January 2-6, 1984

DATE	Stories and Cutlines	Locals (75)	Reg. Dallies (25)	Reg. Weeklies (B 39) (A 37)	50 M's (16)	Reg. Radio	X-List (26)	Adj. Counties (15)	Hometowners	PSA's	Ag list	Ag boxes (16)	MISC. (#)	CONTACT	REMARKS
1-1-3-84	Pulsed Power	✓	✓		✓								✓	PL	Fall Media Science List
2-1-3-84	Museum Workshop	✓						✓						Cheryl	
3-1-3-84	Robert Browning Lecture	✓						✓						Cheryl	
4-1-3-84	Outstanding Researcher Named	✓	✓									✓		Cliff	Ag List Special List
5-1-3-84	Lecture Series	✓						✓						Cheryl	
6-1-4-84	Law booklet (100)	✓	✓											Preston	Texas Bar Journal
7-1-4-84	Inflation (150)	✓	✓	✓	✓									Cliff	
8-1-5-84	Engineering Dean													PL	
9-1-5-84	Advertising Booklet	✓	✓											Preston	Media list

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CONTACT: Preston Lewis 1-1-3-84

LUBBOCK--In an age when electricity has helped control everything from traffic signals to space flights, controlling great surges of electricity in minute, yet precise, fractions of a second may open even more wondrous technological doors.

That is the promise of pulsed power technology, if it can be further developed in certain key areas, and industry is just waiting for the technological breakthrough, according to Dr. Magne Kristiansen, Horn professor of electrical engineering at Texas Tech University.

The magnitude of harnessing pulsed power can be compared to taking a flooding river at a dam and forcing through the floodgates in seconds the volume of water that might normally pass through in hours.

Pulsed power is simply an instantaneous and great surge of electricity. The physics of pulsed power, requiring bursts of electricity in hundreds of thousands of volts and amperes turned on and off within millionths of a second, present special problems not associated with electricity when used in smaller amounts and over longer time periods.

"Electric energy," Kristiansen said, "is power times time, as in kilowatt hours, for instance. When you take a certain amount of energy and compress the time frame, as in pulsed power, you increase the amplitude of the power and the difficulty of controlling it as precisely as necessary for industrial use."

"Exactly how much electricity you can compress in a given time, how fast you can do it, how often in a row, how quickly you can do it and how precisely you can time it are questions to be answered by pulsed power research," Kristiansen said.

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Much of the research at Texas Tech is focusing on the "floodgate" of the system, the switch. The switch is the crucial element in what could evolve into a pulsed power system because its design will determine how the rest of the system is designed. Two types of switches -- "opening" and "closing" -- have been studied at Texas Tech. An opening switch operates much like a common household fuse while the closing switch is akin to the spark plug in an internal combustion engine.

Harnessing pulsed power has been hampered by the wear and tear the high power electrical surges cause on the switching apparatus. Though pulsed power is used in the laboratory and in some military modeling applications, Kristiansen said its prime industrial application to date has been in shaping metals, a process traditionally handled by metal presses.

"Reliability and longevity are important to industry," Kristiansen said. "If we can ever bring the reliability and life of the switching apparatus up to industry's needs, a whole area of applications is just waiting to open up."

In one potential application, pulsed power might be used to initiate nuclear fusion, a relatively clean and safe nuclear reaction that could produce energy from water.

Research into pulsed power is a multidisciplinary effort nationally involving material scientists, plasma (high temperature) chemists, structural engineers, physicists, electromagnetic field theorists and electrical engineers, Kristiansen said.

Texas Tech's nationally recognized pulsed power research effort is concentrated in the Electrical Engineering Department, but also involves faculty and facilities in the Physics, Chemistry and Mechanical Engineering Departments.

The Texas Tech research, funded by the Air Force, Army, Navy and other agencies in excess of $3 million over the last three years, has focused on opening switches for inductive energy storage, gas breakdown initiation, transient processes in laser-triggered closing switches, interaction of arc channels with electrodes, surface physics of insulators, techniques for monitoring gap conditions, gas flow conditions in high power switches, and basic breakdown theory and experiments.

The field of pulsed power is more than 40 years old, receiving its initial impetus in the development of radar. In fact, the only text available on pulsed power was written on its radar applications about the time of World War II, a situation Kristiansen is trying to help remedy by serving as co-editor of a new series of books titled "Advances in Pulsed Power Technology" and by editing a series of pulsed power lecture notes for the U.S. Air Force.

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CONTACT: Cheryl Duke 2-1-3-84

LUBBOCK--"Textiles of Guatemala" will be explored by youths, ages 9-12, during a two-part workshop in January at The Museum of Texas Tech University.

