

# From the STACKS

Vol. I No. 4  
Fall 2009

Honoring the past through the Alabama Alumni  
Magazine archives



When UA was founded in 1831, handwritten notes were the standard for communicating, and if a destination wasn't within walking distance, horses provided transportation. Fast forward to 2009, and it's amazing how far we've come. People who marveled at the first automobiles in 1908 also watched our first steps on the moon in 1969, and for their children, cell phones and the Internet bring the world to their fingertips. Explore with us the Capstone's role in the rapid technological advancements of the last century, from the pages of its alumni magazine.

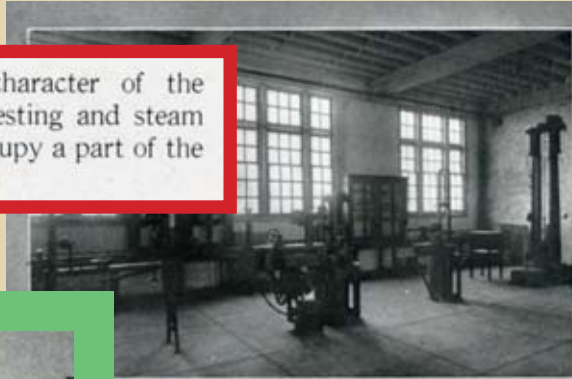
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Manager of Publications: Janice Fink

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# Earth

THIS group indicates the character of the equipment in the cement testing and steam engineering laboratories, which occupy a part of the north half of Comer Hall.



Summer School class in physics

1916

1915



COMER HALL, covering nearly an acre of ground, is the largest engineering building south of the Potomac River. It was erected in 1909, and named in honor of Hon. Braxton Bragg Comer, an alumnus of the University, who was at that time governor of Alabama.

This building occupies the northwestern corner of the campus, and cost, with the equipment, approximately \$175,000. It contains the departments of engineering with their offices and laboratories, the departments of physics and astronomy, and the University power plant.





# College of Engineering Expands Into New Quarters

1937



1928



Dear Brooks In The Anatomical Library.

**"What is a scientist after all? It is a curious man looking through a keyhole, the keyhole of nature, trying to know what's going on."**

**—Jacques Yves Cousteau**

1918



Group of Alabama Selectmen Being Trained in Automobile Mechanics at the University



# Fulfilling Your Desire For *Quality*

The surpassing beauty of the new 1937 Chevrolet is but the pleasing reflection of surpassing quality which goes all the way through. In materials, in precision manufacture, in features of safety and comfort and convenience, this car provides a measure of goodness equaled only in expensive automobiles. It fulfills your desire for quality...and—it's the only complete car—priced so low!

CHEVROLET MOTOR DIVISION, General Motors Sales Corporation, Detroit, Michigan

# CHEVROLET

## Again-Oldsmobile Steps Out Ahead!

With Two Dashing New  
Style Leaders  
Both Offering the New  
**AUTOMATIC  
SAFETY  
TRANSMISSION\***



NEW SIX



NEW EIGHT

STYLING that sets the style for America to follow... features that represent the greatest roll call ever announced in cars of popular price... you get them all in Oldsmobile's dashing new Six and dynamic new Eight for 1937. And if you want super-performance, it's yours with Oldsmobile's sensational new Automatic Safety Transmission, optional at extra cost in all models of both the Six and Eight\*. Step ahead with an Oldsmobile for 1937... it's the smartest buy of the year!

**NOWHERE ELSE  
CAN MONEY BUY  
SO MUCH!**

Style-Leader Styling • Safety Dash with Safety Instrument Unit • Safety Interiors • 95-Horsepower Six • 110-Horsepower Eight • K-Bar-Action Wheels • Super-Hydraulic Brakes • Center-Control Steering • Unibody Body Construction • Turret Top • Air-Cooled Battery • No Dead Ventilations • Safety Glass • Unobstructed Floors • Trid-Action Engine Suspension



THE ONLY COMPLETE CAR—PRICED SO LOW

# 1937

## NEW CHEVROLET 1937 *The Complete Car • Completely New*







Home of Mrs. George R. Savage, Wilmette, Ill. Mrs. Savage, who has used Hoovers ever since her marriage, now has the One Fifty Cleaning Ensemble.

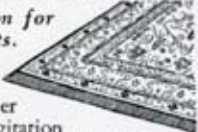
## Hoover's finest version of the new idea in cleaning

*—The tested and approved method of cleaning deep-piled carpets, Oriental rugs, upholstered furniture, silk lamp shades, draperies and all good furnishings is the Hoover One Fifty Cleaning Ensemble.*

Here's why particular home-owners, after comparing all cleaners, are selecting this Hoover One Fifty Cleaning Ensemble.

### Unusual protection for heavy-piled carpets.

Rug manufacturers recommend its use, because they consider patented Positive Agitation the sure way of removing embedded grit.



### Better cleaning of fine upholstery and draperies.

Hoover's complete Cleaning Kit has brushes, soft and stiff—for curtains, mattresses, Venetian blinds, upholstery, bookshelves, stair risers, inside the motor car. All together in Handy Cleaning Kit.



### A fundamentally clean home.

Moths dislodged. Buried dirt in furniture, and dog hairs in rugs removed.

### Heavier cleaning of today's homes offset by new Hoover conveniences.

Magnesium, new wonder-metal  $\frac{1}{3}$  lighter than aluminum, for amazing lightness. Two speeds for thick and thin rugs. Instant conversion from rug to furniture cleaning, without stopping motor. Automatic rug adjuster. Time-to-empty bag signal. Dirt Finder.



Home-owners careful in equipment selection recognize in Hoover a name that has stood for the highest standards of manufacture for thirty years. Phone for a Hoover representative to show you the One Fifty by appointment. Sold by leading dealers everywhere—for \$1.50 a week, payable monthly. Three 30th Anniversary Hoovers, for every home and budget.

**30th Anniversary**—The Hoover Company, the oldest and largest maker of electric cleaners, has held its leadership through all these years, by its outstanding service to 4,500,000 homes.



Ensemble is the new idea in this cleaner, interchangeable for rug and furniture cleaning. Modern streamlined design by Henry Dreyfuss.

From rug cleaner to furnishing cleaning—instantly. Simply slip tool connector in slot in side of cleaner.

The greatest retail stores are proud to sponsor the cleaner guaranteed by its makers to prolong the life of rugs. This guarantee is stamped on the bottom of every Hoover.



Lightness and brightness is the spirit of the new decor, and the Hoover makes cleanliness possible in the light toned fabrics and carpets of the new mode.

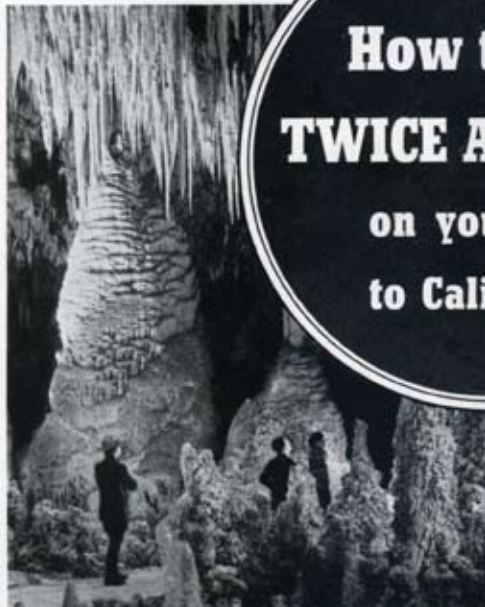
## HOOVER CLEANING ENSEMBLES

IT BEATS . . . AS IT SWEEPS . . . AS IT CLEANS

“The process of science is literally the act of creating knowledge from where there once was none.”

—Guy Caldwell, associate professor of biological sciences, *Alabama Alumni Magazine*, 2006

How to see  
**TWICE AS MUCH**  
on your trip  
to California



**GO ONE WAY** See the Mexican border country, Carlsbad Caverns National Park, Southern Arizona and Los Angeles. **SUNSET or GOLDEN STATE ROUTE.**



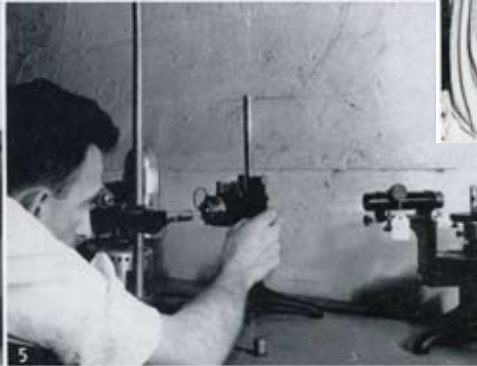
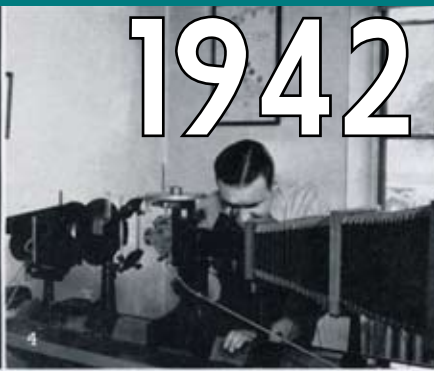
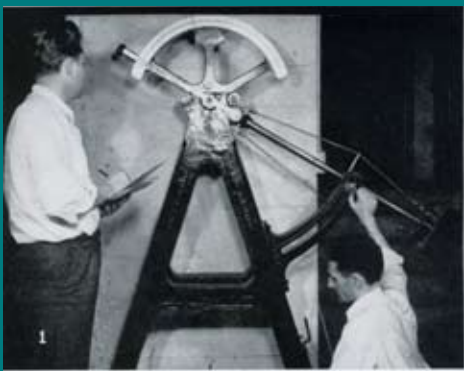
**RETURN ANOTHER** Cross Great Salt Lake on the famous Lucin Causeway. See San Francisco, the High Sierra and the Rockies. **OVERLAND ROUTE.**

1937



# 1942

# 1945



College of Engineering—1. Impact Testing. 2. Hardness Testing. 3. Corner of Laboratory. 4. Photomicrographic Equipment. 5. Testing Equipment. 6. Blast Furnace.

In 1837, The University of Alabama became the first in the state to offer engineering classes and was one of the first five in the nation to do so. Today, UA has one of the three oldest continuously operating engineering programs in the country.

