

Spring 1992

## UAH Magazine, Spring 1992

University of Alabama in Huntsville

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Vol. 1, No. 2

Spring 1992

# UAH

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE



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## UAH and the Oriental University

*Also:*

UAH goes cross country

Accepting Montgomery's challenges



# Bon voyage:

## UAH to study floating Gulf Coast rocket launch platform

using government or a private source to track the rocket is more feasible.

Seed money from industry and commercial rocket industry supporters will be necessary to make both the study and project possible.

At least one commercial rocket builder believes the project has merit and believes his company could launch from the facility in less than two years.

"With our smaller vehicles for suborbital launches we could set up a launch very fast, with no range safety concerns at all," said Donald "Deke" Slayton, director of the Space Services Division of EER Systems of Vienna, Va.

Lundquist agrees that a suborbital launch could be accomplished by the end of 1993. The launch of a small vehicle would help set future guidelines for larger vehicles, he said.

Slayton said his company could provide suborbital and orbital capabilities with a variety of vehicles. Slayton said a launch could follow a trajectory that would head south over the Gulf of Mexico between Cuba and Monterey, Mexico, then head into orbit over Central America.

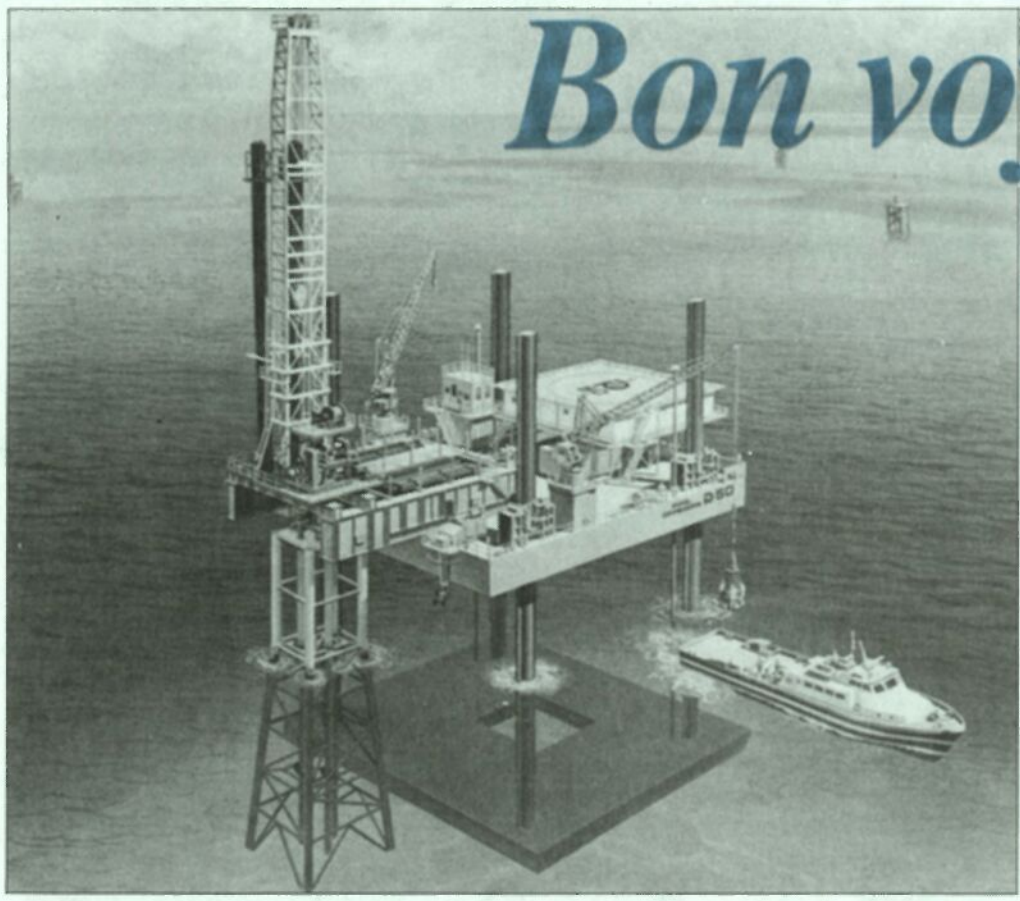
A three-stage rocket, for instance, would drop its first two used engine casings into the Gulf of Mexico. The final stage would fall into the Pacific Ocean several hundred miles off the coast of Ecuador.

A Mobile launch capability would be useful for launching satellites into polar orbits.

"We should be able to handle almost any polar orbit anyone has," said Slayton. "Generally, what you try to do with polar orbit is to get telecommunications satellites in low earth orbit or ... get a series of satellites into one orbit."

Existing U.S. commercial launches have been conducted by "renting" government facilities. UAH's Consort and Joust series of suborbital rockets use government launch facilities in New Mexico and Florida.

—by Rick Mould



**I**t is an unlikely setting, but the blue water of Mobile Bay and the nearby Gulf of Mexico may hold this country's newest capability for launching satellites and research rockets.

UAH is studying a proposal to establish a commercial launch facility on Alabama's Gulf Coast using a converted "jack up" oil drilling rig. The proposal, which has been dubbed "Spaceport Alabama," is geared toward launching orbital and suborbital payloads and satellites using relatively small vehicles which could be adapted for use off a rig. A growing number of commercial customers are seeking an inexpensive and quick way to get their products and experiments into space.

The project would be a commercial venture between private companies and the UAH Consortium for Materials Development in Space (CMDS). Overhead and operating costs would be financed by paying customers and existing NASA contracts.

"One of the main objectives is to stimulate the U.S. commercial rocket industry," said Dr. Charles Lundquist, CMDS director. "In order to have a more competitive launch services industry we need a site in the U.S. where we can do launches at a convenient time."

The concept of launching rockets from a mobile oil rig isn't unprecedented, said Lundquist. "The Italians did it years ago and continue to do that with their San Marco platform, which sits on the equator."

The UAH proposal received a favorable reaction from the newly formed Alabama Commission on Aerospace Science and Industry, and the trustees of the University of Alabama System in April.

