



UNIVERSITY NEWS AND PUBLICATIONS / P.O. BOX 4650 / TEXAS TECH UNIVERSITY / LUBBOCK, TEXAS 79409 / (806) 742-2136 Residence telephones: Jane Brandenberger, Director, 829-2108 / Bea Zeeck, Associate Director, 296-7125 / Dan Tarpley, Manager, News Bureau, 792-5596

CONTACT: Becky Patterson

ATTN: Fine Arts Editors

LUBBOCK--Kyung Wook Shin, baritone on the Texas Tech voice faculty, will perform in a free recital on Friday (Feb. 16) at 8:15 p.m. in the Recital Hall of the Texas Tech Music Building.

A native of Seoul, Korea, Shin received degrees from the Korean National University and Indiana University. He placed first in Korea's National Music Contest and has appeared as soloist with the El Paso Choir of the Southwest and the Lubbock and Amarillo symphonies. He has also portrayed numerous roles in Texas Tech Music Theater productions.

Shin recently made a return visit to Korea, where he was guest stage director for the opera "Don Giovanni" at the National Theater in Seoul.

His all-Italian program will include works by Monteverdi, Vivaldi, Porpora, Bellini, Donaudy and Tosti. His piano accompaniest will be Lora Deahl.

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CONTACT: Becky Patterson

LUBBOCK--Pianist Diane Nordyke Wilkinson, graduate teaching assistant at Texas Tech University, will present a free graduate recital on Thursday (Feb. 15) at 8:15 p.m. in the Recital Hall of the Texas Tech Music Building.

Wilkinson received the Bachelor of Music Degree from Texas Tech in 1977, and will receive the Master of Music Degree in music theory in May 1979. She is a student of Dr. Thomas Redcay.

Wilkinson's program will consist of selections by Franz Schubert, Claude Debussy and Alberto Ginastera.

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CONTACT: B. Zeeck

ATTN: Energy Editors

LUBBOCK--Transport of Western coal to Eastern users, or of a great many other solid resources over vast distances, may in the future rely on pipelines.

Slurries of water mixed with solids like coal, limestone, copper and iron ore already are shipped short distances in at least 15 countries. One planned pipeline would transport coal more than 1,000 miles from Wyoming to Arkansas. Another in East Germany is designed to ship fish 200 miles.

While there have been work done and research performed in the past, there are basic problems that remain unresolved. A Texas Tech University chemical engineer is undertaking to resolve some with the support of a three-year \$143,757 National Science Foundation (NSF) grant.

Dr. Raffi M. Turian, chairperson of the Department of Chemical Engineering, is principal investigator. He began his research in slurry transport in 1967.

"The current surge of interest in slurry pipelining derives," he said, "from the recognition that it represents a technically feasible surface transportation method for solid materials and from the fact that there are good reasons to expect slurry

pipelines will play a significant role in the future energy transportation strategy of the United States."

There is no doubt, he said, that enormous quantities of coal will in the future have to be transported from Western states to Eastern population centers. To accomplish this it is desirable to have multiple systems of transport.

Alternative systems to provide power for Eastern states, according to Turian, could include unit-trains devoted exclusively to coal transport, generation in the West of electrical power for transmission to the East via ultra-high voltage lines, or via slurry pipelines.

While Turian will do no economic studies, his research should develop definitive technical data to be used as the basis for economic evaluation of the slurry pipeline method.

The problem's enormity is indicated by Turian's comment that railroads today haul approximately 35 million tons of Western coal per year while 350 million tons may be required annually within 5-10 years.

"Coal slurry pipelines need to be considered as complementary, alternative transportation systems to railroads, but before they can be built, enabling legislation is needed to permit pipelines condemnation powers and right-of-way through railroad lands."

Turian's hope is that slurry pipeline companies will not only design and construct the pipelines but will also be required to operate them as well.

"This will promote more careful attention to design and insure that there is continuing accountability," he said.

#### turian/add two

Most slurry transport research already done has been circumscribed by the narrow interest of the researcher in a special problem, Turian explained, and the results relate to particular slurries in specific flow situations.

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He is interested, instead, in a store of data which can be used to establish general design correlations. This information could be used whether the material to be shipped is coal, iron ore or fish--earth in Japan, gold tailings in South Africa or gilsonite in Utah.

A typical question which Turian hopes to solve is the role of fines in the slurry. Twenty percent of solid weight of coal delivered is finely ground material, he explained. There is a cost in fine grinding the solid, but there is additional cost in recovering the fines at the destination. Environmental considerations in regard to fines also are important. Fines are difficult to recover and would pollute waterways or, when dried and allowed to blow, they would pollute the air.

In addition to the role of fines the Tech researcher hopes to establish optimum mixes for distribution of particle sizes, to investigate the role of particle shape, and to measure and predict critical velocities for slurries in transport.

Turian, for two years director of the NSF Chemical Processes Program, has special research interests in advanced water renovation, complex fluid flows including slurry and suspension transport, mathematical analysis and approximation, and porous media processes.

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CONTACT: B. Zeeck

LUBBOCK--Dr. Robert W. Seidel, whose expertise is in the history of science and technology, has been appointed director of research for the History of Engineering (HOE) Program at Texas Tech University.

Seidel is a member of the Texas Tech history faculty.

The program, initiated in 1970, has been active in the identification, inventory and documentation of historic engineering sites and structures in the Southwest.

Historic Engineering Site Inventories have been compiled for Texas, New Mexico, and Arizona and the program recently has been awarded a contract for a statewide survey in Nevada.