Sessions will meet 9 a.m. to noon Jan. 14 and Jan. 21 at The Museum. Fee, which covers materials, is $20 for the general public and $15 for West Texas Museum Association (WTMA) members.

Peggy Bright, Texas Tech art professor, will teach the workshop. She said students will make their own looms of boxes and pieces of cardboard.

"We will be doing some novelty and primitive weavings and work with both pattern and woven stitches," Bright said.

The young people's program is offered in conjunction with the traveling exhibit, "A Century of Change in Guatemalan Textiles," on display at The Museum through Jan. 29.

The workshop is sponsored by the WTMA and limited to 30 students. To register or for more information, contact the WTMA office, 742-2443.

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CONTACT: Cheryl Duke 3-1-3-84

LUBBOCK--A British expert on ancient history and classics will visit Texas Tech University Jan. 19-20.

Robert Browning will present a free public slide-lecture on "Medieval Athens" at 7 p.m. Jan. 19 in Room 77, Holden Hall.

Browning will give a seminar session Jan. 20 on the problems of constructing the biographies of ancient persons such as the Roman emperor Julian. Persons interested in attending the seminar should contact classics Professor Edward George at 742-1555.

Browning taught ancient history and classics at Birkbeck College, University of London, from 1947 until his recent retirement. He is a fellow of the British Academy and a resident fellow at the Dumbarton Oaks Research Institute in Washington, D.C. His publications include "Justinian and Theodora," "Byzantium and Bulgaria," "The Emperor Julian," and "Medieval and Modern Greek."

His Texas Tech visit is sponsored by the Departments of Classical and Romance Languages and History, and offices of the Dean of Arts and Sciences and the Vice President for Research and Graduate Studies.

For more information, contact George at 742-1555.

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CONTACT: Clifford Cain 4-1-3-84

LUBBOCK--One of the more active researchers and writers in Texas Tech University's College of Agricultural Sciences has been named the college's Outstanding Researcher for 1983.

Dr. Fred S. Guthery of the Range and Wildlife Management Department was selected by a committee of former recipients, said Dr. Robert C. Albin, associate dean for research. He will receive the award April 6 at the college's spring awards banquet.

Guthery, an Oregon native, has written 31 articles in refereed journals, 11 articles for symposiums, seven articles in such magazines as The Cattleman, Texas Parks and Wildlife Magazine and Texas Hunters Hotline, and has given 21 presentations in the 6½ years he has been at Texas Tech. His research and writing specialty is wildlife management.

While at the university, he has received $53,800 in state appropriated research grants. The primary sources of the grants were the U.S. Department of Agriculture Forest Service and the Kleberg Wildlife Foundation.

In 1981 and 1983, Guthery received the Outstanding Publication Award for his writings from the Texas Chapter of the Wildlife Society. He also received in 1982 a Certificate of Appreciation from the U.S. Forest Service. In 1983, he received a Certificate of Appreciation from the Llano Estacado Chapter of the National Audubon Society.

He received his doctoral degree in wildlife ecology in 1977 and his master's in wildlife science in 1972, both from Texas A&M.

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CONTACT: Cheryl Duke 5-1-3-84

LUBBOCK--An "Evening Explorations" lecture series, featuring curators of The Museum of Texas Tech University and Texas Tech professors, will begin Jan. 19 at The Museum.

Lecturers will discuss topics of their special expertise for the general public. The free slide lectures will begin at 7 p.m. Thursdays in The Museum.

Dr. Francis L. Rose, an avid collector of wild flowers and a professor of biological sciences, will talk about "Wild Flowers of the Llano Estacado" Jan. 19. Rose is coordinator of Rattlesnake Canyon for The Museum.

Lectures Feb. 2 and 16 will be "Art Talks/Money Talks" by Dr. Steven Bradley, curator of art for The Museum, and "Waterfowl of South America" by Dr. Kent Rylander, adjunct curator of ornithology for The Museum and a biological sciences professor who has conducted recent research on South American birds.

Museum director Dr. Clyde Jones will lecture March 8 on "Natural History Studies in West Africa."

Dr. Robert J. Baker, curator of mammals and living tissues for The Museum and Horn professor of biology, will lecture March 29 on "James Bond, Tropical Islands and Zoogeography of the Caribbean."

April 12, Dr. Eileen Johnson, curator of anthropology and director of the Lubbock Lake National and State Landmark, will speak on "Lubbock Lake and the South Plains Record."

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Betty Mills, curator of costumes and textiles, April 19 will present "The Language of Lace," in preparation for a traveling exhibition on lace, scheduled at The Museum in August.