UAH, with the commission's assistance, is seeking \$50,000 to \$60,000 to conduct the study which will look at the project's feasibility and economic benefits. For instance, the study will consider whether



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*It is not a rising sun, but a setting sun that is reflected in the windows of the UAH Library.*

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## UAH civil engineers win southeastern regional title



Photo by Don Perkinson/Philat

Members of UAH's championship civil engineering team paddle their concrete canoe across the finish line in first place. John Murphy, left, and Bernardo Batong won both the men's sprint and slalom races, as the Chargers swept all five student races and finished second in the faculty sprint.

The UAH civil engineering team paddled its concrete canoe—*Fastrack*—to victory on Saturday, April 4, giving UAH the overall championship at the American Society of Civil Engineers' Southeast Regional Conference in Tampa.

UAH was the defending champion and has won the title in four of the last five years. The team from the University of Florida finished second in the overall competition.

As regional champion, the UAH team qualifies for the national concrete canoe championships in Fort Collins, Colo., in June.

The UAH team went into the canoe races in fifth place in the overall competition. The UAH paddlers swept all five student races and finished second in the faculty sprint, giving the Chargers the canoeing and overall championships.

In addition to the concrete canoe contest,

UAH finished second in the concrete strength competition, third in technical paper, and fourth in geotech or "soil strength." The UAH team was handicapped in the overall competition by not fielding a surveying team.

In a separate competition that did not count toward the overall score, a UAH team won for fastest construction time by erecting a student-designed, 20-foot-long steel bridge in just over 12 minutes.

### From the Editor:

## Understanding, not bashing, is our goal

Much of this edition's cover story was written more than a year ago. It was timely then. Events of the intervening year have made it, if anything, more relevant.

There are concerns, however, whenever we "compare" cultures. Let me allay them:

We don't do bashing.

No Japan bashing.

No bashing of any kind, no matter how trendy it might be.

UAH alumni, faculty, staff and friends are a community of scholars. We have no use for stereotypes or caricatures—racial, ethnic or otherwise. Those images lessen both those who are belittled, and those who do the belittling.

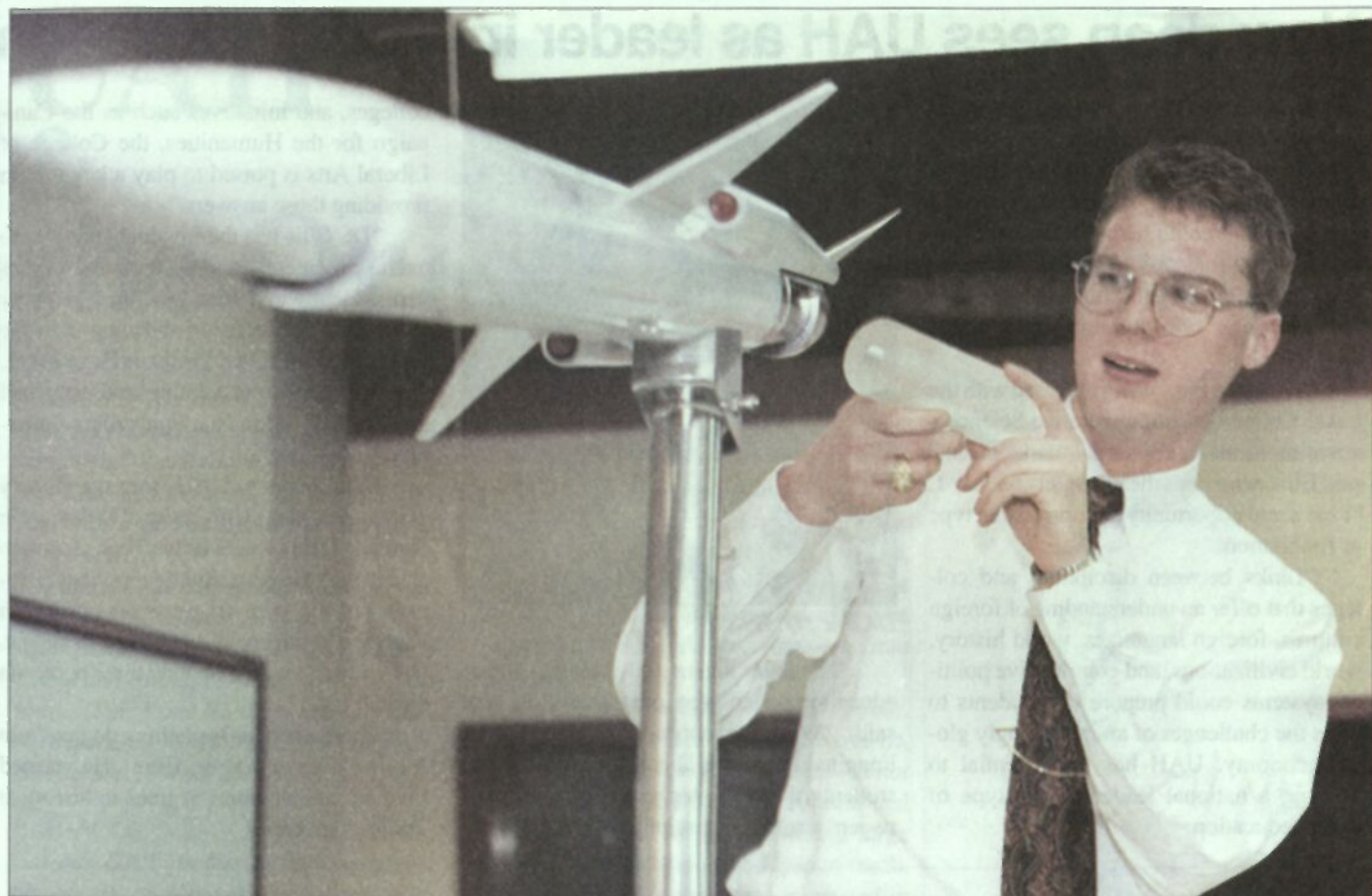
Whatever our relationships with Japan, China, Korea and Taiwan might be, we gain by trying to understand their cultures.