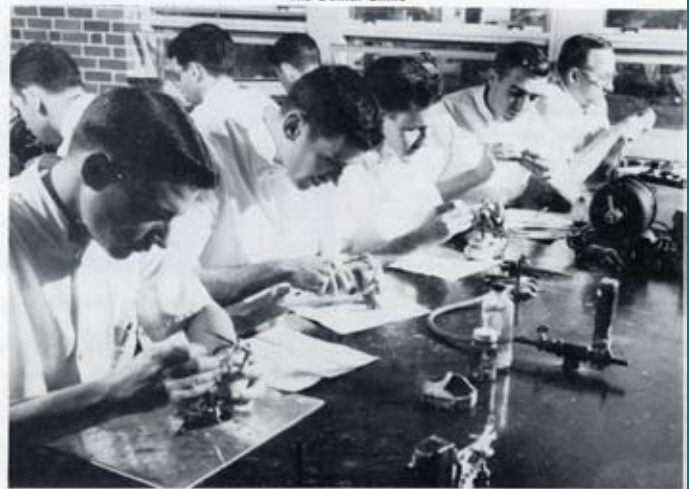


Mr. James R. Cudworth, director of the Mine Experiment Station and Chairman of the Research Committee, examines a stoker furnace unit used in a performance study for domestic stoker fuels of coals from certain Alabama fields.

Note that both stoker and furnace are mounted on a scale to enable the attendant to calculate the rate of burning of the coal.



The Dental Clinic



The Laboratory



"HE'S HARMLESS NOW"

Dr. Ralph McBurney and Mrs. Louise Cason of the Department of Pathology and Bacteriology with Dr. E. B. Carmichael of the Department of Physiological Chemistry observe a vicious wild rat caught in "A Better Mousetrap" which they have jointly designed for safe handling of such experimental animals.



The team from the Health Center in Birmingham and the Speech Clinic on main campus working to help cleft palate victims.



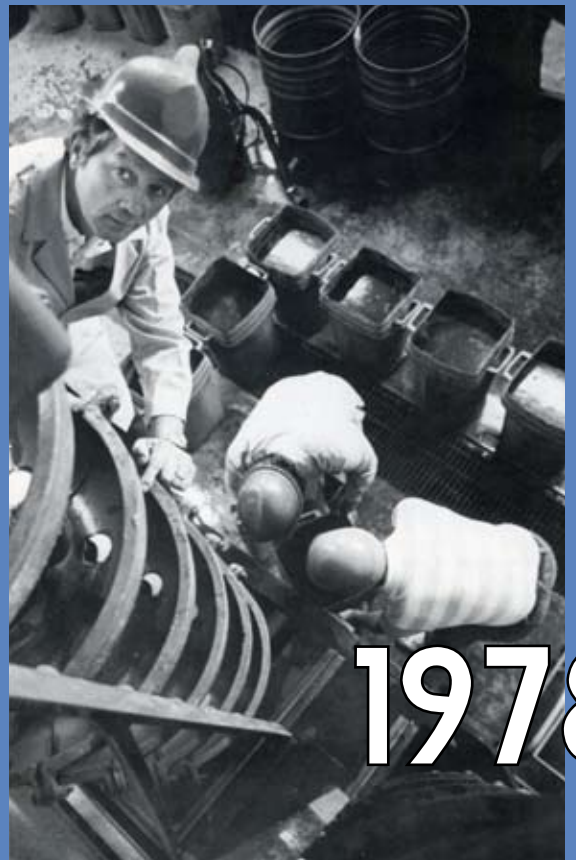
*“In the end, research—whether it be theoretical or applied, investigative or interpretive, whatever its form or shape—should make a difference in the quality of life.”*

*—Former UA President Roger Sayers,  
Alabama Alumni Magazine, 1995*

1955



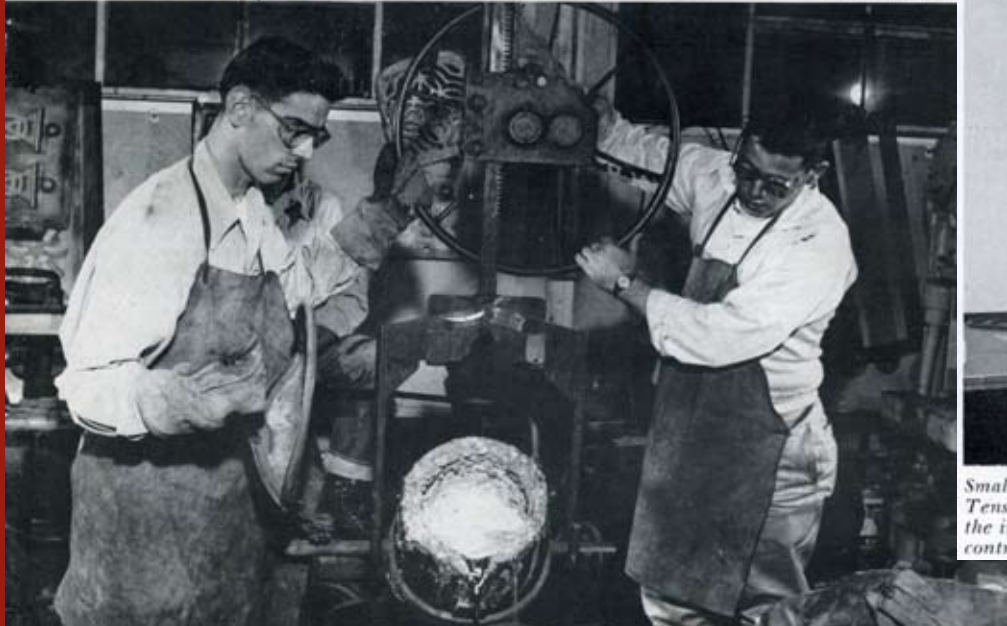
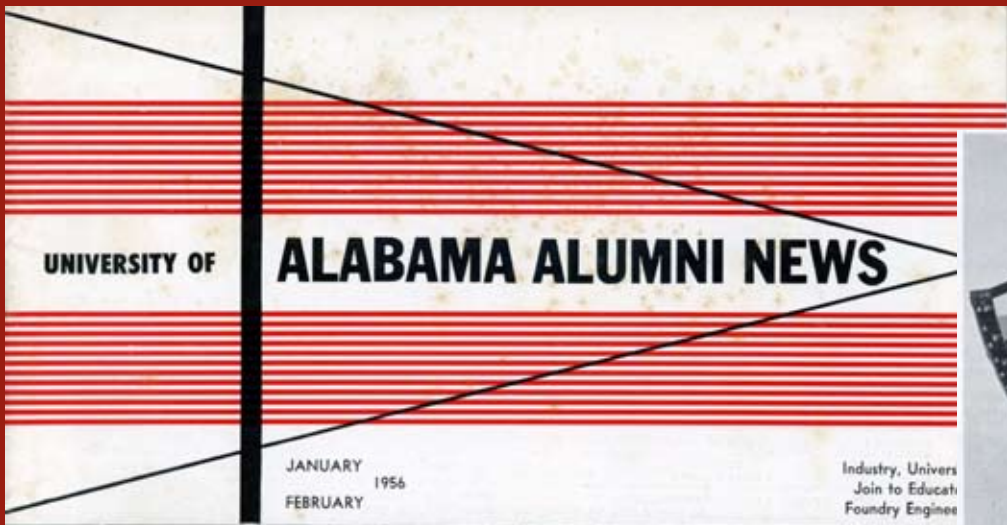
The first gush from Alabama's first gusher, near Brewton, in January 1952.



1978



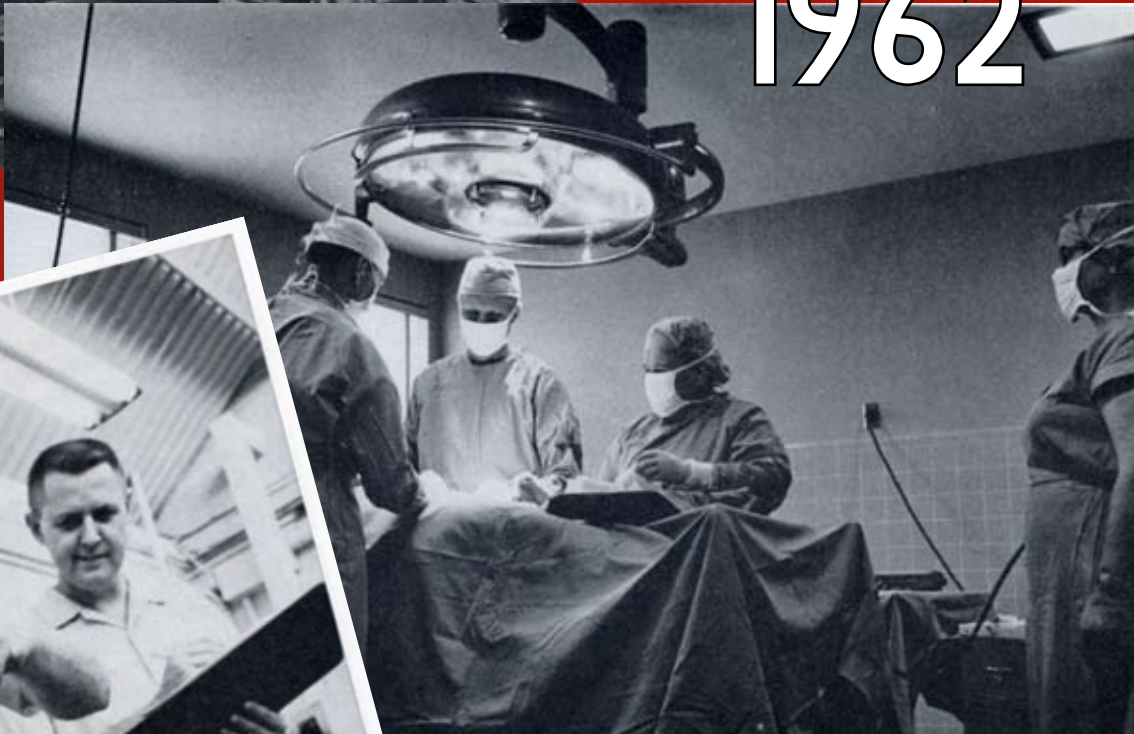
# 1956



Small sheets of paper made in the laboratory are tested on the Tensile Strength Tester under rigid conditions demanded by the industry. This testing is done in a humidity and temperature controlled room.

# 1956

# 1962



In the civil engineering laboratory, Professor John Karrh observes graduate student Tom Douglas make a penetration resistance test to discover maximum density and optimum moisture conditions of soil best suited for construction of highway embankments.