The final lecture in the series will be May 10. Dr. Kristine Fredriksson, curator of history for The Museum, will speak on "Growing up on the Road: The Children of Wild-West Shows."

The lectures, sponsored by The Museum and the West Texas Museum Association, are planned to be of interest to the general public and students from junior high and up.

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CONTACT: Preston Lewis 6-1-4-84

LUBBOCK--High school students with questions about a legal career can find answers in the second edition of "Would You Like to be a Lawyer?" from the Texas Tech University School of Law.

Sections on prelegal education, what lawyers do, the nature of legal work, employment possibilities and outlook, earnings and qualifications are designed to answer the questions high school students ask and the questions they should ask.

Prepared by Texas Tech Law School faculty, the booklet is available free by writing "Would You Like to be a Lawyer?", School of Law, Texas Tech University, Lubbock, Texas 79409.

The booklet says the law permeates every aspect of American society and a general education is often the most practical for an aspiring lawyer.

"Boiled down, the best preparation for the study of law is a broad liberal arts education, one that forms and encourages critical understanding of institutions and values," the booklet says.

"Law school courses are highly specialized. Their real significance can best be understood by recognizing their many relationships to other fields of study and against the vast backdrop of Anglo-American history."

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CONTACT: Clifford Cain 7-1-4-84

LUBBOCK--The problems of small businesses easily can worsen when inflation is added to the balance sheet, according to a Texas Tech University accounting professor.

"In general, the effects of inflation are the same for small businesses as they are for big businesses," said Dr. Paul H. Munter. "The difference is that in many instances, big business has a larger cash flow and reserves to make up for the impact of inflation."

He said the small business often is an extension of its owner and his or her dreams to be independent and own a business. Often, the shareholders consist solely of management and family members.

"Small businesses are caught in a different bind from big business because they use dividend payments as a tax planning device and their ability to compensate for losses through borrowing is more restricted," he said.

He said a small business's entire financial history may be based on the reputation or financial stability of its owners.

"They're in a Catch-22 situation in that if they borrow at 12 percent to invest in plant assets and get a 14 percent return for their money, it will affect their taxes," Munter said. "At the same time, inflation affects interest rates and causes artificially high profits and taxes and makes borrowing more difficult."

"As inflation increases, everything costs more and the businessman has to borrow more," he said. "If he borrows more, the banker may perceive him to be more of a risk and charge him a higher interest rate. This unbalances everything toward the debt side."

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Munter said small businesses are artificially limited in their ability to grow unless they have the ability to borrow or to internally plow the funds back into the business.

"Small businessmen often cannot make additional investments into their business because they are limited by their personal borrowing ability and their limited pocketbooks," he said.

Many owners must eventually face the choice between remaining a small business with no expectations of real growth or to go public, thereby giving up whatever control they had over the business.

Often, inflation is a scapegoat for the death of a business when the reason actually was mismanagement and poor bookkeeping. "Where owners do not take inflation into consideration is in their cash flow projections, such as having to give raises and pay suppliers," Munter said.

"A lot of costs literally sneak up on you because the owners fail to incorporate inflation in their accounting procedures," he said.

The longer a small business operates the more inflation should be reflected in its cost structures. Failure to do so often does not show up until it reaches a point where the business has to replace older assets. Then, the costs of inflation can be staggering, he said.

"Twenty percent of the small businesses fail primarily because they fail to account for inflation in their cash flow projections," Munter said.

In 1981, Munter and Dr. Thomas A. Ratcliffe, director of Texas Tech's Center for Professional Development, co-authored a business accounting book, "Complete Handbook of Inflation Accounting," published by Prentice-Hall Inc.

Ratcliffe said inflation "points out problems that a business owner never thought of before."

"Cash flow crunches occur because the owner did not understand the impact of inflation," he said. "They'll soon realize the business is no longer a seat-of-the-pants operation or they can easily go out of business."

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CONTACT: B. Zeeck 8-1-5-84

SUGGESTED RELEASE DATE: AMs SUNDAY, JANUARY 8

LUBBOCK--Six candidates for the position of dean of the College of Engineering have been invited for campus interviews at Texas Tech University, beginning the week of Jan. 23.

The announcement was made by Vice President for Academic Affairs John R. Darling. He said the search committee, headed by Dean Sam E. Curl of the College of Agricultural Sciences, had narrowed the field of 50 applicants to the six it recommended as finalists.