I hope the old and new material we have

gathered here is interesting and perhaps enlightening but is, above all else, accurate and fair. Thanks.

Phillip Gentry, Editor





Brian Greiner, a graduate student in mechanical engineering, loads plexiglas fuel into a hybrid rocket test engine.

## Hybrid rocket's roar reverberates through UAH Engineering Building

The roar of a rocket engine test is more common in Huntsville these days. In fact, the reverberation is clearest in UAH's Engineering Building, where students are getting hands-on experience with hybrid rocket engines.

United Technologies Chemical Systems Division in San Jose, Calif., has donated a small hybrid test engine to the UAH Propulsion Research Center. The engine will be used in a new undergraduate aerospace propulsion lab to give students experience with the technology, according to propulsion center director Clark Hawk.

"Hybrid engines are an emerging area for us," said Hawk. "This will be a terrific tool for working with the students. The safety and simplicity of this technology make it ideal for student labs. And the possibility for future applications of this knowledge for UAH students is bright."

Hybrid engines combine aspects of solid

and liquid propellant rocket engines. They provide a safety factor solid propellant rocket engines do not have: They can be shut down after ignition. This test engine uses oxygen as an oxidizer and a solid propellant of Plexiglas. The Plexiglas offers none of the safety hazards sometimes associated with other types of propellants.

"The Plexiglas we use you could probably buy at a hardware store," said Dr. Bob Frederick, assistant professor of mechanical and aerospace engineering. "All we would have to do is bore a hole through it and use it as fuel."

Thirteen undergraduate students are using the small rocket as part of their coursework. Frederick said students focus on the efficiency of the motor's combustion, studying the oxygen flow rate, chamber pressure and the amount of fuel burned. These results are compared with a computer model.

While hybrids are receiving more attention in the aerospace industry, the technology isn't new.

"The advantages, such as safety, have been known for a long time," said Frederick. "Historically, the proponents of these other technologies have been around a lot longer. This may be the time that a hybrid gets serious consideration for a large launch vehicle."

Why the interest? Besides safety, the environment plays a larger role in policy-making than ever before. Environmentalists and scientists have raised concerns about solid rocket motors giving off hydrochloric acid, which may lead to acid rain.

Chlorine is absent from hybrids, therefore removing an acidic component. Aluminum oxide, which gives stability to the combustion of a solid rocket motor, may also damage the upper atmosphere's ozone layer. —by Rick Mould



## New dean sees UAH as leader in global education

Dr. Jack D. Ellis, the incoming dean of UAH's College of Liberal Arts, says UAH's unique potential to couple liberal arts with science, engineering, business and health care curricula could help society face several pressing social problems, including the crisis in public education, questions of ethics in technology breakthroughs, and global competition.

"For example, I was impressed with the UAH College of Administrative Science's attention to the international marketplace," said Ellis, who joins the university on July 1. "I see a real opportunity to build on that type of foundation.

"Links between disciplines and colleges that offer an understanding of foreign cultures, foreign languages, world history, world civilizations, and comparative political systems could prepare our students to meet the challenges of an increasingly global economy. UAH has the potential to become a national leader in this type of global education.



*Dr. Jack D. Ellis*

"I believe citizens are looking to higher education for answers more than ever," he said. "With the outstanding energy and imagination of the liberal arts faculty and students, through interdisciplinary links between academic disciplines and between

colleges, and initiatives such as the Campaign for the Humanities, the College of Liberal Arts is poised to play a key role in providing those answers."

"Dr. Ellis has the invaluable ability to excite the interest and imagination of students, faculty and friends of the university alike in the appreciation and support of the liberal arts," said UAH President Frank Franz. "He will be an outstanding and esteemed addition to UAH and the Huntsville community."

Ellis comes to UAH from the History Department at the University of Delaware in Newark, Del., where he has been chairman since 1988. He is an expert in modern European history, with an emphasis on French history and the social history of medicine. His scholarly works include three books on the subject.

Ellis earned his bachelor's degree from Baylor University in 1963. He earned master's and doctoral degrees in history at Tulane University.

## UAH to study market place decisions

Do irrational people become rational when making investment and business decisions? A basic premise of market forecasting models is that investors make rational decisions.

UAH's Dr. Dorla Evans, an associate professor of finance, questions the validity of that premise, and plans to test the rationality of decision making in the marketplace.

"There have been a lot of studies by psychologists looking at how people make decisions," Evans said. "They found that individuals violate a lot of the rational models we have established.

"But most economists will tell you that in the market, people get smarter and more rational. Irrational behavior goes away. And there have been few studies to look at individuals and market behavior together, to see if the market does indeed eliminate those violations of rational behavior."

If she finds that market decisions are no more rational than decisions about such things as love and fashion, "many fundamental

models of valuation will be brought into question."

"It could change the way mutual funds invest their money in the stock market, the way investors calculate the rate of return they must get," Evans said. "It should make a difference in the way organizations make investment decisions."

Evans will study student volunteers. Individually, they will choose between pairs of "lotteries." One may be high risk, but offer high potential payoff, while the other would have lower risk but disproportionately low payoff potential. Or the reverse may be true.

As each volunteer chooses between pairs of lotteries, Evans will use that information to see if subjects make rational or irrational choices.

"If subjects are risk averse in one pair of choices, they should be risk averse in another," Evans said. "We find, however, that they will be risk averse in one pair and risk seeking in another."

Then volunteers will be put in a market environment, using computers to "buy and sell" chances in the paired lotteries. They can make money by selling their lottery chances, or hold them. At the end of each round a roll of the dice will determine the payoff for each lottery.

"At the end of each round, we'll see what the final price is in the market," Evans said. "If it's rational that lottery 'A' should be more valuable, lottery 'A' should have a higher price."

To ensure they are serious about their work, winners in Evans' "market" keep their winnings, while losers can lose the "stake" they receive for participating. While successful subjects might earn only \$8 to \$12 an hour, "at student income levels, the incentives are there."