Announcement of Seidel's appointment was made jointly by Dr. Ernst W. Kiesling, chairperson of the Department of Civil Engineering and Dr. Alwyn Barr, chairperson, Department of History. Students from both of those departments have been active in the research program, directed by Dr. Joseph E. Minor of the civil engineering faculty.

Joining the Texas Tech faculty in 1978, Seidel teaches courses in the history of science and technology. He came to Tech from the University of California at Berkeley, where he earned his doctoral degree and served in various research positions.

### seidel/add one

He was responsible for the content design of the permanent exhibit, "Nuclear Science at Berkeley; The Lawrence Years," at the Lawrence Hall of Science. He supervised research and preparation of interviews for the Bancroft Library's Project for History of Science and Technology, an oral history and archival project recording the history of physical science and technology in the West.

Seidel has contributed to the work of the Office for History of Science and Technology at the University of California, including its publication, "Physics circa 1900." He was awarded the National Science Teachers Association Bicentennial Essay Award for his article, "The Origins of Physics Research in California."

With his new appointment Seidel joins HOE Program Manager Wendell Bell and permanent staff members Dr. T. Lindsay Baker, Donald Ray Abbe and Jeanne Klein.

Seidel said he hoped to extend the History of Engineering Program at Texas Tech with investigations into modern hightechnology industries in the Southwest.

He will work with the ongoing research projects in the program and initiate an expansion of activities in the history of science and technology and use the extensive data which the program already has as well as the additions his new research will provide.

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EDITOR'S ADVISORY

Just a reminder from the Department of Clarification --

The name of the museum on the Texas Tech University campus is:

THE MUSEUM OF TEXAS TECH UNIVERSITY which has two

separate outdoor exhibits

- (1) THE RANCHING HERITAGE CENTER
- (2) The Moss Memorial GOODMAN GIN
- The supporting organization for The Museum proper is the

WEST TEXAS MUSEUM ASSOCIATION.

The supporting organization for the Ranching Heritage Center is the RANCHING HERITAGE ASSOCIATION.

All of this can be confusing for newcomers in your audiences, and your help in keeping everything straight is ALWAYS appreciated.

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#### CONTACT: Nancy Farmer

LUBBOCK--Shauna T. Hill of Big Spring has been named editor of "The University Daily," Texas Tech University's campus newspaper, for the 1979-80 academic year. The Tech Student Publications Committee made the selection in February instead of later in the year so the new editor could have input on the proposed budget. Editors previously were named later in the spring.

Hill said she wants "The University Daily" to be a professional newspaper, reflecting the university and the students. All kinds of news should be reported, but it should be relevant to the students, she said.

Hill currently is working part-time at the "Lubbock Avalanche-Journal" and worked last semester as a reporter for "The University Daily." She was "Megaphone" editor for the "Big Spring Herald" and associate editor of "The Corral" at Big Spring High School.

A 1976 graduate of Big Spring High School, she is the daughter of Mr. and Mrs. Harlan J. Hill, 1706 Runnels and a senior journalism major at Tech.

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CONTACT: Dan Tarpley

LUBBOCK--The Gesell Institute of Child Development, New Haven, Conn., will present a seminar on developmental placement and testing techniques at Texas Tech University on Feb. 23.

The day-long seminar is designed for principals, kindergarten and primary teachers, college teachers, school psychologists, in-service training coordinators, preschool directors, reading specialists, early childhood supervisors, special education teachers, curriculum directors, guidance counselors, superintendents and other concerned professionals.

To be held in the Senate Room of the University Center, it is sponsored by the College of Education and the Division of Continuing Education at Texas Tech. Teachers and educational leaders from a wide area of West Texas are invited to attend.

The morning program will feature a discussion of the most commonly used reading readiness tests, showing how they compare in measuring critical factors with the Gesell method of Developmental Placement, based on scientific aspects of human growth and development.

Seminar speakers will emphasize that "every child has a right to learn at his or her own rate, the signs of the overplaced child, developmental differences between boys and girls and the

unfairness of discriminating against those who are not ready."

The morning presentation also will feature movie films and a series of transparancies to demonstrate the institute's testing procedure.

The afternoon session will be devoted to administration of tests to children between the ages of 4 years 9 months and 5 years 5 months and a question-and-answer period with discussion and comment from participants.

Participants are expected to learn about the theory and background of developmental placement--how it fits in with the advanced thinking in educational circles while being based on tried, tested and proven research over a period of nearly 60 years.

The seminar will be led by a certified institute lecturer who also will demonstrate Gesell techniques. The \$75 registration cost includes a portfolio including a seminar manual, an illustrated guide explaining developmental placement and offering practical advice on aspects of implementing a school readiness program, and a cassette of the lecture portion of the seminar.

Additional information and registration information is available from the Office of Continuing Education, Room 104, Administration Building, Texas Tech University.

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CONTACT: Becky Patterson

LUBBOCK--Elves and hollow trees will be discussed in the opening session of the Feb. 22 "World of Advertising Seminar" during Texas Tech University's Mass Communications Week, Feb. 19-23. The elves are one of several topics to be discussed by the high-ranking advertising executives who will address seminar audiences.

Keebler marketing vice president Charles L. Shemely will speak at 9:05 a.m. in the Coronado Room of the University Center. Shemely will discuss corporate image-building, focusing on Keebler's mythical elfish cookie-and-cracker factory, which is located in a hollow tree. Keebler is the nation's second largest manufacturer of cookies and crackers, and the elves have appeared in many television commercials.