**"Nothing exists until it is measured."**

**—Niels Bohr**

# 1968



1996



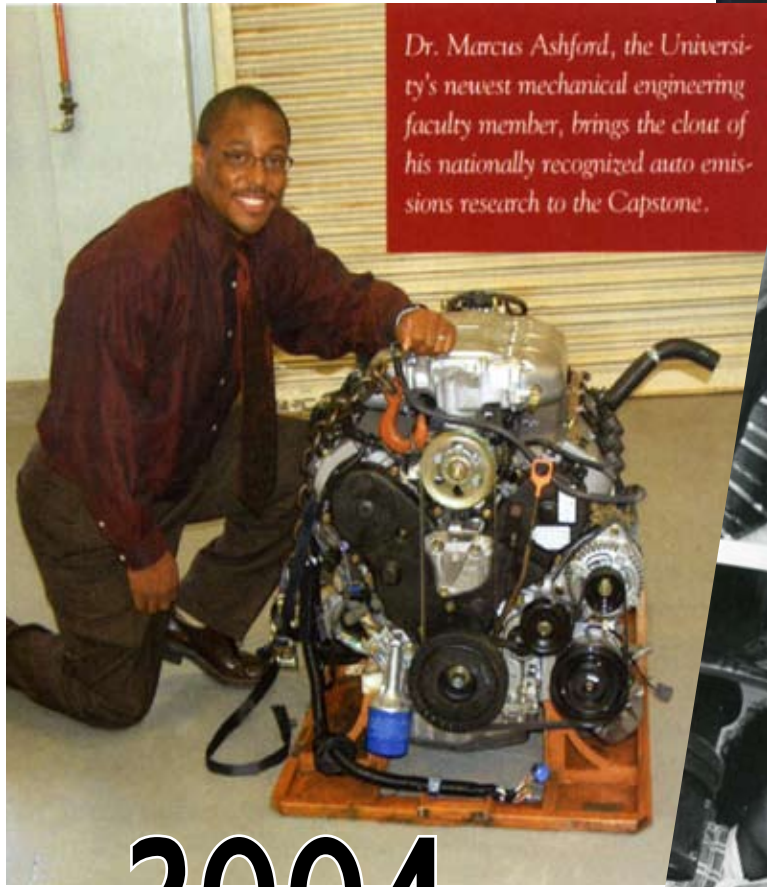
ALUMNI NEWS  
**Alabama**



**RESEARCH:  
THE NEW  
FRONTIER**

1980

FALL 1980



*Dr. Marcus Ashford, the University's newest mechanical engineering faculty member, brings the clout of his nationally recognized auto emissions research to the Capstone.*

2004



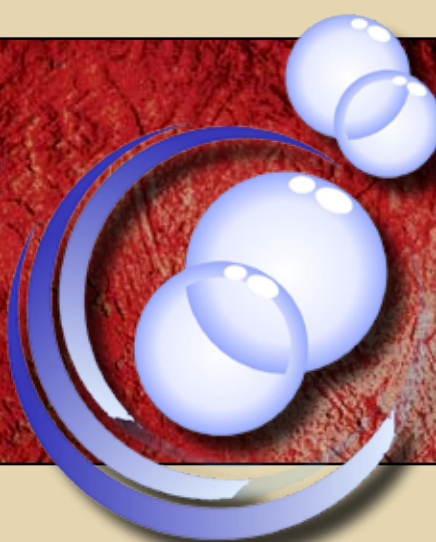
1980

“EQUIPPED WITH HIS FIVE SENSES, MAN EXPLORES THE UNIVERSE AROUND HIM AND CALLS THE ADVENTURE SCIENCE.”

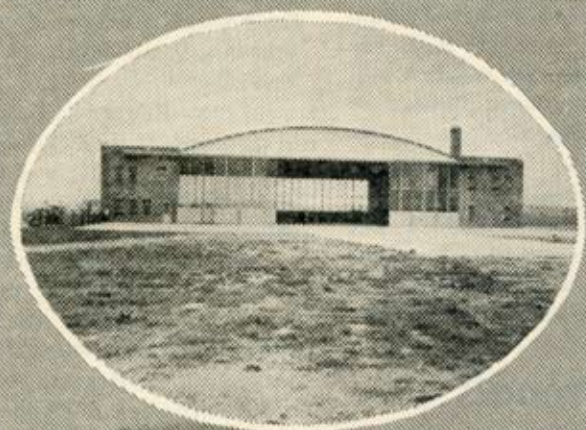
—EDWIN POWELL HUBBLE, *THE NATURE OF SCIENCE*



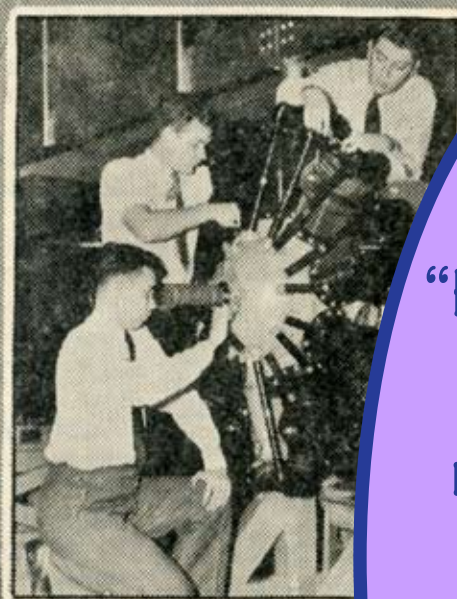
# Air



## University's Aviation School

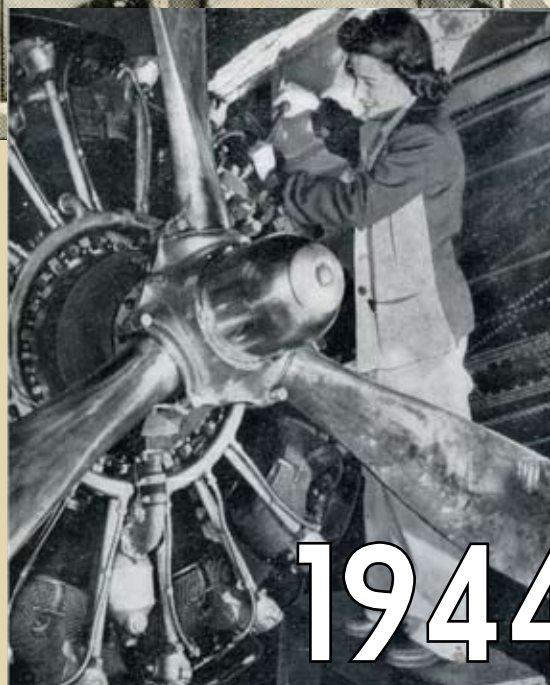


1939

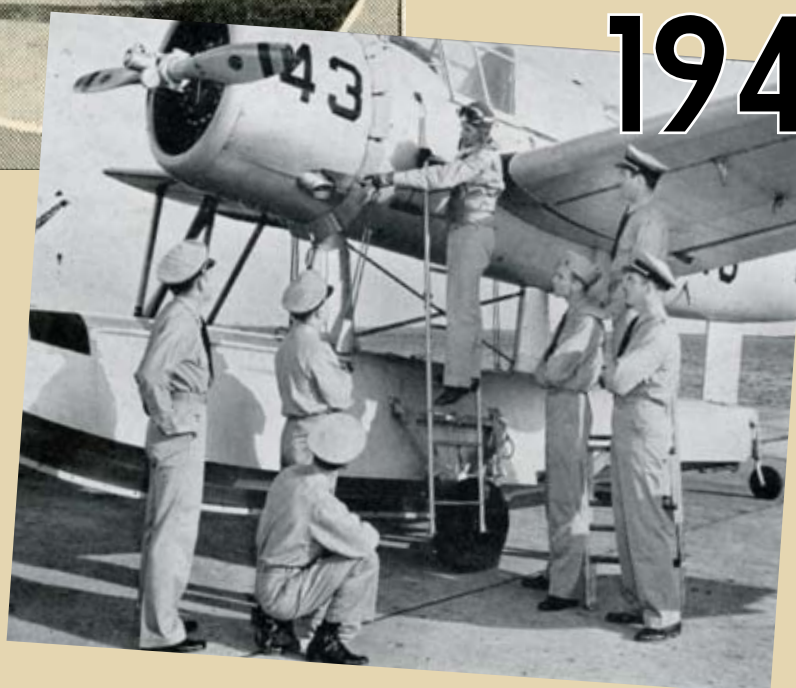


“Heavier-than-air flying machines are impossible.”

—Lord Kelvin, 1895



1944



1941





## TURN ON THE TELEVISION TEACHER



1959

1963

**BLAST-OFF** of supersonic Boeing BOMARC, the nation's longest-range defense missile. Now in volume production for Air Force bases under construction. Other Boeing missile projects that offer engineers and scientists outstanding career opportunities include Minuteman, an advanced solid-propellant intercontinental ballistic missile system.



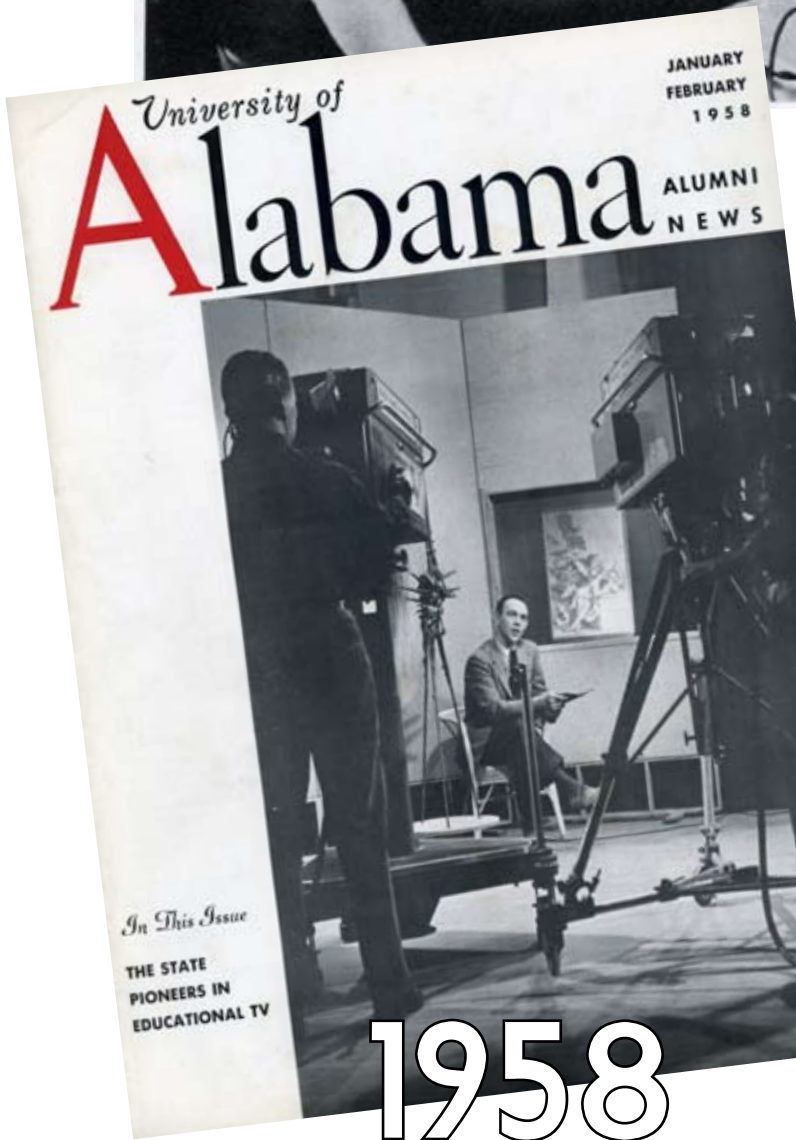
1968

Professors Ronald C. Houts and Richard S. Simpson are shown operating a data conversion unit for adapting communication signals, such as space-vehicle telemetry signals, to a format suitable for computer processing. Administered through the Bureau of Engineering Research the project is sponsored by Marshall Space Flight Center of NASA.  
—Photos by Andy Russel