"The economics and finance students like to come for the money," Evans noted. "The psychology students might come for the experience, but the business students really seem to like the money."



# UAH & the Oriental University

*The U.S. and much of Asia are linked with ties that are economic, political, military, social—and educational. While those first four ties make us allies and rivals, education brings us together in scholarship and research.*

*Indeed, UAH has numerous joint projects with Asian institutions. And more than 150 Asian students are enrolled at UAH, from Korea and China, Taiwan and Japan, Malaysia, Hong Kong, Vietnam, and Indonesia.*

*What does UAH learn from its Asian counterparts? What are they learning from us?*

\*\*\*

*Four UAH professors have a special perspective on Japanese higher education. Dr. Carter Martin, professor of English, Dr. Rolf Goebel, associate professor of foreign languages and literatures, Dr. Dan Schenker, associate professor of English, and Dr. Daniel Hays, associate professor of psychology, were participants in an exchange program between UAH and Osaka University. Each spent at least a year in Japan teaching English to Japanese students.*

*Almost a year ago, while Schenker was still in Japan, UAH's Kim Ann King brought together Martin, Hays, and Goebel to discuss their experiences and insights. It was the first time all three had been together since they returned from Japan. This was prepared for a publication that was cancelled due to financial constraints. We are happy to bring it to you now. Schenker's observations are presented separately.*

**UAH:** Why did you want to go to Japan?

**HAYS:** From the time I was a student, I wanted to learn a major Asian language and, through it, something about the culture. Unfortunately, at the university I attended, it was not possible to study Asian languages. Today, of course, there are many reasons to

be interested in Japan and its social organization.

**MARTIN:** When I got off my plane in Osaka, there were five senior professors from the university to meet me and take me to dinner. One of them was Professor Fujita, who became a close friend. He is almost exactly my age, and at that first meeting he asked me, "When did Japan first come into your consciousness?"

The answer, of course, was Pearl Harbor. I was eight years old at the time. So was he, and we both understood much that was *not* said. The subtle and complex cultural and historical matters we shared were a large part of my decision to go to Japan to teach.

**GOEBEL:** I first became interested in Japan as a graduate student when I met some Japanese students. Then I developed an interest in Japanese literature and started reading about the culture.

Like so many Westerners, when I came to Japan I thought I knew everything about the country because I had read so much, but I ended up experiencing a considerable amount of culture shock. In fact, the longer I stayed, the more I realized there was a gap between the Western discourse on Japan and the actual, empirical experiences I had.

**UAH:** How is a Japanese university different from an American one?

**GOEBEL:** Structurally, it is very similar to the American system, because the Japanese university system was reorganized under the American occupying forces after 1945. Therefore, the Japanese have a four-year undergraduate education followed by graduate school. There are a large number of private and national universities.

Osaka University is one of the seven former Imperial Universities set up during the Meiji period in Japan after 1868 and, as

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息子は優し気に

一浪決め

母さんと呼ぶ

心の波の静まるか





Photo by Terrell Jones

*'The American university expects its professors to have their Ph.D.'s. In Japan, if you have a doctorate, the best thing is to conceal that fact.'*

—Dr. Carter Martin

such, is very prestigious. Many consider Osaka the third-best university in Japan.

**HAYS:** I think a big difference is the course structure. Here a student might take four or five classes a semester. In Japan, a student might take a dozen or as many as 16 classes that meet once a week.

In the Japanese classroom itself, there is a lot more formality. The Japanese professor is known as *sensei*, or master. When I would ask my class at Osaka, "Are there any

questions?" I knew there would never be any questions.

Because the society is very hierarchical, there is a lot of respect for authority. Asking questions is seen as disrespectful. There is an old Japanese proverb that says, "The nail that sticks out gets hammered down." It's illustrative of the society as a whole.

Paradoxically, many individuals there are very ambitious, so they must achieve without upsetting the group or appearing immodest.

**MARTIN:** One of the big differences is the entrance requirements and expectations of students. Japanese secondary education is extremely demanding of students, much more so than higher education. It is very difficult to get into a Japanese university, but once in, it's not as hard.

America has a very democratic student body. By hook or by crook, one way or another, you can get into a university. In Japan, there is a system of filtration. The very best students go to the very best schools because of the exacting entrance requirements.

I read only the English section of the entrance exam, and it was well conceived and graded carefully. I think what the U.S. needs is not a system to keep students out, but one that would convince all students that they have to work hard, and learn a lot in the lower grades and high school if they expect to go to college.

**HAYS:** As Carter said, entrance exams are tough. There are national exams. If students pass those, they take the university exams. Preparation often starts early. You can start going to cram school, also known as *juku*, when you are in kindergarten.

One advantage of the exams is that they give the competent student a chance to exceed his or her family background. The problem is, the *juku* costs money and the good private schools are very expensive, so wealthy families often have the best-prepared students. It does keep some rigidity in the system.

**UAH:** What happens to the kids who don't pass?

**HAYS:** One thing they can do is to become an extra-year student, and go to a special school to prepare for the tests. I've had students tell me that in their year as a *rohinn*, an extra-year student, they actually learned to study.

**UAH:** How is the Japanese faculty trained?

**MARTIN:** It's quite different. The American university expects its professors to have their Ph.D.'s. In Japan, if you have a doctorate, the best thing is to conceal that fact. You'll get along a lot better then. If you insist upon it, that's something of a *faux pas*, because being like the others is so important, as Dan mentioned.

**GOEBEL:** One of the interesting things I found was that Japanese professors of foreign literatures seldom publish in the languages they study, although many are obviously well trained to do so.

Perhaps they hesitate to publish in languages other than their native tongue because it helps them to assure their cultural and academic identity as Japanese scholars. Moreover, many professors conceive of themselves as mediators between Western culture and a Japanese public that might not necessarily be able to read scholarly literature written in a foreign language. Hence the impressive number of translations of, and commentaries on, a large variety of Western authors.