"Penthouse" magazine's associate publisher, Kathy Keeton, will speak at 10:35 a.m. in the Coronado Room of the University Center.

A former ballet dancer, Keeton was associate publisher and editor of "Viva" magazine and has been instrumental in the planning and development of "Omni," a new magazine devoted to the sciences.

Wayne Sellers, editor of the "Palestine (Texas) News-Herald,"

#### ad day/add one

will be inducted into the Texas Tech Mass Communications Hall of Fame at a noon luncheon in the University Center Ballroom. James T. Healy, Jr., vice president of the Newspaper Advertising Bureau in Chicago, will be the luncheon speaker.

Healy, Keeton, and Shemely will be joined in a 1:35 p.m. panel discussion by Tom Ross, vice president and account supervisor with Leo Burnett USA in Chicago, and Beverley Wardale, director of advertising for "Omni," based in New York. The panel discussion will be conducted in Mass Communications East 101.

CLIO Award-winning commercials will be shown at 3 p.m. in Mass Communications East 101.

"The World of Advertising Seminar," sponsored by the J. Culver Hill Chapter of the American Advertising Federation, is just one aspect of the multi-faceted Mass Communications Week. Each day of the week is devoted to seminars, demonstrations and lectures in one area of mass communications. The theme of the week, "Media Wars," refers to inter-media relationships and competition.

Monday, Feb. 19, is Public Relations Day; Tuesday, Feb. 20, Journalism Day; Wednesday, Feb. 21, Photography and Film Day; Thursday, Feb. 22, the "World of Advertising Seminar;" and Friday, Feb. 23, Telecommunications Day.

All sessions are free and the public is invited.

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CONTACT: Kandis Gatewood

LUBBOCK--Texas Tech University graduate Dr. E. Leroy Plumlee has been named chairman of the College of Business and Economics at Western Washington University. Plumlee received the bachelor's degree in 1961 and the doctorate in business administration from Texas Tech in 1971.

At the university in Bellingham, Wash., Plumlee, 39, heads a department including 13 full-time faculty. The college includes 900 student majors, approximately 10 percent of Western's total enrollment.

Plumlee is the son of Mr. and Mrs. Virgil Plumlee of 204 S. Walnut St. in Cleburne. Plumlee worked as a purchasing agent for R.R. Donnelley & Sons in Chicago and taught seven years at Northern Illinois University.

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LUBBOCK--Violinist Virginia Kellogg and pianist Mary Pendleton will perform in a free Texas Tech University faculty recital on Sunday, Feb. 25, at 8:15 p.m. in the Recital Hall in the Music Building.

Kellogg, associate professor of music at Texas Tech, has performed in St. Louis, Mo., Rochester, N.Y., Dallas and Aspen, Colo. She received a Fulbright Award in 1965 and appeared as recitalist in Brussels and Amsterdam while studying abroad.

The violinist received the Bachelor of Music and Doctor of Musical Arts degrees from the University of Illinois. She was a member of the St. Louis Symphony, the Rochester Philharmonic and the Aspen Festival orchestras. She is concertmaster of the Lubbock Symphony Orchestra and a member of the Faculty Spring Trio at Texas Tech.

Pendleton, part-time instructor at Texas Tech, began studying piano with her father when she was two years old, and first performed publicly at the age of five. She has since performed with the Junior Bach Festival in Berkeley, Calif., the Lubbock Symphony Orchestra and the Amarillo Symphony.

The pianist graduated with honors from Interlochen Arts Academy in Michigan and received the Bachelor and Master of Music degrees from Texas Tech.

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CONTACT: B. Zeeck

LUBBOCK--The life of Maurice Utrillo (1883-1955) was an incredible story of an artist who, although plagued with alcoholism, never allowed doubt or disorder to mar the strict construction and clarity of his paintings, hailed even in his lifetime as masterpieces.

The works of this great individualist among modern French artists will be discussed in an art seminar at 10 a.m. Tuesday (Feb. 20) in The Museum of Texas Tech University. There is a nominal fee for the seminars, sponsored by the Women's Council of the West Texas Museum Association. Rabbi Alexander Kline, a recognized authority, is the lecturer.

Utrillo was the son of a teen-age model, later known as the artist Suzanne Valadon, a student of Toulouse-Lautrec and Edgar Degas.

By the time he was 18, Utrillo had failed as a bank clerk and, because of alcoholism, had to be temporarily committed to an asylum. It was in occupational therapy that he learned to paint.

Although his mother and later his wife, Lucie, had to be his jailers and to commit him to sanitoriums at various times, Utrillo produced thousands of oils, gouaches, water colors and pencil sketches. By 1920 he had become a legendary art figure.

Alcohol never destroyed his genius, and many critics call

#### utrillo/add one

him the greatest landscape painter of this century. At the same time they acknowledge that his total lack of self-criticism permitted the creation of both unbelievably inferior works and of indisputable masterpieces. Some critics also complain of an absence of intellectual concepts and of an endless repetition of the same manner.

One critic said, however, "if Utrillo is only an eye, as Cezanne said about Monet, one can continue with Cezanne: 'But what an eye!'"

From his white period his masterpieces include "Rue de la Jonquiere," painted in 1909 when his fascination with white began, and "Notre Dame de Clignancourt," painted in 1912. "Sacre-Coeue de Montmartre and Passage Cottin," 1934, is from his colorist period although the dominant color is white. It is typical of his post 1920 works, abounding in delicate, bright colors.

In the 1930s, Utrillo's style suddenly relaxed and he developed a new simplicity. The sparkling color of "Montmartre," 1938, is typical. His "Flower Still Life" of 1946, with its vehement, expressive brush strokes, indicates continuing growth of style even in his final years.