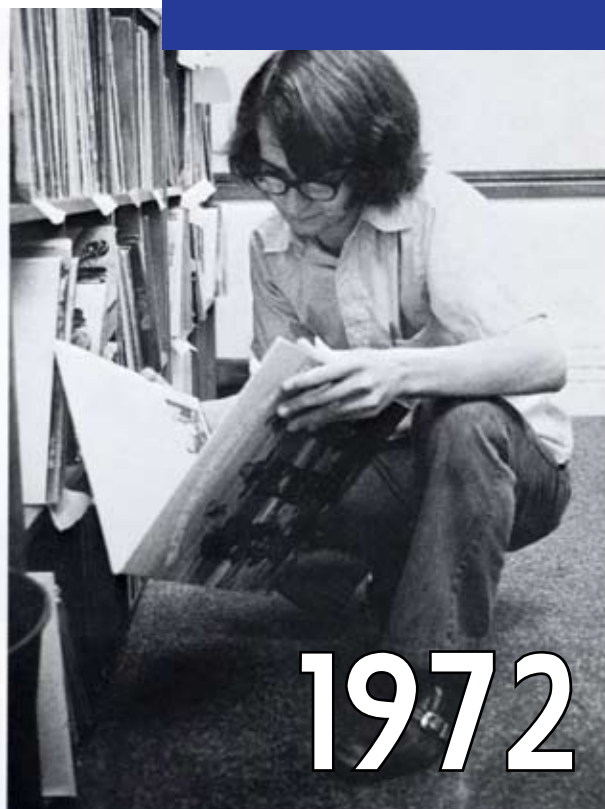
1972



1958

"Not last week's game; not something that happened yesterday; not even a minute ago. But right now. Seeing things—miles away—at the very instant they happen! That's the new thrill that television now makes possible."

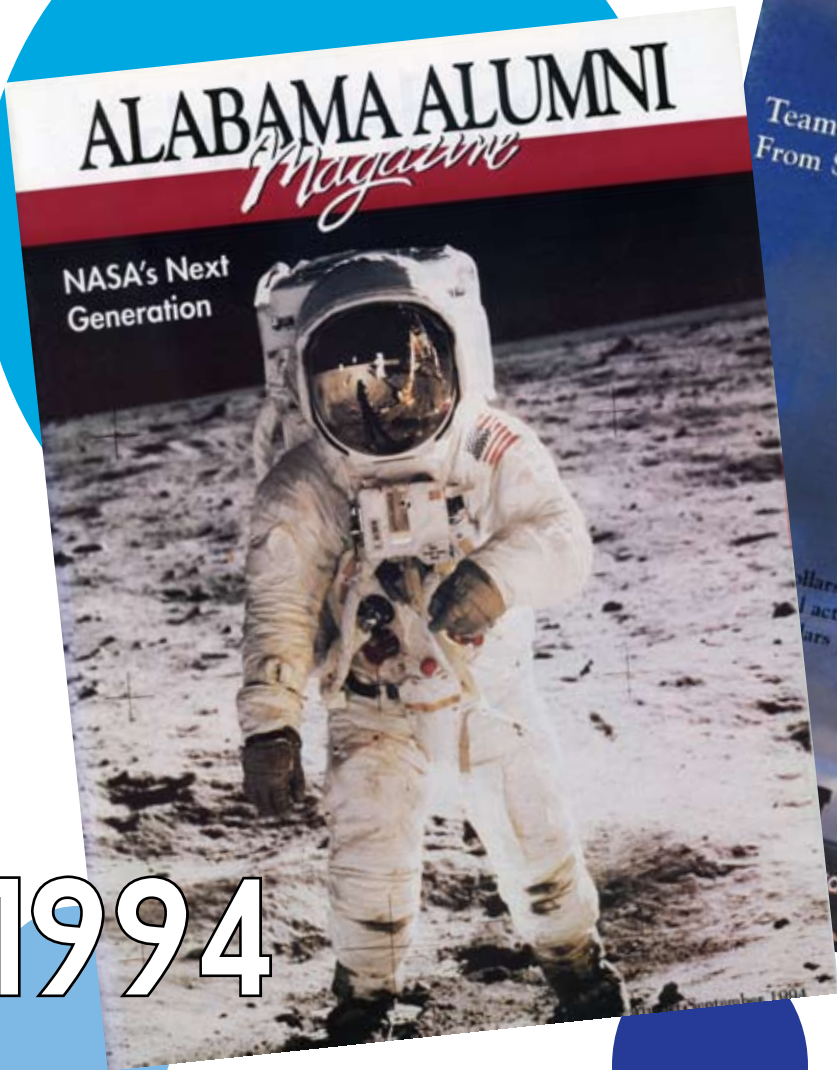
—General Electric ad,  
Alabama Alumni News, 1939



1972

Students do the work behind the mike . . . . . and behind the scenes.





1994



1997



1994

“The lunar landing, maybe for the first time, showed us what we can really accomplish if we all work together.”

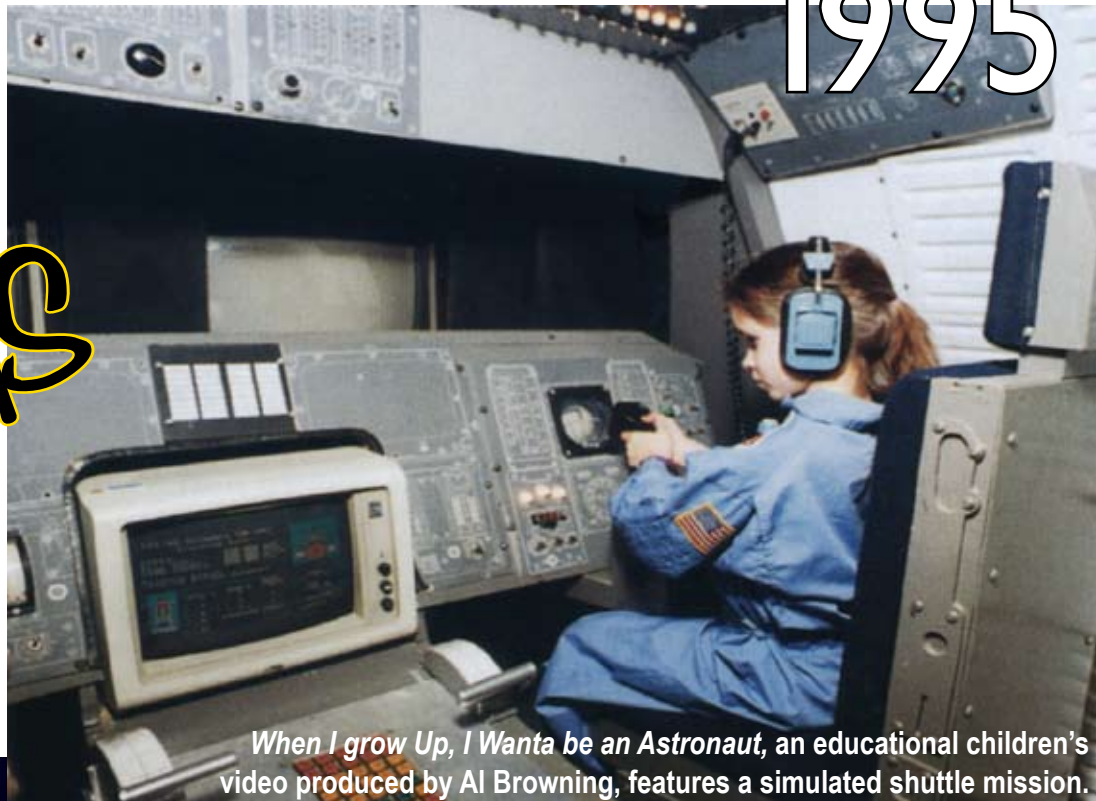
—Jonathan Campbell,  
NASA Program Developments,  
*Alabama Alumni Magazine*, 1994