**MARTIN:** I can tell you the knowledge there in specialized fields is extraordinary, even when it is not in academia. I sat next to a young man at a concert and we started talking about jazz. This man was a walking encyclopedia! Even though he was not



college educated, he was an absolute expert.

**GOEBEL:** I agree. On numerous occasions, when I had an opportunity to give lectures or attend academic meetings, it was impressive to see how fast a Japanese colleague would catch up with the latest developments in my field. Their profound knowledge of literary theories and the critical literature on individual authors written in Europe and the U.S. is, of course, part of a long, indigenous tradition that considers the immediate reception and adaptation of Western intellectual movements a necessity for the cultural progress and enrichment of Japan.

**UAH:** Is there anything you think the U.S. higher education system could learn from the Japanese model, and vice versa?

**HAYS:** It's a difficult comparison. The Japanese education system was restructured after the war, and they have looked to us in many ways, but there are other influences.

In philosophy, I think the Japanese lean more toward the German model of education than the American one. I'm not sure what I would try to import to American schools from the Japanese university system, but I wouldn't mind some better students.

The students at Osaka University are very good. Despite the fact that the four years of college are viewed by some as a breath of fresh air, I found my students were still in the habit of studying. Of course, I insisted that they come to class, and I graded them every day, acting on advice from Professor Martin and other colleagues.

**GOEBEL:** It's an interesting question, because our two cultures are so different. I think we could look into the Japanese education system — primary school through high school — for the academic rigor, social discipline, and moral standards that are often said to be lacking at U.S. schools.

The Japanese university system is something entirely different.

Because high school is so extremely rigid, strict, and demanding (and the entrance exams to college are even more demanding), the university is sometimes conceived of as a four-year vacation between entrance exams and company life, which is equally rigid, demanding, and constrictive.

However, to what extent this outlook of Japanese students reflects the actual quality and performance of the universities is a

question, I cannot answer. Certainly there are many fine and demanding institutions of higher learning in Japan that can fully compete with U.S. or European universities in teaching and research.

**HAYS:** Japan is certainly an education-conscious society. At the same time, while in Japan I wished my students could express themselves as well or as freely as American students.

Everything about their system leads them to the appearance of social harmony, so it's hard to compare. In fact, such comparisons can be misleading. I have heard that Japanese secondary schools are not very good, to the extent where students must go to the cram schools in order to pass the entrance exams.

And who is motivating these students? Many Japanese will tell you that it is their mothers. The "education mother" is a phenomenon in Japan. She pushes her children to succeed in school.

In Asian cultures generally, young people feel that they are representing their families, so that their success in school and later in work reflects on their family honor. Getting into a corporation is not easy to do in Japan, and changing jobs is difficult indeed. Certain universities lead to certain corporations or government agencies, which means lifetime employment. So it's really important for these kids to get the right start.

**GOEBEL:** I think one of the good things about the Japanese university system is that it gives students a lot of time to pursue their own extracurricular interests. There are clubs for virtually every discipline: sports, English debating, philosophy, comic strip animation. It is in these clubs that students have a chance to develop creativity, critical thinking, and a sense of personal independence.

**UAH:** Do you miss anything about the Japanese classroom?

**HAYS:** I think a professor in a Japanese university has more prestige than his coun-

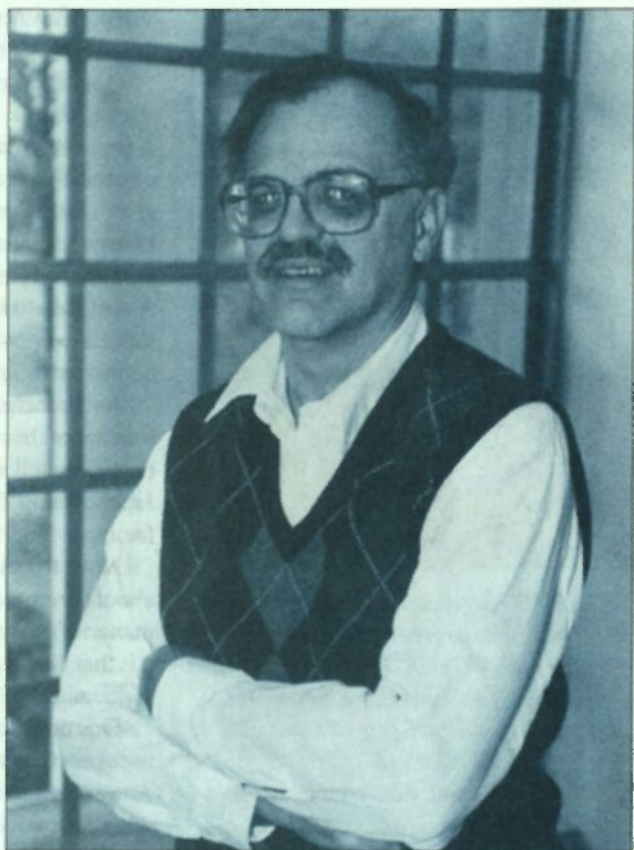
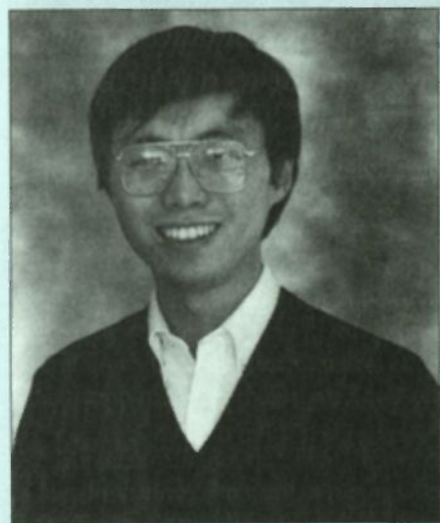


Photo by Terrell Jensen

*'Japan is certainly an education conscious society. And who is motivating these students? Many Japanese will tell you that it is their mothers. The "education mother" is a phenomenon in Japan.'*

—Dr. Daniel Hays





UAH Ph.D. candidate Gan Mo earned his undergraduate degree in physics at Jiao-Tong University in China. Asked to compare U.S. and Chinese universities, he emphasized differences in curricula:

**I**n China, you don't have much choice in the courses you take. The university arranges the sequence of courses. The advantage of the American system is that you can decide by yourself what you like to take. The disadvantage is that it is unsystematic. You may get into a class and find that something you need is not covered.