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CONTACT: Kandis Gatewood

LUBBOCK--Thirty student teachers from Mexico will visit Texas Tech University on March 8 while in Lubbock March 5-11. The visit to the university is part of the "Operation Amistad" program sponsored by the Junior League of Lubbock.

For 17 years, students from the National School for Teachers in Mexico City, in conjunction with Mexico's Association for International Understanding and the Department of Public Education in Mexico City, have chosen to visit Lubbock. "Operation Amistad" was termed "Operation Senorita" until 1978 when the program was opened to young men.

Students will arrive from Laredo at 6 p.m., March 5. They will tour the First National Bank, the First Federal Savings and Loan Association, the "Lubbock Avalanche-Journal" and the Lubbock Memorial Civic Center on March 6. Mayor Dirk West will award the students honorary citizenships.

The week's events include shopping, a dinner sponsored by Texas Tech Sigma Delta Pi honorary on March 7, a tour of the Ranching Heritage Center and the Texas Tech Museum on March 8 and a farewell dinner at Junior League Headquarters on March 10. Preston Smith, former Texas governor, will present honorary Texas citizenships to the students at the farewell dinner.

## operation amistad/add one

More than 400 Mexican students have participated in "Operation Amistad" throughout the years. In 1971, the Junior League of Lubbock was awarded the Order of the Golden Knights of Popocatepet1 by Project Good Neighbor for promoting better understanding and good will at home and abroad.

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CONTACT: Marcia Lundy

LUBBOCK--Seeding is not enough--the right grass and fertilizer must be chosen to maintain vegetation on strip mined land.

Federal regulations require strip miners to revegetate the land after mining and to maintain that vegetation for at least five years after reseeding. A problem in maintenance is that there is too much acidity in the soil as a result of pyrite coming to the surface after mining.

Methods of reclamation and optimum types of grass to plant must be determined for strip mining companies to conform to the regulations.

Dr. F. M. Hons of the Texas Tech University plant and soil science faculty is conducting research on an area of land strip mined for lignite to determine optimum reclamation methods.

"Little reclamation data is available on lignite strip mining," Hons said. "In Texas alone, more than one million acres of land will be disturbed by the year 2000 for surface or strip mining of lignite. We must develop information on forage yield, rooting activity and reclamation potential of grasses to save the land from constant erosion and loss of fertility."

#### strip mining/add one

In Hons' research, data were gathered at the Big Brown Steam Electric Generating Station and Mine in Freestone County, about 100 miles southeast of Dallas.

His initial results showed that coastal bermudagrass and kleingrass worked best and would work in dry or drought-type areas. The method of replacing the soil also made a difference in the ability of grasses to take hold and stay healthy.

Pyrite is usually found either above or below the lignite seam and if left at the top of the soil, it will cause too much acidity through oxidation. By keeping the pyrite separate when first stripping the soil away, and then placing it at the bottom of the mine, Hons said, strip miners can prevent the excess acid, which causes vegetation to die.

Hons also found a problem with the conversion of ammonium fertilizer to nitrate for plant use. The breakdown of ammonium to nitrate in the soil by bacteria and its resulting use by plants is necessary for plant growth and health. The acidity in the soil after mining has been found to adversely affect the bacteria, resulting in a lessening of available nitrogen for the plants. The addition of ammonium fertilizers is relatively inefficient in such a case because the bacteria would not be present to prepare the nitrogen for plant use. A nitrate fertilizer would be best in such a case.

The fertilizer used also depends on the grass species. Coastal bermudagrass, which has a higher root density near the soil surface, can use an ammonium fertilizer, which tends to remain at the top of the soil. Kleingrass, though, has low rooting density at the surface,

## strip mining/add two

and would react best to a nitrate fertilizer, which penetrates better than ammonium.

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CONTACT: Pat Broyles

ATTN: PSA Directors (Kill Feb. 26)

AMERICAN POET PHILIP LEVINE WILL GIVE A FREE PUBLIC READING OF HIS POETRY MONDAY, FEBRUARY 26TH, 8 P.M. IN THE TEXAS TECH UNIVERSITY CENTER. THE CALIFORNIA STATE UNIVERSITY PROFESSOR WILL ALSO MEET WITH STUDENTS AND FACULTY AT 10:30 A.M. THE SAME DAY. LEVINE, WHOSE POETRY REFLECTS HIS COLORFUL LIFE, HAS BEEN DESCRIBED AS "AN EXTRAORDINARY VISIONARY OF OUR DENSE, TROUBLED, MYSTERIOUS TIME." LEVINE'S VISIT TO THE UNIVERSITY IS SPONSORED BY THE DEPARTMENT OF ENGLISH.

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CONTACT: Pat Broyles

ATTN: Public Service Directors (Kill Feb. 21)

CHARLES PACE WILL DEPICT THE LIFE AND TIMES OF FREDERICK DOUGLASS IN A ONE-MAN PERFORMANCE TUESDAY, FEBRUARY 20TH, 8:15 P.M. IN THE TEXAS TECH UNIVERSITY CENTER. TICKETS FOR PACE'S PERFORMANCE ARE \$2 FOR TECH STUDENTS AND \$3 FOR THE PUBLIC. FOR RESERVATIONS CALL THE UC TICKETBOOTH AT 742-3610.

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CONTACT: B. Zeeck

LUBBOCK--The public had a long time to wait between Benjamin Franklin's key on a kite string and Thomas Edison's light bulb, and that's usually the way with basic research and the application of its findings.