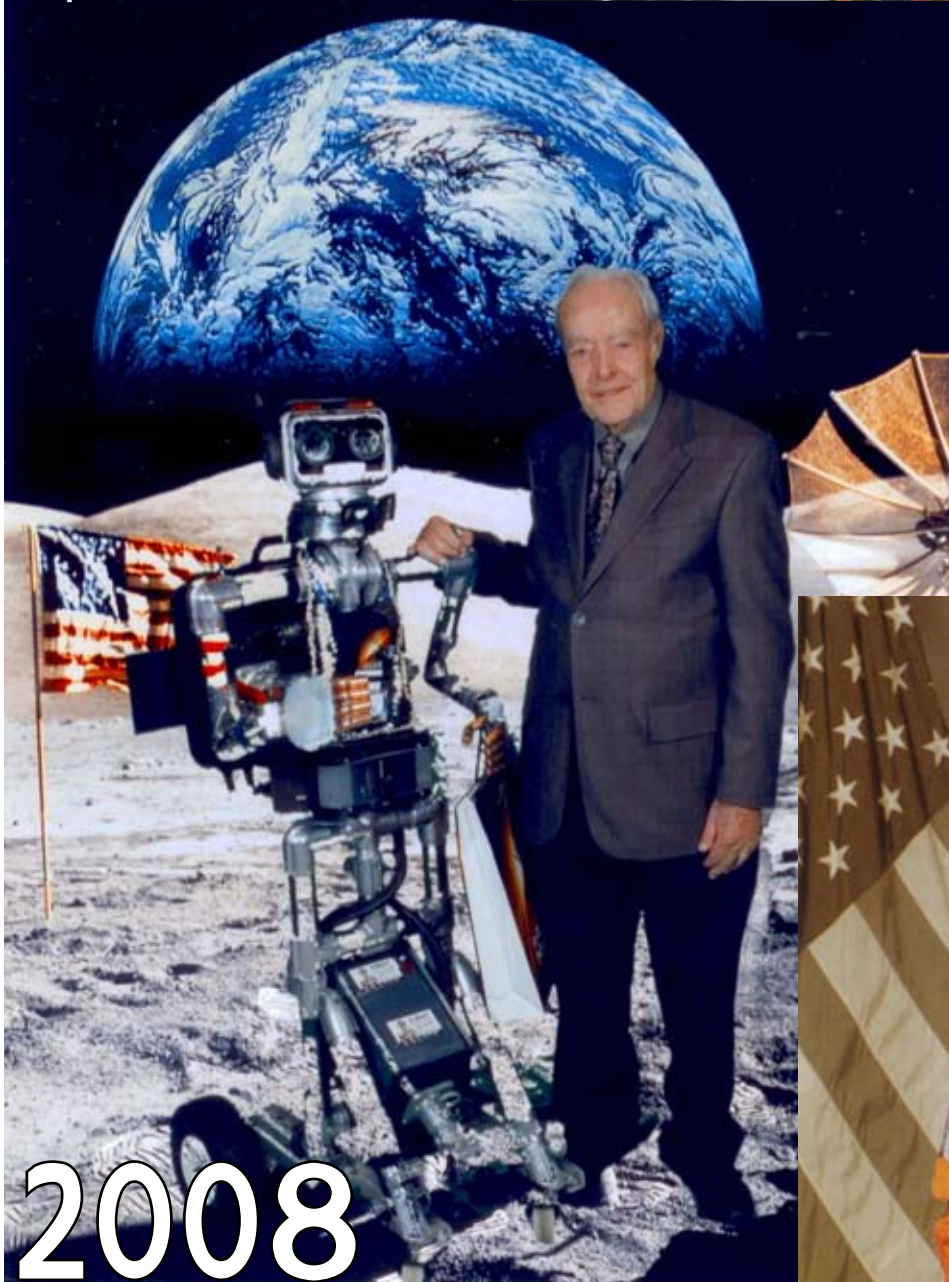
# Friends

1995



*When I grow Up, I Wanta be an Astronaut*, an educational children's video produced by Al Browning, features a simulated shuttle mission.

Capt. Frank. B. Gorman, '38



2008

in

2006



Col. James Kelly, MS '96

# Space





# 1998

providing innovative programs and outreach . . .

- interdisciplinary research through NSF-funded Center for Freshwater Studies
- nation's first educational television network provides outstanding programming through the Center for Public Television and Radio
- reaching out to 160,000 secondary school students with Integrated Science, a new way of teaching scientific disciplines and discovery
- serving rural communities through research and outreach
- helping children with developmental disabilities reach their full potential
- sponsoring joint degree programs and producing plays in repertory with the Alabama Shakespeare Festival
- one of 11 original NSF Materials Research Science and Engineering Centers in the United States
- Alabama International Trade Center, Alabama Productivity Center and Small Business Development Center help companies enhance their competitiveness and grow their businesses into new markets
- faculty generate \$32.5 million in outside contract and grant revenue each year



Opposite page: Aquatic biology research in on-campus mecosm. Top: Undergraduate engineering student (left) participates in NASA research. Above: History professor Dr. Howard Jones's research informed Steven Spielberg's *Amistad*.

August - September 1998 • 21

# 1995

**"It's never routine.  
It's always risky."**

—Charles Darby, Marshall Space Flight Center flight systems engineer, *Alabama Alumni Magazine*, 1994



Tim Nguyen holds a model of a C-130, the aircraft on which he escaped South Vietnam. Today he integrates defense systems for Lockheed, the company that builds the C-130.



# Fire



1924



## The needle that knits metal

There was a time when a broken frame or wheel of an important machine would tie up a big plant for days.

Now electric welding tools literally knit together the jagged edges of metals and insure uninterrupted production. That means steady wages, steady profits, and a lower price to the consumer.



One of the interesting departments of the General Electric Company's works at Schenectady is the School of Electric Welding, in which any manufacturer may send men for instruction.

GENERAL ELECTRIC



In spite of its size and the enormous power developed by this reversing blowing mill motor it reverses every three minutes. Its maximum rating is 22,000 h.p., equivalent to the muscle power of 170,000 men.

## "The 100,000 Man"



Look closely at the picture of this great motor installed in the plant of a large steel company, and you will see the enormous of the General Electric Company, an organization of men and women who produce equipment by which electricity does more and better work.

Of Napoleon it was said that his presence on the battlefield was equivalent to 100,000 additional men. "The 100,000 man," his enemies called him.

Napoleon dealt in death. Big General Electric motors, like the one in the picture, lift heavy loads off human shoulders, and contribute to the enrichment of life.

GENERAL ELECTRIC



## Eight thousand miles saved on every trip

It used to be 13,307 miles from New York to San Francisco by sea; it is now only 5,262.

The Panama Canal, which seemed such a heavy expense when it was built, is an immense national economy.

A greater economy because of the 1,500 General Electric motors which do its work—pulling the ships through, pumping water, opening and closing the locks—all at such little cost.



To reduce human labor, shorten distances, and save money—these are the services of electricity. General Electric Company makes all of the apparatus which electricity uses, and manages it in the most efficient way.

GENERAL ELECTRIC

1923

1924



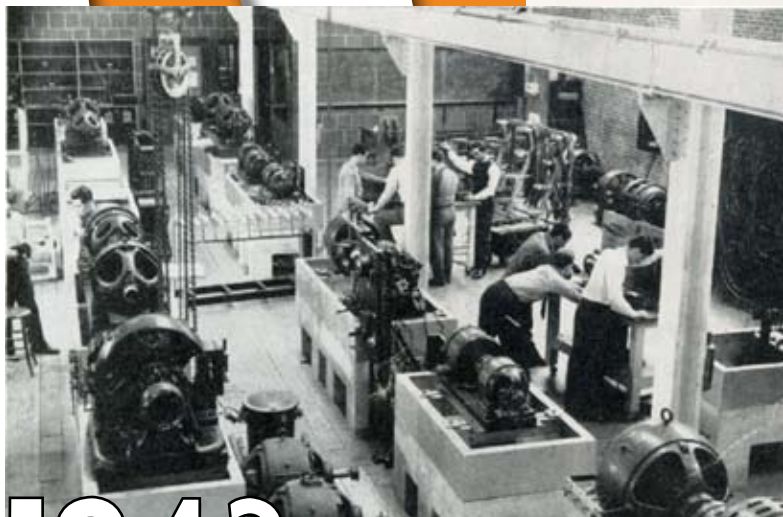
1931

ELECTRICITY  
puts the news on the street  
before the fans leave the arena





**AMERICA'S  
FIRST LINE  
OF DEFENSE**



**1943**

**1940**

**General Electric answers your questions about**

# TELEVISION

**1945**



**Q. What will sets cost after the war?**

A. It is expected that set prices will begin around \$200, unless there are unforeseen changes in manufacturing costs. Higher priced models will also receive regular radio programs, and in addition FM and international shortwave programs. Perhaps larger and more expensive sets will include built-in phonographs with automatic record changers.



**Q. How big will television pictures be?**

A. Even small television sets will probably have screens about 8 by 10 inches. (That's as big as the finest of pre-war sets.) In more expensive television sets, screens will be as large as 18 by 24 inches. Some sets may project pictures on the wall like home movies. Naturally, pictures will be even clearer than those produced by pre-war sets.



**Q. What kind of shows will we see?**

A. All kinds. For example: (1) Studio stage shows—dancers, vaudeville, plays, opera, musicians, famous people. (2) Movies can be broadcast to you by television. (3) On-the-spot pick-up of sports events, parades, news happenings. G.E. has already produced over 900 television shows over its station, WRGB, in Schenectady.



**Q. Where can television be seen now?**

A. Nine television stations are operating today—in Chicago, Los Angeles, New York, Philadelphia, and Schenectady. Twenty-two million people—about one-fifth of all who enjoy electric service—live in areas served by these stations. Applications for more than 80 new television stations have been filed with the Federal Communications Commission.



**Q. Will there be television networks?**

A. Because television waves are practically limited by the horizon, networks will be accomplished by relay stations connecting large cities. General Electric set up the first network five years ago, and has developed new tubes that make relaying practical. G-E station WRGB, since 1939, has been a laboratory for engineering and programming.



**Q. What is G. E.'s part in television?**

A. Back in 1928, a General Electric engineer, Dr. E. F. W. Alexanderson, gave the first public demonstration. Before the war, G. E. was manufacturing both television transmitters and home receivers. It will again build both after Victory. Should you visit Schenectady, you are invited to WRGB's studio to see a television show put on the air.

## TELEVISION, another example of G-E research

Developments by General Electric scientists and engineers, working for our armed forces in such new fields as electronics, of which television is an example, will help to bring you new products and services in the peace years to follow. General Electric Company, Schenectady, N. Y.

Hear the General Electric radio program: "The G-E All-Girl Orchestra," Sunday 10 p.m. EWT, NBC—"The World Today" news, every weekday 6:45 p.m. EWT, CBS.

**GENERAL  ELECTRIC**

FOR VICTORY BUY AND HOLD WAR BONDS





# RESEARCH AND TEACHING HAVE A NEW TOOL

PHOTOGRAPHS BY ANDY RUSSELL

**“I think there  
is a world  
market for  
maybe five  
computers.”**

**—Thomas  
Watson,  
chairman of  
IBM, 1943**

**1961**

**“Any sufficiently  
advanced  
technology is  
indistinguishable  
from magic.”**

**—Arthur C. Clarke,  
The Lost Worlds  
of 2001**

## Computers.

They're everywhere. You can't beat them; that's for sure. You can't even escape them, so you might as well learn something about them.

They do almost all our work for us, it seems. They plan our national defense, they guide our rockets into space, they weld our cars, they milk our cows.

Computers—now they're even making some that we're supposed to keep in our rooms to help us pay our bills, balance our checkbooks, turn our lights on and off.

Some people just don't like them. Unfortunately, there aren't too many people around who can make sense out of the green screens, all the silent typewriter keys, all those things you're supposed to shove in or pull out. But, fortunately, the Capstone has at least one person who has made it his business to know a great deal about them. Truman Baker teaches in the secondary education department in the College of Education, and is an expert in personal computers. You have to make it your business to be an expert in personal computers. They just haven't been around very long and not very many places offer courses in what they are and what they can do for you.

