini-Baja track is considered to be the toughest course of the four regional "baja" competitions, and the only real baja course on a university campus. Short graded stretches are interrupted by sharp turns and steep hill climbs, a field of granite rocks the size of volleyballs, and treacherously narrow arroyos.

In the pit, crews cheer their drivers, anticipating the first breakdowns.

"I drove this track last year and this year it's about five times harder," says one Cal-Poly Pomona crewman. "They've got some killer drops and it can break a lot of cars probably in the first half-hour."

His words prove prophetic. One of the Monterrey cars breaks down and is unable to continue the race after only a couple of laps around the two-mile track. Cars with low ground clearance begin to sustain major damage to suspension systems. Crews run up and down hills to assist stalled vehicles, at times pushing them all the way back to the pit for repairs.

Three hours into the race, the pit area is strewn with disabled vehicles, casualties of inadequate design or inexperienced driving. But the competition only intensifies.

Luis Otepox from La Salle University in Mexico, cites a broken clutch and a flat tire as the only major problems sustained by three of their cars, all of which are still in the race.

"Perhaps in Mexico we don't have the resources that you have in the United States, but by trial and error we figure out what works best," he says.

Despite their claim to limited resources, the La Salle team is the consummate racing squad. A Mexican flag waving in the breeze marks their desert outpost. Tools and spare parts lie neatly on the ground. The team's bright red overalls are an outward reflection of the Mexicans' fiery, competitive and almost brash attitude.

UTEP's freshman design team has not been as fortunate. Emerging from a hill climb on foot after getting his car going again, Hugo Magdaleno recites a litany of problems dealt to his car by the baja terrain:

"We've been having a lot of problems," he says. "A shock broke, a U-joint and a spindle broke. A bracket for the engine accelerator broke. But we have not quit. We've been able to fix everything and get the car back on the track."

Magdaleno's crew, gathering around him, looks disappointed but not beaten. The fact that the car is still on the track after so many breakdowns in three-and-a-half hours is considered a triumph.

"Our major problem was under-funding," he continues. "Had we had a transmission we would have done a lot better. We were running with three-year-old shocks and that really hurts."

Over 30 cars failed the rigors of the course laid out by Tony Guarnero and course design teammates, Jim Shrivel, Tony Sanchez and Vito Fuentes.

"Basically we set out with the goal to knock as many cars out as we could," says UTEP mechanical engineering senior Tony Guarnero as he draws laughter from fellow team members.

"I'm dead serious," he adds. "This track was created to test design and driving skill, and it will weed out the weak from the strong teams."

In the end, La Salle and Cal-Poly Pomona emerge with first- and second-place victories. Judges flag down remaining racers to the finish line and an excited Cal-Poly crew unstrap their finishing driver, pull him out of the car, and hug in a triumphant ritual.

"We were leading the first three hours and then we fell back the last hour so were trying to play catch-up," says Todd Cameron of Cal-Poly.

"I guess I got a little carried away. As you come down into this ravine full of rocks, you have to slow down. I was passing four cars. The last car got in underneath me and flipped me up in the air."

"It was ugly," recalls Guarnero. "The car flipped over 180 degrees, bounded on its top, and rolled over. We ran down the mountain to help him, but when we looked back up, he was gone. I could not believe it."

Cameron continues:

"I thought it was over. I didn't know what was going on, but when I landed on the wheels and the motor was still running I just gassed it."

"Yeah, his eyes were closed, man," jokes one of his team members.

"He saw bright lights and then flashed back into reality," quips another.

Amidst celebration, crews begin to collect their machinery, and the energy of the endurance race quickly wanes. As the Mini-Baja teams load their equipment and depart, the desert slowly reclaims its domain, enveloping the human spirit that came in a flash to compete and challenge the elements. ■



When the facts are known, even Billy the Kid fades and falls among the legendary figures of wild New Mexico Territory when compared to Elfego Baca. He earned prominence as a young deputy sheriff in Socorro County, became a lawman-lawyer, newspaper editor, Huertista in the Mexican Revolution, real estate and mining speculator and a force in territorial politics. Novels have been written about him, even a TV series. The truth about him is stranger—and more fascinating—than all the fiction.

THE LIFE AND TIMES OF ELFEGO BACA

by Larry D. Ball

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