One exception was the transistor, another the laser and now a Texas Tech University engineer's basic research has made a quick leap to application.

Dr. Richard Saeks, who holds a joint appointment as professor of electrical engineering and mathematics, developed a theory for the automated maintenance of complex analog electronic devices. When the system goes down, a computer can be plugged into the device to pinpoint the cause of failure.

"Engineers previously have used ad hoc seat-of-the-pants techniques for electronic maintenance," Saeks said. "The new theory results in a saving of endless hours of searching."

No sooner was the theory available than the Navy Ocean Systems Center in San Diego began building a military maintenance system on the mathematical theory Saeks developed at Texas Tech. The Navy project began in December.

"There are methods for automated testing of digital devices," Saeks explained, "but sophistication was needed for testing

analog devices, and this is what we have developed."

Saeks is working with the Navy in San Diego to help translate the theory into application. His research interest, however, is neither in computer hardware nor programming but in theory.

Saeks has been working on the theory for five years, and his work at Texas Tech University has spawned nationwide research in this area.

Results of his work and that of others will be published soon in a special issue of the "Transactions in Circuits and Systems," organ of the Institute of Electrical and Electronics Engineers of which Saeks is a fellow.

The engineer is far from the end of the road, however. He is working now in failure prediction in the expectation that minicomputers can be built into electronic devices, and these would automatically and continuously test the device, predicting failure before it occurs.

Saeks' research represents one of seven projects conducted at Texas Tech with the support of a \$175,000 grant from the Joint Services Electronics Program, made annually for the past three years. Saeks is the principal investigator.

Research under the grant focuses on the areas of circuits and systems, optical signal processing and mathematics. Working on projects are Drs. Saeks, Kwong Shu Chao, John F. Walkup and John Murray of the electrical engineering faculty and Thomas G. Newman and Louis R. Hunt of the mathematics faculty. All are engaged in basic research.

Saeks' understanding and expertise in systems has resulted

in a National Science Foundation contract to develop a workshop on large-scale systems. The workshop, to take place this spring, should result in establishment of a systems advisory group to NSF, Saeks said.

He also is working on mathematical systems theory under a U.S. Air Force grant. Again, the research is basic, developing mathematical techniques to be used for analyzing, studying and designing the extremely complicated systems of the future.

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CONTACT: Kandis Gatewood

LUBBOCK--Texas Tech University economist Robert Rouse will discuss Social Security financial problems Tuesday (Feb. 20) at a "Brown Bag Colloquium" in gerontology at noon in the Conference Room of Building X-15 on campus.

Dr. Rouse's topic, "Social Security Problems and Our Aging Population," subtitled "Social Security Going Broke," will be followed by a question and answer session.

The economics and business administration professor became interested in the financial problems of the aging while preparing a graduate course on Economics and the Aging. He received the Bachelor of Arts Degree from Coe College and the Master of Arts and Doctor of Philosophy degrees from the University of Iowa.

For questions or additional information, contact the Division of Continuing Education, 742-2354.

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18-2-14-79

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CONTACT: Dan Tarpley

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LUBBOCK--Texas Tech University announced Wednesday it will file a petition with the Federal Communications Commission (FCC) to secure an interference-free channel for KTXT-TV on Lubbock Cable TV.

The request, to be filed by Texas Tech's communications attorneys in Washington, D. C., seeks a hearing before the FCC requiring the cable company to show cause why KTXT-TV, Texas Tech's educational television station, should not be re-assigned to Cable Channel 2 or another interference-free channel. The Texas Tech Public Broadcasting System (PBS) outlet was assigned to Cable Channel 6 in January 1979 and KCBD-TV switched from Channel 6 to Channel 2.

Texas Tech Vice-President for Academic Affairs Charles S. Hardwick said Lubbock Cable TV manager Jim Brown notified him Jan. 30 that KCBD-TV was being moved from interference-fraught channel 6 to interference-free channel 2 temporarily "in an effort to help KCBD-TV through a 'rating period' without interference." Brown did not say how long "temporary" would be, Hardwick said, and now the Texas Tech vice president said he understood the move is permanent.

Under FCC rules and regulations, the cable company must

#### ktxt-tv/add one

carry KTXT-TV's signal "without material degradation in quality." The placement of the Texas Tech station on interference channel 6 is not in keeping with those rules and regulations, Hardwick said. Continuation of that arrangement will cause KTXT-TV to "suffer severe loss of revenues both from donors and from students who are currently enrolled in college courses offered by the station and the Continuing Education Program at the university."

Interference on cable channel 6 is caused by a recent change in frequency, antenna system and antenna height by KTXT-FM, authorized by the FCC.

Hardwick said the university agreed to modify its FM facilities if the cable company would defray costs of the change. The cable company said it could offer \$3,000 toward modification but could not provide \$6,000 to \$8,000 which Texas Tech officials estimated the changes would cost.

Robert Twilla, chief engineer for KTXT-TV, said that under present conditions, cable channel 6 is unusable for the Texas Tech educational station. He made the statement in a supporting document accompanying the petition for the hearing before the FCC.

Texas Tech Legal Counsel Marilyn E. Phelan said Washington attorneys believe the "show cause" hearing before the FCC could be held within a couple of weeks.

KTXT-FM is in the "program-test" period pending receipt of its operating license for its new facilities and increased power.

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CONTACT: Prabhu Ponkshe

ATTN: Agriculture Editors

LUBBOCK--Federal and state agencies, including Texas Tech University, have initiated a comprehensive geologic study of the Ogallala aquifer, an underground reservoir which provides water for eight states in an area of approximately 250,000 square miles.