"Another advantage is if you can develop something that is interdisciplinary. In China it is very hard to do those things unless the department thinks that it's a good thing, and then the department makes those arrangements.

"Also, in China (undergraduate programs) concentrate more on basic skills in math, physics, chemistry, and those types of courses. If you are a science or engineering major, the coursework is almost 100 percent science or engineering. Sociology, psychology, those types of courses, we have none of that. The undergraduate program there is more helpful to me. If you were a liberal arts student, because there is very little freedom, you probably wouldn't like it.

"The graduate program here, however, is more dynamic. There are more opportunities for research. I like the graduate program here, a lot."

terpart in an American university. We have little social prestige and very little money.

One reason for this, I think, is a very strong strain of anti-intellectualism in American culture. It's pretty well documented by political scientists and sociologists: there's a suspicion of people who know too much. I think that's part of the problem of the very poor test scores that American students make. Americans now score lower on standardized tests than students from some developing countries.

As a teacher at UAH, I feel much less tolerant of those students who cannot speak or write well than I did before I went to Japan. Being there certainly solidified that feeling.

Now that I'm back, I feel very upset about the careless thinking and poor performance of many American students. Perhaps it is that they have no "education mother" or "education father."

One thing that impressed me is that Japanese people read voraciously, whereas many Americans do not seem to read very much. Also, American students do not receive much training in being accurate. Somehow they do not learn about precision and quality. It hasn't always been like that. Test scores have declined along with an appreciation for expression and thinking.

**GOEBEL:** This entire issue is ideologically very complicated. Japanese and Americans can, and certainly should, learn from each other. But it is a very difficult task, because the educational systems and philosophies of both countries cannot be separated from their respective political, historical, and cultural contexts.

Our students' wish to think independently and creatively is rooted in our culture's strong — sometimes exaggerated — sense of individuality, personal freedom, and subjective (as opposed to communal) values. Since such a tradition is to a large degree lacking in Japan, it is pedagogically difficult and ideologically ethnocentric for a Western visiting professor to expect the same amount of independent thinking and creativity from his or her Japanese students. I myself made this mistake at the beginning.

By the same token, the high academic standards in Japan — no doubt admirable as such — are partly predicated upon a traditional culture fostering hierarchical, often

inflexible, thinking and a suspicious attitude toward social and cultural plurality.

While there are signs that this situation is slowly changing, this strange dialectic makes it difficult for us to simply adopt Japanese educational methods to improve academic standards in our country and, at the same time, retain our positive sense of political and cultural diversity. Still, Japan's high literacy rate, economic achievement, sense of social responsibility, and its arts, literature, philosophy, and aesthetic traditions should be allowed to challenge the often-assumed universality of Western cultures, socio-historical values, and conceptions of the individual self.

**UAH:** What do you remember most fondly from your experiences in Japan?

**HAYS:** Japan is a high-energy culture, and there are many things to do and see. But I think my best memories are of my students. Despite the cultural formality and distance, I came to feel close to them. I appreciated their spirit.

**GOEBEL:** The entire year at Osaka University was extremely valuable to me, both personally and professionally. It helped me significantly to broaden my cultural and political horizons, and brought me into continuing contact with several Japanese scholars in my field.

I remember fondly the many occasions on which we would get together and taste various brands of sake, sample sashimi, sea urchin and other dishes, and discuss Kafka, the New Historicism, and even more esoteric topics, such as certain kinds of local pottery that I had begun to collect. Not a bad way to spend an evening and get immersed in the Japanese culture!

**MARTIN:** My fondest memory is of the vivid and timeless quality of the people and their work on the small island of Kamishima . . . When my wife and I walked over the entire island, we felt we had been carried back in time to the serenity, simplicity, and natural beauty that one usually thinks have been obliterated by war and modern urban culture. After that experience, we found the same qualities in many of our Japanese friends and students, and we understood them better.

**UAH:** Let's talk about your Japanese students.

**MARTIN:** The Japanese generalization



about their students is that they are innocent, shy, insecure, and lazy. I don't disagree with that totally, but I did find there was a pretty interesting mix of students.

**GOEBEL:** In Japan, the popular ideology of cultural and racial homogeneity might lead to the misconception that the university is a place where conformity is taught. That's not necessarily true. Sure, in my classes I had students who had difficulty developing creative ideas. But I also had students who were much more mature, independent in thinking, and creative than my average American student. So there really is a very broad spectrum of students in Japan, from outstanding to immature.

**MARTIN:** For me, the key to understanding was to get the students to relax and trust me as a teacher, so I chose for them not to refer to me as *sensei*, because the term does put distance between the teacher and the student.

When I first entered my classroom, it was like looking at a sea of faces with shades drawn down. There were no apparent emotions and all their eyes seemed to be steady. Being used to responsiveness in students, I wondered how I would get past this. One way I did get past this unresponsiveness was to set up a competition reading Arthur Miller's *All My Sons*. That worked, because each person wanted to read his part better than his competitor. I even had students raising their hands, asking for parts, which was amazing.

**HAYS:** You know, there were days when I enjoyed the distance between teacher and student. But seriously, I used some techniques that I would use in the United States to reach the students.

Group work was pretty successful. Japanese students are used to working in groups, to organizing themselves, and they are encouraged to take the initiative to solve certain problems with only occasional intervention by the teacher.

By the time they reach the university level, they have organized their own special interest groups. To have a faculty advisor is rare. Ironically enough, in America there are a lot of students who cannot organize and who will lean on a faculty advisor. In fact, to have a student group without a faculty advisor is illegal at some American universities.