First, Baker made himself an expert in the generic computer. After receiving a Ph.D. from the University of Mississippi in 1969, he began teaching at The University. His specialty was in mathematics.

With the help of grants from the National Science Foundation and the University in 1970, 1971, and 1972, Baker and a fellow professor, the late Dr. Carl Seabeck, taught a course in the use of the computer to 40 students in summer workshops. Those were on terminals hooked up to the University's main computer—but that's all there was back then.

With the dawning of the personal computer era in the mid 70s, Baker's life took a sharp turn. He once again made himself an expert. He is now the director of a computer lab with 30 personal computers. In the spring of 1985, all of his duties were concerned with the computer.

He remains, in the face and presumably at the mercy of the computer, a very humane and people-oriented professor. He still thinks that the most important element in education is reading . . . But that's getting ahead of ourselves.



**1985**



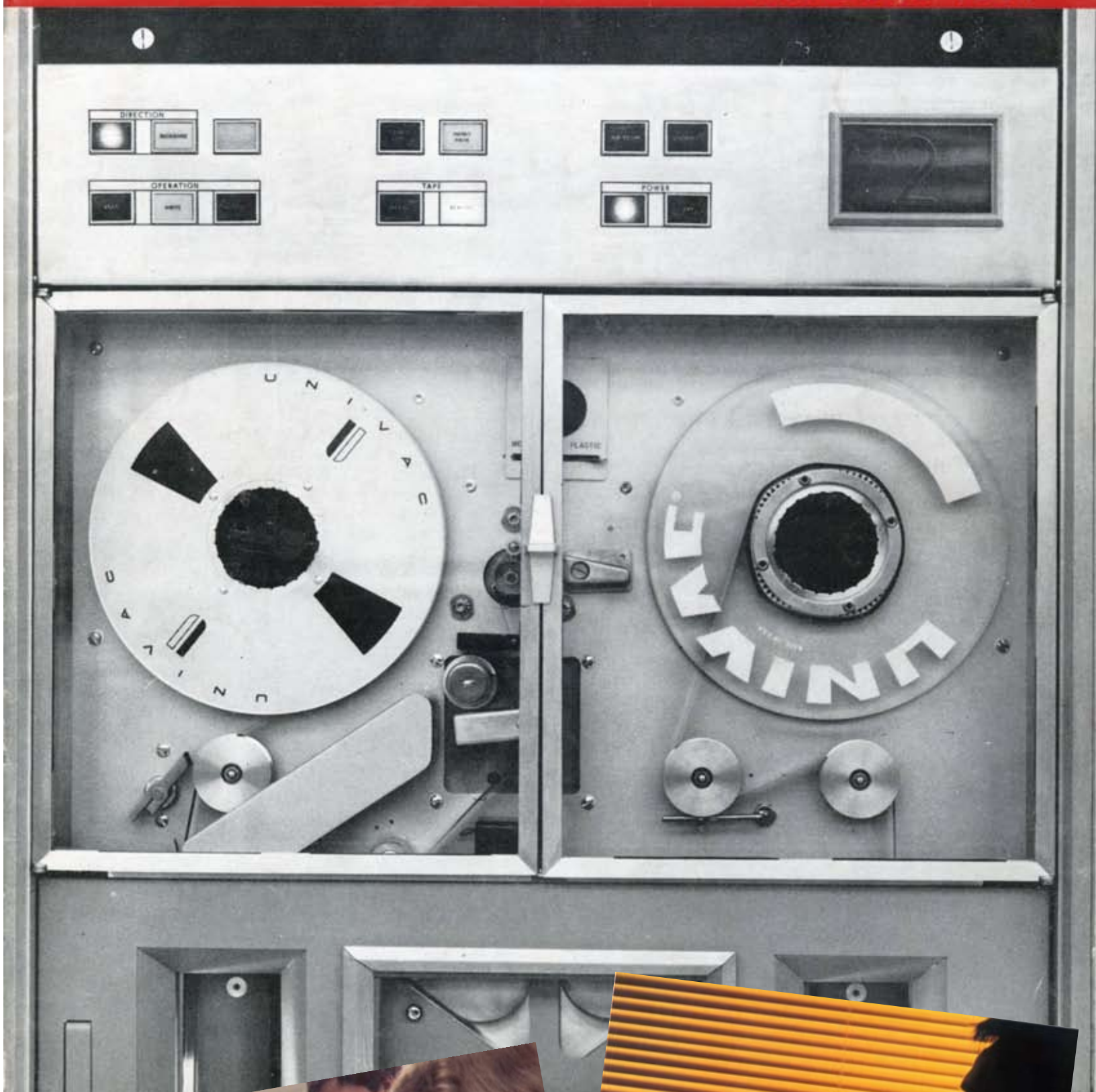
THE

# Alabama

1961

ALUMNI  
NEWS

MAY-JUNE 1961

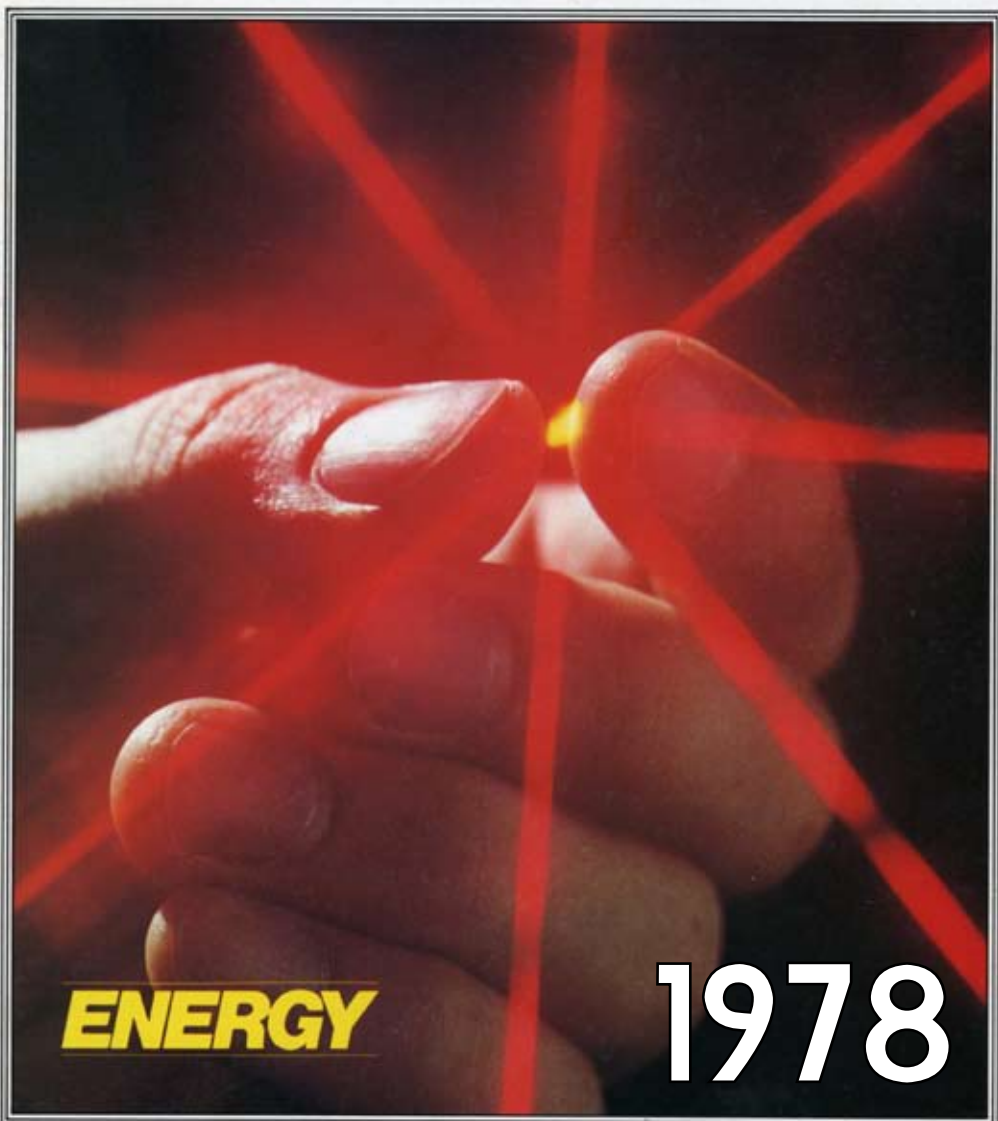


1986



1998





"SOLAR  
ENERGY  
IS NOW."

—ED PASSERINI,  
ASSOCIATE PROFESSOR  
OF HUMANITIES AND  
ENVIRONMENT,  
ALABAMA ALUMNI MAGAZINE,  
1978

1978



1995

1996





**"THERE IS A SINGLE LIGHT  
OF SCIENCE, AND TO  
BRIGHTEN IT ANYWHERE  
IS TO BRIGHTEN  
IT EVERYWHERE."**

**—ISAAC ASIMOV**



**Crimson  
Ingenuity**

- Growing New Technology
- A World of Information
- Science Pioneers

**2006**

SPRING 2006





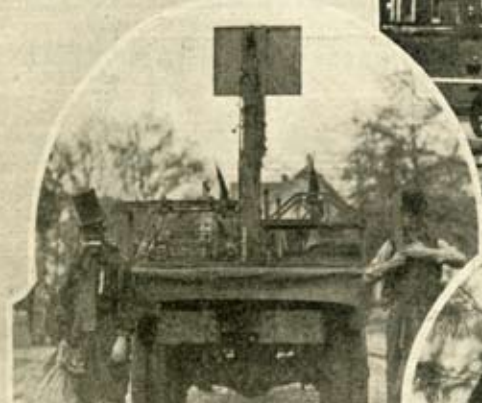
# Water

Engineers Celebrate St. Pat's Day




1945

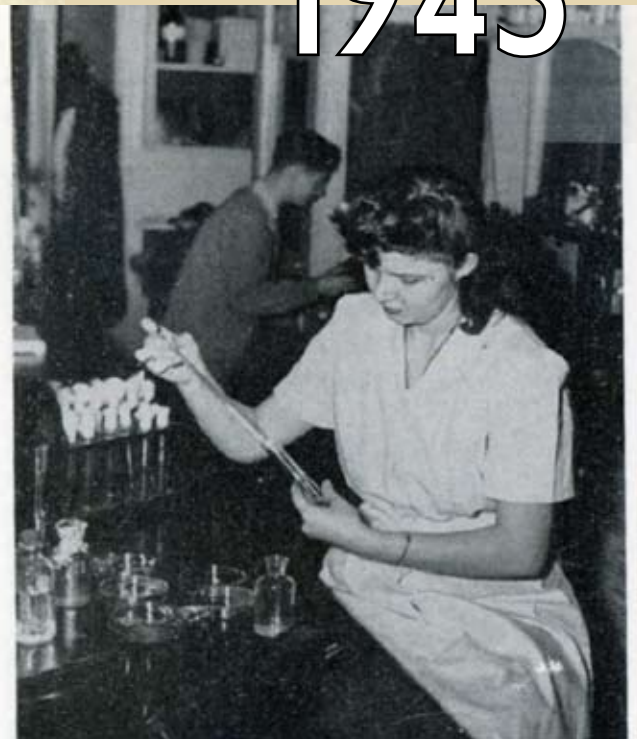
Miss Thelma McMillan, Research Associate, extracting Vitamin C from food; weighed portions of food are ground with acid in a Waring Blender then filtered and the clear extract analyzed for vitamin C.