The study is a major effort by the United States Geological Survey (USGS) to describe the water resources of the aquifer, to design a computer model on the water resources and to evaluate water withdrawal and management practices. The total USGS study will last five years, while Texas Tech's portion of it will be completed in the next two years.

The Ogallala spreads from South Dakota in the north to Texas in the south, including the states of Nebraska, Wyoming, Kansas, Colorado, Oklahoma and New Mexico.

Dr. C. C. Reeves, Texas Tech geologist, is funded to study the Texas portion of the Ogallala, an area of more than 30,000 square miles with about 70,000 irrigation wells in it. A. Wayne Wyatt of the High Plains Underground Water Conservation District No. One in Lubbock is working with Reeves.

"Texas Tech will investigate all the different rock, clay

### ogallala/add one

and sand formations in the Ogallala and map them. Based on those maps, it would be possible for experts to identify areas that can provide water as well as accept water for recharge," Reeves said.

Clay formations do not give up their water easily, neither do they accept water for storage. But coarse grain sand and gravel will easily yield water to the pumps and also accept water for recharge, Reeves explained.

In recharging the Ogallala, however, it is necessary to know whether the injected water will move laterally to spread below the earth surface, Reeves added.

The Ogallala was formed several million years ago, but it has taken man less than a century to deplete its water content.

Wyatt said that the Water Conservation District will provide Reeves with data collected on the various irrigation sites. The Water Conservation District issues permits for drilling water wells and maintains pumping records of all wells within its jurisdiction. There are three water districts within the Texas region of the Ogallala

"The well logs in our office contain detailed information on the depth to the top of the water table, the rock characteristics within the water table, the water yielding capacity of each well, and the depth to the Red Bed or the bottom of the water table," Wyatt said.

Once all the information from the various states has been compiled, it will be fed into a computer by USGS to develop a data storage and retrieval system as well as a digital computer model.

"The computer model will simulate the actual physical

conditions within the Ogallala, which will enable water management experts to anticipate the reservior's response to alternative withdrawal and recharge practices," Reeves explained.

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CONTACT: Becky Patterson

EDITOR'S ADVISORY:

Richard E. Wiley, former chairman of the Federal Communications Commission and this year's recipient of the Thomas Jefferson Award, will conduct a news conference Friday, Feb. 23, at 3:15 p.m. in the Press Room at Lubbock International Airport.

As a member and chairman of the FCC, Wiley was a leader in the movement creating exemptions to Section 315, the "fairness doctrine" or "equal time" portion of the Communications Act. The exemptions established guidelines for debates between political candidates and are considered a great step forward in protecting the public's right to know through mass media reporting.

The Thomas Jefferson Award is presented annually during Texas Tech University's Mass Communications Week to honor a public official who has made outstanding contributions toward preserving the freedom of news media. The award is sponsored by the Texas Daily Newspaper Association, Texas Association of Broadcasters, Texas Press Association, and Texas Tech.

Wiley will accept the award during the Thomas Jefferson Award Dinner at 7 p.m., Feb. 23, in the University Center Ballroom.

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LUBBOCK--Photographers, imaginative films and photographic exhibits will be featured on Wednesday (Feb. 21), Photography and Film Day of Texas Tech University's Mass Communications Week, Feb. 19-23.

Morning events will include a 9:35 address by Patrick O'Dell, CBS photographer and cameraman, and a 10:35 talk by Fred Bunch, "Houston Post" photographer.

O'Dell and Bunch will hold a panel discussion on photography and film at 1:35 p.m. Other afternoon sessions are devoted to film. The 2:35 showings will include "Binary Bit Patterns," "Braverman's Condensed Cream of Beatles," and "Frogs."

"Binary Bit Patterns" is a three-minute computer-programmed film study exploring the graphic variations of a Persian-like pattern. The resulting film depicts squadrons of "polyhedral modules which come pulsating out of a black void," according to literature released by Pyramid Productions. This company supplied most of the films used for Photo/Film Day.

The era of the 1960's and the "Beatles" is explored in "Braverman's Condensed Cream of Beatles." The 15-minute film is described as a "fast moving collage of still pictures, film clips, works of art and album covers accompanied by the Beatles' innovative music."

"Frogs" delves into man's various relationships with the long-legged amphibians. The 15-minute film draws attention to men who hunt frogs, a woman who collects frog pins and sells frogs for dissection, a frog-hypnotist, a chef who prepares frogs' legs for human consumption and humans who participate in the Calaveras County frog jumping contest.

### PFDay/add one

Audiences attending the 3:35 p.m. session will view "Camera Magic: The Art of Special Effects," "The Searching Eye," "Stuntman," Clio Award-winning commercials, and films by Texas Tech mass communications students.

"In this film we are out to trick you," the viewer is told in the opening segment of "Camera Magic." The film illustrates how to create such effects as rotation in space, multiple images, upside-down and reverse film action and the instant appearance and disappearance of objects and people.

"The Searching Eye" builds upon the simple actions of a 10-year-old boy to create visual metaphors of a world that is normally unseen. For example, as the boy chases birds and imitates them, the audience perceives that "imitation is the beginning of learning." When the boy drops a rock on the beach, the viewer is shown the "constructive violence and destructive beauty" of volcanic eruptions. It is not what the lad sees, but what he does not see, that adds an extra dimension to the 18-minute film.