**GOEBEL:** At first, it was difficult to

connect with Japanese students. For one thing, classes on the undergraduate level are typically very large. Our special seminars set up for foreign teachers had a maximum enrollment of 30 students, and that was considered small. Regular classes could have 70 to 100 students. That huge class size does not always make for good interaction between teachers and students. Teachers have to be very patient in motivating students to respond.

On the other hand, I had the opportunity to visit German and English departments in graduate schools that were very small, with a total of perhaps 25 students. In that environment, of course, teaching and learning is totally different. These are highly motivated, often brilliant students, and the interaction between professors and graduate students is quite close, which creates a congenial atmosphere of learning and engaging in serious scholarly activities.

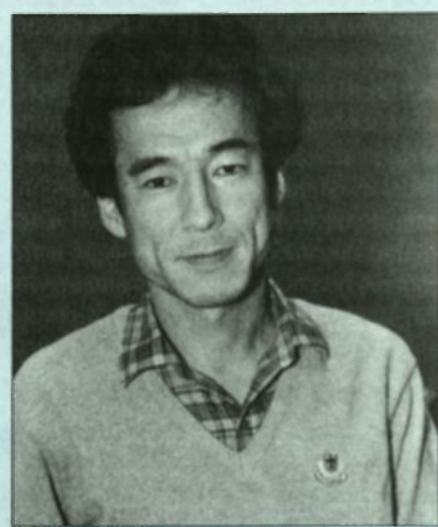
Students are often eager to pursue their own academic interests outside of class. For example, graduate students set up their own seminars and study groups to read literature that is not covered, perhaps, in the regular curriculum.

**MARTIN:** A lot of people in Osaka have not really seen very many foreigners, so to have one come up and stand in the place of the *sensei* is a shock to them. This created an additional dimension of distance that I had to overcome. I think they were somewhat embarrassed, a little disoriented. They probably wondered what the proper courtesies were.

Because you are meeting only once a week, with only 12 to 14 meetings in a semester, you have to be very dedicated in order to achieve something in the classroom. Classes tend to be foreshortened by the resident professors. I think they are expected to arrive late and leave early.

I expected all of my students to be alike, but I found some who were quite non-conformist. Some of them dressed differently and tended to be loners. The interesting thing was that, although these students did well in class, they did poorly on the written work. I don't know how they got so far, but I suspect they have a pretty exciting future ahead of them. Grades do not matter a great deal, just the institution from which you graduated.

**GOEBEL:** Although I told my students that I was not born an American citizen, that I was a native of Germany, many of them



*Jong Min Kim earned his B.S. degree in physics at Korea University in Seoul. While studying for his Ph.D. in optics at UAH, he wrote the following for an English as a Second Language course:*

**"I**n Korea, tuition is determined by the department in which a student is enrolled, and the student's grade level. Instructors and students in the two countries treat each other in a different manner. In my opinion, students in Korea pay more money, but are treated with less hospitality.

"During my first class in America, it was hard for me to suppress the urge to clean the blackboard before the class started. In Korea, all students must take seats and the blackboard must be cleaned before the instructor comes in.

"When I go back to my country several years from now, some Koreans may ask me what the difference is between the two countries. I will tell them that the instructors are evaluated at the end of each quarter by the students in the American classes. I am sure most Koreans will not believe me. They may ask me, 'How can students evaluate their instructor?'

"There is an old saying in Korea: 'Do not step on the shadow of your teacher.'"



would not accept that fact. To them, America is the west and the west is America; it's almost one and the same.

**HAYS:** It's true. If you are more or less pink in complexion, tall, and have blond or brown hair, you'll be thought of as an American, even if you are Czechoslovakian.

**MARTIN:** As a matter of fact, when I first went into class, my students wanted me to speak English the way their Japanese professors spoke it. They wanted me to use the same accent. I had to explain to them that my being there was to teach them native pronunciation.

**GOEBEL:** I can confirm that experience. When I applied to the exchange program, my question was, "Do I qualify, because I am not a native speaker of English?" Well, they accepted me and, you know, my students said, "We understand your English much better than that of all the other native speakers we know," which says less about my actual linguistic competence than about their cultural preconceptions.

**HAYS:** They were still saying that about you when I was there! Not one week before I left, one of my Japanese colleagues said, "Professor Goebel speaks English so much more clearly than the other Americans."

**GOEBEL:** There is a discrepancy between what they observe by talking to foreign faculty members and reading in current newspapers — the west as culturally heterogeneous — and the prevailing cultural stereotype — the west as a large, very artificially conceived homogeneous super culture that is as much an object of fascination, influencing intellectual movements, science, and pop culture alike, as it is often a target of ill-informed prejudice and cultural fears.

**UAH:** How do the Japanese feel about sending their children to Western schools?

**GOEBEL:** I think there is an increasing tendency to do so, particularly for a master's degree. There seems to be more openness to

the idea of studying abroad in very recent times. The Japanese educators who point out that maybe it is a good thing for their society to have a large number of foreign-educated citizens are quite courageous, and are still not the rule, to be sure.

**HAYS:** Most young Japanese people want to work for companies in Japan. Unless you are working for a foreign trade division of a Japanese company, you are better off going to a Japanese university. Going to an American university frankly guarantees that you won't get hired by most Japanese firms.

Do you know that grade school and high school students who spend a year or more with their parents overseas in Europe or America are socially shunned in school, and are disapproved of by their teachers and principals? If the parents can afford it, these kids go to special reculturalization schools. I know of people who had to make their international tour of duty for their companies and were very nervous, because they wanted to wait until their children were out of school or to go before their children were in grade school.

**UAH:** Closing thoughts?

**HAYS:** We hear a lot about Japanese economic success on the one hand, and American educational shortcomings on the other. It seems clear that the Japanese, in their technological and marketing triumphs, have benefitted from their education, among other factors.

Further, the carelessness and ignorance reflected in average test scores in the U.S. seem to be related to production of poor-quality goods, and planning that is short sighted.