1930



1945



How many bacteria? We know the answer. Louise Glass, research assistant, inoculating lactose broth fermentation tubes with river water for its bacterial analysis. In background, Fred Hosli, laboratory assistant counts bacterial colonies on agar plate.





# DRIVING A RIVER UP A SKYSCRAPER

1931

**S**EVEN hundred and fifty gallons of water a minute pouring out from three nozzles over one thousand feet above the busy streets of Manhattan—a small river driven skyward 77 stories—that's the service afforded by the G-E motorized fire pumps of the famous Chrysler building.

During a recent test these pumps developed a pressure of 58 pounds per square inch at the 77th floor, or 422 pounds pressure per square inch at the basement installation—a mighty test for drive and pump alike. A stunt? No! Such protection must be maintained as long as needed—on a second's notice.

Such outstanding performance has won confidence for the hundreds of G-E products. This confidence has been maintained largely through the work of more than three decades of college graduates who are members of the G-E organization.



*G-E 300-hp. motor driving a LeCourtenay fire pump  
located in the basement of the Chrysler building,  
New York City*



95-832DH

JOIN US IN THE GENERAL ELECTRIC PROGRAM, BROADCAST EVERY SATURDAY EVENING ON A NATION-WIDE N.B.C. NETWORK

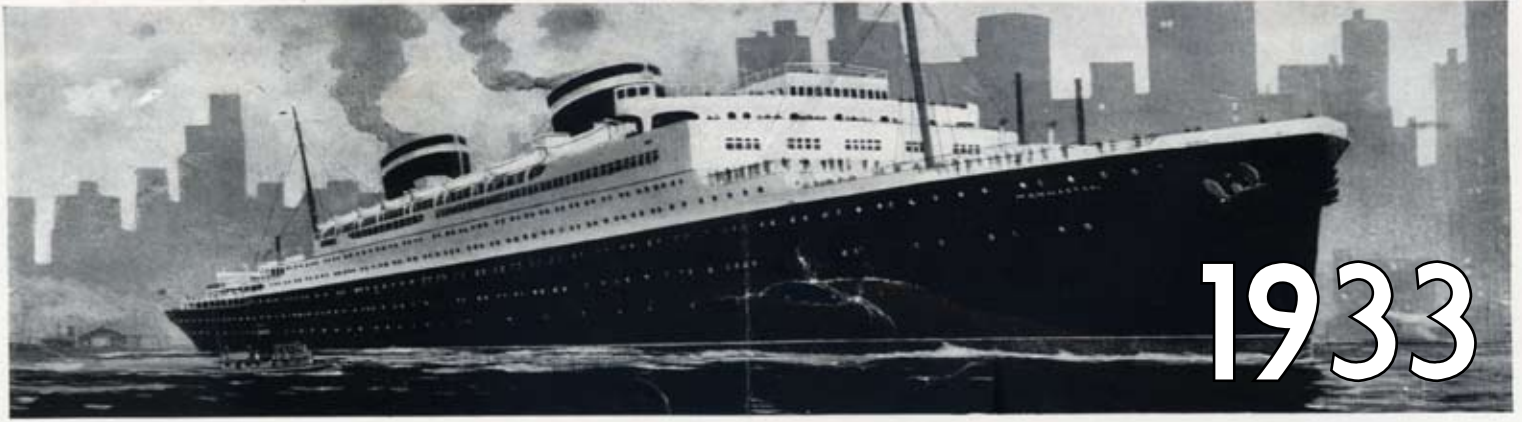
## GENERAL ELECTRIC

"When the well's dry, we  
know the worth of water."

—Benjamin Franklin



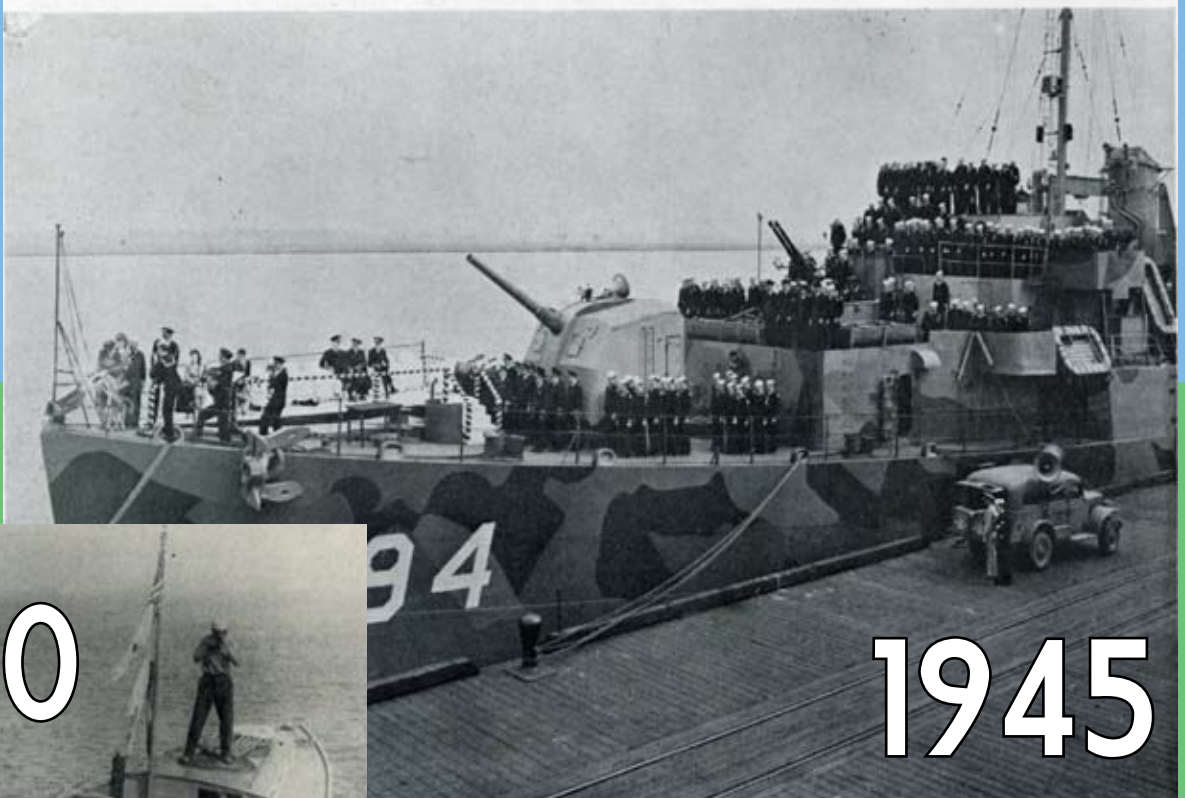
# GOING TO EUROPE?



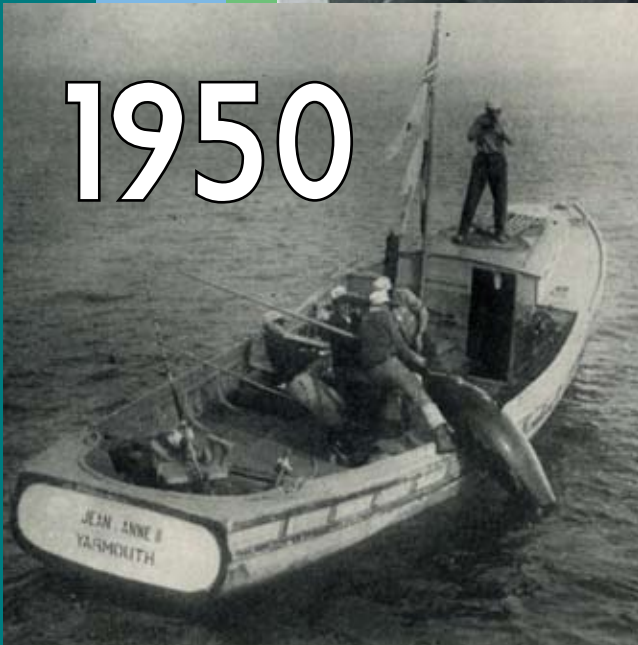
1933

... then follow the trend to AMERICAN SHIPS!