"Stuntman" spends the day with Greg Anderson, a motion picture stuntman who discloses a few of the tricks of his trade and expresses feelings about his job. Some special effects explored in the 11-minute film include gunshot wounds and free-falls from tall buildings.

Photographs taken by Texas Tech mass communications students will be displayed throughout the day in Mass Communications East 223.

Photography and Film Day, sponsored by photography and film students and faculty at Texas Tech, is just one aspect of the five-day Mass Communications Week. Each day is devoted to seminars, demonstrations and lectures on a separate facet of mass communications. The theme of the week, "Media Wars," refers to inter-media relationships and competition.

Monday, Feb. 19, is Public Relations Day; Tuesday, Feb. 20, Journalism Day; Wednesday, Feb. 21, Photography and Film Day; Thursday, Feb. 22, the "World of Advertising Seminar," and Friday, Feb. 23, Telecommunications Day.

All sessions are free and the public is invited.

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### beginning photography/add one

Photo travel tours will be offered to present and past graduates of Beginning Photography at the end of the course. Before the tours McKinney, who has visited all 50 states and 40 countries on five continents, will brief the students on travel and photography. McKinney will go with students whenever possible.

Private tutoring will be another first this spring. McKinney also will show students how to produce an illustrated family history by putting the 35mm camera to work in genealogy.

Tuition is \$30 per person. At the end of the course a certificate will be awarded to each student qualifying. Information is available in Texas Tech's Mass Communications Building, room 102. For information and a form to enroll by mail, phone 742-3385.

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CONTACT: Kandis Gatewood

LUBBOCK--Texas Tech University activities on campus, in the classroom and laboratory and even off campus may be viewed on the air "live" when mobile cameras arrive at KTXT-TV, Channel 5, the university's educational broadcasting station.

An \$82,105 federal grant will provide the station with two mobile cameras, a portable videotape machine and switching and editing equipment as soon as purchase orders are processed and filled.

John Henson, KTXT-TV station manager, said, "The grant will allow us to use Texas Tech and the surrounding area as our studio. The possibilities excite all of us around here."

The station should be as well equipped as any of the local commercial stations, Henson said, after the equipment arrives. The cameras, which cost \$30,000-\$40,000 each, are up for competitive bidding.

The equipment will allow the station to mix electronic field production and remote format, where tape can be stored or used live.

In terms of programming Henson commented, "We can go any place we can carry the cameras." He said the staff hopes to film from the University Theatre, the University Center Theatre, recital halls, classrooms, labs, museums and any place in the community.

#### ktxt-tv/add one

Sports events, public affairs programs, and documentaries will also become a part of KTXT-TV programming.

"Now we'll be able to go to city council meetings, cover county government and go anywhere our imagination will take us," Henson said. "The only problem will be narrowing down our priorities."

Along with the equipment grant, KTXT-TV has been awarded a \$139,110 grant from the Corporation for Public Broadcasting that will go into effect in October. The grant will continue to be used to acquire programming and to pay salaries for the production staff. The money also buys equipment and pays for program promotion.

As far as the broadcast transmission is concerned, Henson has hopes of increasing the 38-mile signal sometime in the future.

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CONTACT: Kandis Gatewood

LUBBOCK--With the approach of spring Texas Tech University will offer a 35mm camera short course for amateur photographers. Beginning Photography classes will meet Mondays from 6:30-9:30 p.m. for six weeks starting March 5.

John McKinney, former magazine editor and cover photographer and now member of the Texas Tech Mass Communications faculty, will teach the course. If the need arises, an overflow course will be set up on Tuesdays.

First hour of the course will be devoted to operation of the 35mm camera. Major emphasis, however, will be placed on how to compose and shoot good pictures.

The course includes classroom demonstrations, 1,000 educational color slides and films and guest lecturers. The course will not cover darkroom technique. Common mistakes to avoid in composing, lighting, focusing and timing will be covered throughout the course.

McKinney has taught photo courses over the past 20 years. He introduced beginner photography in the Orient at the University Pertanian Malaysia, where he was a Peace Corps volunteer. His own pictures have been published in newspapers, magazines and on television internationally.

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CONTACT: Marcia Lundy

ATTN: Agricultural Editors

LUBBOCK--Chemical treatments of livestock feeds are increasing the feeds' amino acid levels and providing for animals easier digestibility of low-quality roughages.

Formaldehyde-treated soybean meal increases the level of amino acids derived from high-quality protein for livestock's absorption, while treating cotton gin trash with sodium hydroxide has heightened digestibility of the trash by 12 to 15 percent.

Dr. C. Reed Richardson of the animal science faculty at Texas Tech University has been examining the effects of these two chemical treatments on cattle and lambs.

The problem in getting adequate protein to cattle, Richardson said, is that the feed must go through the rumen first before entering the stomach. In the rumen, bacteria almost completely break down any protein present, so that the animal does not receive adequate amounts of high protein to be sent throughout the body via digestion and metabolism.

The formaldehyde treatment insures that most of the protein will be sent intact to the stomach from the rumen. Some of the protein will still be broken down by the bacteria, but the majority will be left whole.

#### chemicals/add one

Richardson said an improved weight gain efficiency is being seen in cattle on the formaldehyde-treated feed, although final, complete data are not yet available.

In the cotton gin trash experiment, lambs were fed feed containing 70 percent total gin trash, with added minerals and supplements. Gin trash is known to be an economical feed for livestock, but the problem in the past has been its low digestibility. By treating the trash with levels of sodium hydroxide Richardson found that the digestibility, and related weight gain, could be improved by 12 to 15 percent over untreated gin trash.