They are: Dr. William E. Biles, chairman, Department of Industrial Engineering, Louisiana State University; Dr. Leroy S. Fletcher, associate dean, College of Engineering, and professor of mechanical engineering, Texas A&M University; Dr. Paul H. King, head, Department of Civil Engineering and Engineering Mechanics, University of Arizona; Dr. Andrew P. Sage, chairman, Department of Engineering Science and Systems, University of Virginia; Dr. Mason H. Somerville, head, Department of Mechanical Engineering, University of Arkansas; and Dr. Jimmy H. Smith, interim dean, College of Engineering, and professor of civil engineering, Texas Tech University.

"Each of the six candidates," Darling said, "have excellent credentials in teaching, research and administration, and each comes highly recommended by colleagues in the engineering professions."

"Because of the quality of the candidates, the selection process can by no means be cut and dried," he said. "Texas Tech has reason to be pleased that individuals of this calibre are interested in the engineering deanship."

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Each of the candidates has industrial as well as academic experience. Each has extensive research background and shows strong involvement in professional as well as civic organizations.

Biles holds the doctoral degree in industrial engineering and operations research, awarded by Virginia Polytechnic Institute and State University in 1971. He earned the master's degree in industrial engineering at the University of Alabama and the bachelor's in chemical engineering at Auburn University.

He has served on the faculties of Louisiana State, Pennsylvania State and Notre Dame universities.

Fletcher earned his doctoral degree at Arizona State University, his master of science and engineering degrees at Stanford University and the bachelor's degree at Texas A&M.

He has been on the faculties of Arizona State, Rutgers and Texas A&M universities and the University of Virginia.

King's bachelor's and master's degrees in civil and in environmental health engineering were earned at the California Institute of Technology. Stanford University awarded him the doctoral degree.

He has taught at the University of Kentucky, Virginia Polytechnic Institute and State University and the University of Arizona.

Sage earned bachelor's and master's degrees in electrical engineering at The Citadel and Massachusetts Institute of Technology, respectively, and the doctoral degree at Purdue University.

He has taught at Purdue, the universities of Florida and Virginia and at Southern Methodist University.

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Somerville's degrees are in mechanical engineering. He earned the bachelor's at Worcester Polytechnic Institute, the master's at Northeastern University and the doctoral degree at Pennsylvania State University.

He has taught at the universities of Arkansas, North Dakota and Penn State and was for four years an invited lecturer in engineering extension at the University of Wisconsin.

Smith's bachelor's and master's degrees were earned at Texas Tech University and the doctoral degree at the University of Arizona. He also has undertaken postgraduate studies at Oklahoma State University and the University of Wisconsin. He joined the Texas Tech faculty in 1971.

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CONTACT: Preston Lewis 9-1-5-84

LUBBOCK--The number of advertising students in the nation's colleges and universities rose 6 percent in the last academic year, according to the compilers of the 1984 directory "Where Shall I Go to College To Study Advertising?".

Compiled annually by Texas Tech Mass Communications Department Chairman Billy I. Ross and University of Tennessee College of Communications Dean Donald G. Hileman, the booklet is based on statistics gathered from 86 institutions in 42 states.

Last year 15,892 students, up from 15,006 the previous academic year, majored in advertising. Of those, 14,832 were undergraduates and 1,060 were graduate students, up from 13,960 and 1,046, respectively, the year before.

The most advertising students in a single program -- 1,208 -- were reported at Michigan State University, which also reported the most undergraduates. Roosevelt University in Chicago reported the most graduate students -- 512 -- in advertising. Advertising tuition and fees ranged from $420 at West Virginia University to $8,325 at Northwestern University.

Advertising graduates increased to 4,942 last year from 4,760 the year before, with 4,671 bachelor's degrees up 6 percent from the year before. Graduate degrees numbered 271, down 23 percent from the previous year.

The number of advertising faculty increased from 343 to 361 during the last academic year.

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Of the 86 schools with advertising programs, 72 programs are under journalism-mass communications, 10 under business-marketing and four under joint programs. Fifteen schools offer a doctoral degree while the highest degree given by 35 is a master's and by 36 is a bachelor's degree. Twenty-nine programs are accredited by the Accrediting Council on Education in Journalism and Mass Communications and 12 by the American Association of Collegiate Schools of Business.

Basic information offered in the booklet on various advertising programs includes: the title of the advertising program at each school; specific degrees; accreditation; enrollment; number of graduates and advertising faculty; largest three scholarships; financial assistance; entrance requirements; tuition, fees, room, board; campus advertising organization; and the contact for more information.

Additional information on the booklet is available from Ross, Department of Mass Communications, Texas Tech University, Lubbock, Texas 79409, (806) 742-3385, or Hileman, College of Communications, University of Tennessee, Knoxville, Tenn. 37916, (615) 974-3031.