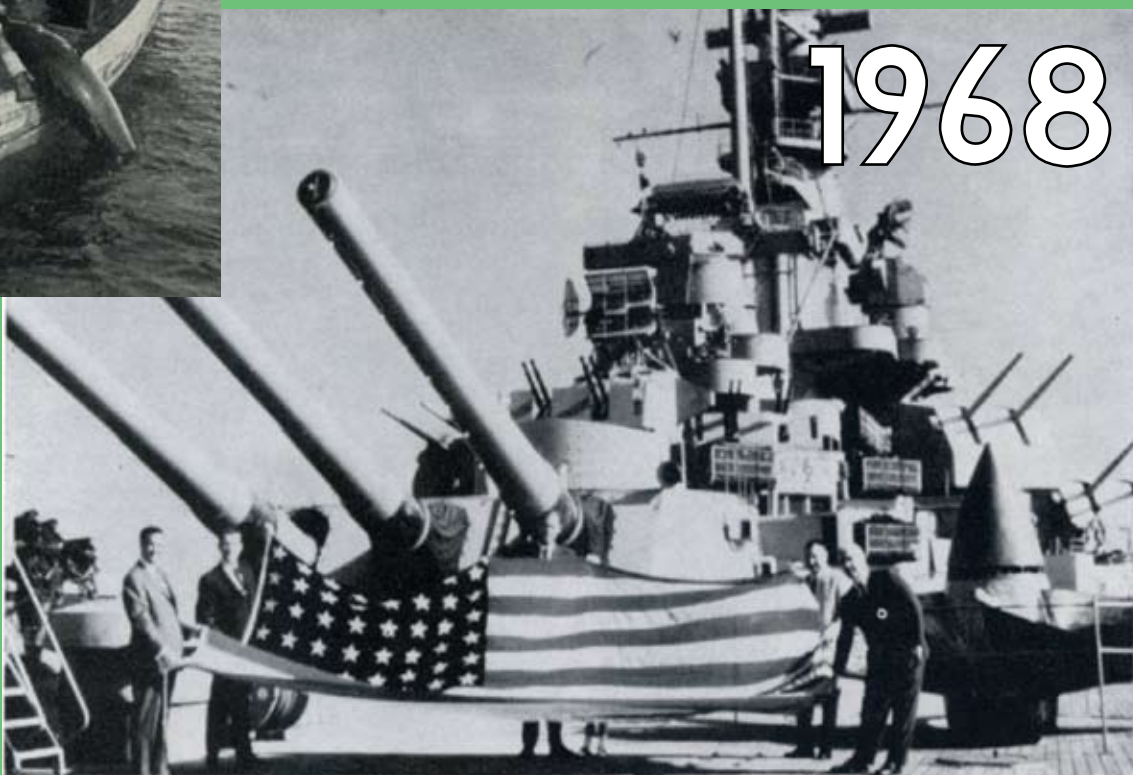
## *Destroyer Transport Named For Alabama Hero*



1945



1950



1968

"The University wants all Alabamians to be able to see the flag that flew above this great ship," said Dr. Rose when he presented the actual flag that flew over the USS Battleship Alabama during World War II. The presentation in Mobile on September 27 during "Alabama-Southern Mississippi Week" was made to the USS Battleship Alabama Commission. For twenty years the flag has been preserved in the archives room of the Gorgas Library.

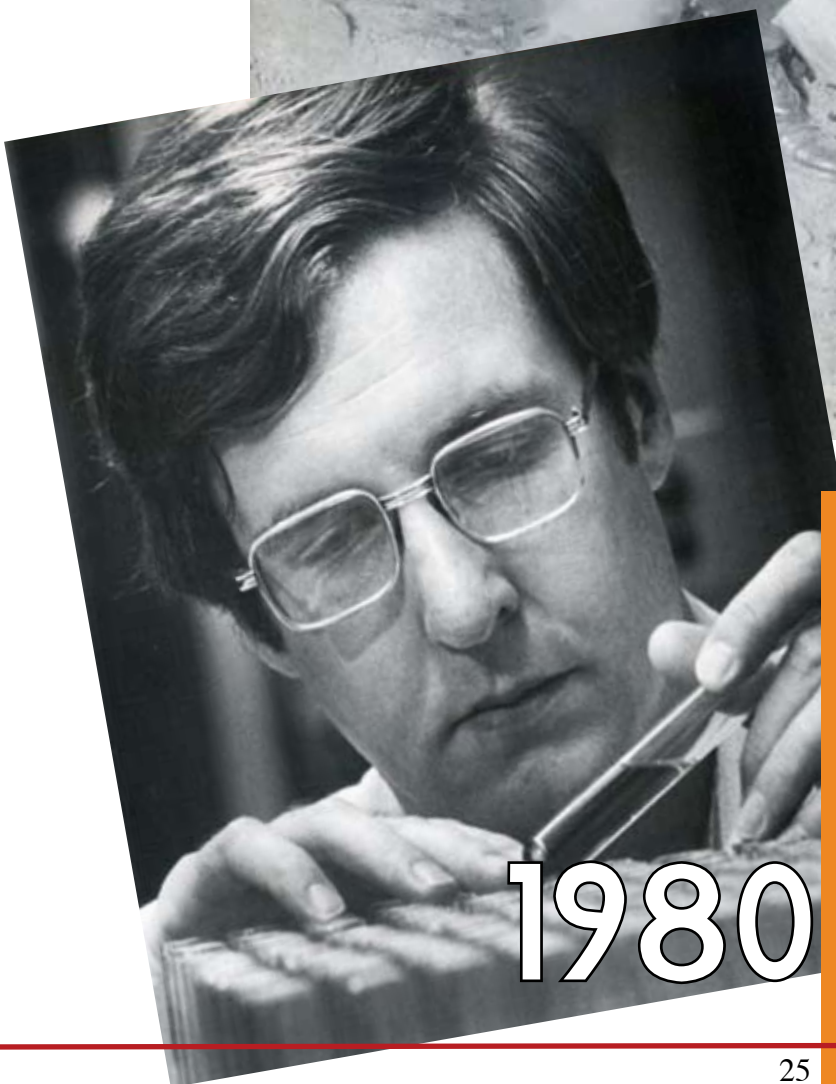




1980

Discovery of Oil  
Highlight of a Century  
of The Geological Survey

1955

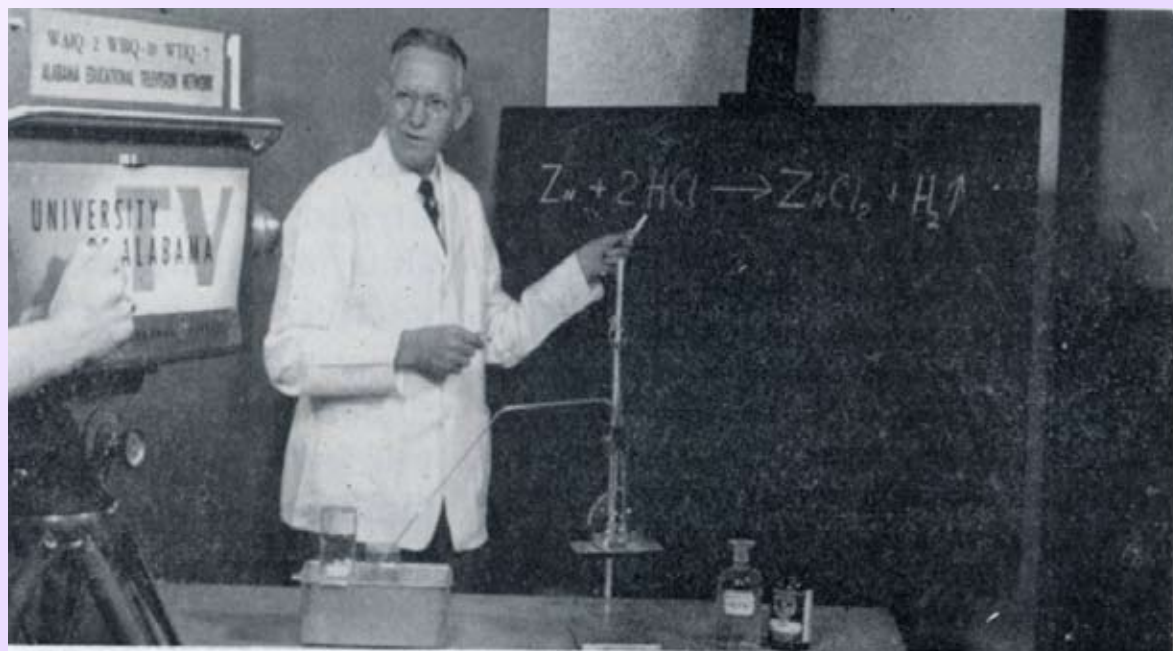


1980

**“NATURE COMPOSES SOME OF  
HER LOVELIEST POEMS  
FOR THE MICROSCOPE AND  
THE TELESCOPE.”**

**—THEODORE ROSZAK**  
*WHERE THE WASTELAND ENDS*



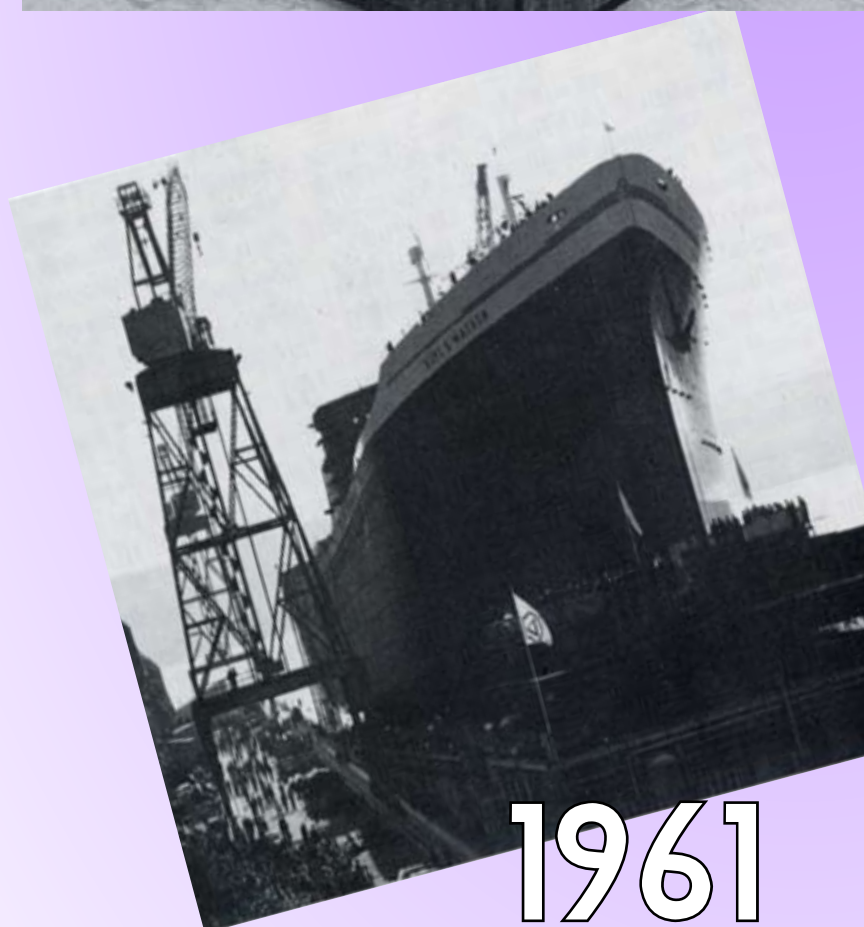


1958

*Dean Robert Brown of the School of Chemistry illustrates principles of "Basic Chemistry," a course offered for credit in high schools.*



1968



1961



1994



2006

## A MAGNET FOR THE MARKETPLACE

THE NEW BAMA  
TECHNOLOGY INCUBATOR  
IS ATTRACTING  
ENTREPRENEURS.

by Chris Bryant

“The world, after all our  
science and sciences,  
is still a miracle;  
wonderful, inscrutable,  
magical and more.”

—Thomas Carlyle

2007

FEATURE



## *the* **PROPER** *Dosage*

by Meredith Cummings