Another aspect of the experiment was examining the mineral balance returned to the environment through urination and excretion, he said. There has been a concern that treating feed with chemicals could create an imbalance in the chemical and mineral composition of the soil, as well as a mineral imbalance in livestock.

He found that although the sodium hydroxide-treated trash did cause decreases in potassium, magnesium and chlorine in the animals, it did not present a major health problem and those minerals could be supplemented without losing the economic value of the trash as a feed.

He is still studying the effects of the chemicals on the soil but does not believe he will find a major detrimental effect in that respect either.

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CONTACT: Pat Broyles

ATTN: Fine Arts Editors

LUBBOCK--Charles Pace will present two of his one-man performances Tuesday (Feb. 20) in the Texas Tech University Center.

At 12:30 p.m. Pace will portray "Malcolm X" in a free presentation. The life and times of Frederick Douglass will be presented at 8:15 p.m. in the Coronado Room. Tickets are \$2 for Tech students and \$3 for the public.

Pace has presented one-man shows throughout the Southwest, and his powerful stage-presence and directness of delivery have made him popular with his audiences. He helped establish the Afro-American Player Theater in Austin.

Pace's performances at Texas Tech are part of Black Month, sponsored by the Student Organization for Black Unity. The goal of the month is to promote black awareness among all races and cultures. Other events include an African dinner, Saturday, Feb. 24, 7 p.m., in the Faculty Club at Tech. Then at 8:15 p.m. the Dallas Black Dance Theater, Inc. will perform in the UC Theater.

Tickets for the events are available from the UC Ticketbooth and reservations can be made by calling 742-3610.

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LUBBOCK--Texas Tech University's Division of Continuing Engineering Education will offer a short course in Solar Energy Design and Economic Evaluations of Solar Systems on Saturday mornings, 9-12 noon, March 17, 24 and 31, and April 7, 14 and 21 from 9 a.m. to noon.

The course in designed for architects, engineers, contractors and others involved in the design of solar systems for residential buildings. The course will emphasize the practical application of solar energy and the development of skills necessary to perform technical and economical feasibility analyses and detailed designs for solar systems.

In the course, participants will study the principles of solar collection and energy storage for applications to solar energy; solar radiation, and its spectral distribution, atmospheric attenuation and information for design; sizing methods for feasibility analysis; heating and cooling load calculations and detailed design methods for calculating solar performance.

Also included in the course will be economic life-cycle cost analysis-energy conservation trade-offs; study of solar systems; applications of space heating, solar drying, service water heating and space cooling and an emphasis of practical applications of solar energy.

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Also included in the course will be economic life-cycle cost analysis-energy conservation trade-offs; study of solar systems; applications of space heating, solar drying, service water heating and space cooling and an emphasis of practical applications of solar energy.

Instructor for the short course will be C. E. Teske, Ph.D., PE. Teske has served with the United States Air Force in various civil engineering positions and is presently an assistant professor in the Department of Engineering Technology. He teaches structural engineering courses, as well as an undergraduate course in solar energy. He has been a solar consultant on numerous residential solar homes and three successful Department of Energy sponsored solar demonstration grants, the latest, a grant for the installation of 25 solar homes in Lubbock.

Special lecturer for the course will be Dr. Ernst W. Kiesling, chairperson of Civil Engineering at Texas Tech.

The registration fee of \$75 includes the cost of instruction, a notebook with additional information about the subjects covered in the course, and coffee. The fee does not include the price of the textbook.

Places must be reserved with the fee by March 12 through the Continuing Engineering Education Division office, Post Office Box 4200, Texas Tech University, Lubbock, Texas 79409. Spaces are limited.

A certificate will be presented to each participant upon completion of the course.

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LUBBOCK-- Telecommunications personnel with Texas Instruments, Cosmos Broadcasting and Emory University Medical School in Atlanta will address audiences on Feb. 23 during Telecommunications Day of Texas Tech University's Mass Communications Week.

Texas Instruments' Al Bond will address audiences at 8:35 a.m. in Mass Communications East 101. Bond, president-elect of the International Television Association, joined Texas Instruments from the NASA Manned Space Craft Center in Houston, where he was news media director.

Charles Jones, director of radio development for Cosmos Broadcasting Corporation, will speak at 9:35 a.m. He was vice president of radio affairs for the National Association of Broadcasters for six years, and has 26 years of news media experience.

Edwin L. Giles, media specialist with Emory University School of Medicine in Atlanta, will speak at 10:35 a.m. in Mass Communications East 101. He is technician, consultant, and coordinator of all major audio-visual presentations within the Emory School of Medicine.

CLIO Award-winning commercials will be shown at 1:35 p.m. and 3 p.m. in Mass Communications East 101.

Mass Communications Week will conclude with the Thomas Jefferson Award Dinner at 7 p.m. in the University Center Ballroom. The award, presented annually to a public official who has made major

### telecom / add one

contributions toward preserving the freedom of the mass media, will be presented this year to Richard E. Wiley, former chairman of the Federal Communications Commission.

Telecommunications Day is just one aspect of the multifaceted five-day Mass Communications Week. Each day is devoted to seminars, demonstrations and lectures on one field of mass communications. The theme of the week, "Media Wars," refers to inter-media relationships and competition.

Monday, Feb. 19, is Public Relations Day; Tuesday, Feb. 20, Journalism Day; Wednesday, Feb. 21, Photography and Film Day; Thursday, Feb. 22, the "World of Advertising Seminar," and Friday, Feb. 23, Telecommunications Day.

All sessions are free and the public is invited.

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