But we need to keep in mind that a substantial number of American universities are among the best in the world, and despite the fact that there are a lot of people in the country who do not know their multiplication tables, there are still many who have come through the system learning and knowing a tremendous amount. These same people are good at discovering new knowledge and making new things, and they know how to work flexibly and productively with others.

One advantage of an exchange program, such as that between Osaka University and UAH, is that it provides better information about each other, and it encourages us to work together. ☛



Photo by Terrell Moore

*'Although I told my students that I was not born an American citizen, that I was a native of Germany, many of them would not accept that fact. To them, America is the west and the west is America; it's almost one and the same.'*

—Dr. Rolf Goebel



It's not only who you know but where you go that's paramount for Japanese college students, says Dr. Daniel Schenker, an associate professor of English who participated in UAH's faculty exchange program with Japan's Osaka University during the 1990-1991 academic year.

"In a sense, college is a reward for Japanese students," Schenker said. "The most important thing to them is getting in 'the right' university, and making 'the right' contacts while they are there."

Schenker said there is no truth to claims that Japanese students are more intelligent than American students.

"It's quite obvious that emphasis is placed on education at the primary and secondary levels," he said. "The real strength of the education program is on fundamentals ... teaching the basics, especially obedience. If a Japanese student has a good memory and is obedient, he will do exceptionally well."

"Japanese students at primary and secondary levels are constantly taking tests, preparing themselves well in advance for university entrance exams," he said. "The positive side to this strenuous testing schedule is that the Japanese education system, unlike the American public education system, finds a place for every student and it prevents a high drop-out rate of students at the secondary level."

Schenker said the one thing that makes the Japanese education system so successful is Japanese society.

"Japanese culture is homogeneous. Family is very important, the divorce rate is exceptionally low," he said. "Japanese children have a solid emotional and social base to build on. They place heavy emphasis on learning, tradition, obedience and a strong sense of responsibility to others."

"But what really motivates a Japanese person is the sense of shame. Shame is a very powerful feeling. It's like, if you do something wrong, you not only have your own conscience to deal with, but all of Japan is looking at you."

Schenker taught American literature and culture, and assigned various reading projects to first and second year university students. A typical Japanese student takes about 12 courses at a time.

By the time they graduate from college, Japanese students have studied the English

## College choice is paramount for ambitious Japanese students



Photo by Terrell Jester

language for seven years, Schenker said. "They feel that speaking English is their window to the world."

While Japanese students study English for several years, they don't really understand the spoken language. That is because they are taught by Japanese instructors who seldom converse with native English-speaking peoples.

"On average, I estimate that students understood about one-third of what was going on in class," he said. "It was not unusual for a few of them to 'politely' lay their heads on their desks and take a nap during class."

Schenker said the rigorous Japanese education program has its strengths and weaknesses.

"One specific weakness is the Japanese education system discourages individual initiative," he said. "But, in Japan that isn't so important. Japanese people find satisfaction in group situations. The idea of asserting yourself as an individual is only now beginning to take hold among the younger generation."

—by Joyce Anderson Maples

*"The real strength of the education program is on fundamentals ... teaching the basics, especially obedience. If a Japanese student has a good memory and is obedient, he will do exceptionally well."*

—Dr. Daniel Schenker



# 'American college students are ... much more prepared to study'

Hideki Watanabe, an exchange professor of English linguistics from Osaka University in Japan, taught Japanese language classes at UAH for one year. Before returning to Japan, he discussed his impressions of American university students and campus life:

**"A**merican college students are much more eager and are much more prepared to study than their Japanese counterparts.

"In contrast, there is severe competition in Japanese university entrance examinations, which forces Japanese high school students to study really late at night or early in the morning. They have to continue that intense self-training for almost a year before they take the university entrance examinations.

"So, once they get into a university, they're ready to slack off, and they do. Some of them are very serious students, but most begin to play. If they have spare time, they'll try to make money for vacations, like ski outings or trips to the southern islands of Japan.

"My impression is that American students work too, but do so in order to afford their education, not for fun stuff.

"I didn't expect that my students would be so concerned about their grades. There are many students at UAH who really want to achieve high grades, and that sometimes makes them impatient.

"For example, while I am speaking and explaining, oftentimes my students cannot wait until I am done. I am not accustomed to that, because Japanese students hardly ever ask questions in class, whether they understand or not.

"I feel that the system of students grading their professors at the end of the term is really good. I was quite impressed when I had to give grading sheets to my class. If we had that performance rating system in Japan, I think professors would be more inspired and active in the classroom.

"Conversely, students here could be a



Photo by: Ferrell Jensen

*"There are many students at UAH who really want to achieve high grades, and that sometimes makes them impatient."*

—Hideki Watanabe

little more respectful of their teachers. American society is much less formal than Japan. The difference in status is not as important here.

"It's funny, because in Japan if someone is really friendly to you, you are wary of them. Overfriendly strangers must be impostors!

"But Americans are so friendly, so I had to get used to that. I think it is a good thing. In Japanese culture, even close friends have some distance between each other. Here that is not true." ❖



*(Editor's Note: Dr. Takahashi, a research professor of physics, discussed education in Japan as part of UAH's 1992 Honor's Program lecture series. Following are excerpts from his presentation.)*

**D**uring the Edo Era, from the 16th Century through the Meiji restoration in the 1860s, each feudal clan had a senior school for teaching the young successors of the Samurai families (initially warriors, but later bureaucrats of the regional governments).

Owned and run by the regional governments, these schools were not open to all Samurai, but were limited to outstanding students. At graduation, top students were sent to Edo (Tokyo) for additional study at the shogun's elite school. There they made friends with elite students from other regions. These students later became the regional governing bodies. Their alumni "alliance" covered most of Japan. Their communication network was extensive and they were very alert to news of domestic and foreign affairs, new thoughts and inventions.

At the same time, many private mini-schools — "juku" — were open to selected people. Juku taught in-depth ethics, history and political morals, often addressing reforms needed to unify the nation toward modernization. These juku were not authorized by the regional clans or the shogunate governments, but they were generally respected by those governments.

Schooling for commoners was provided at "terrakoya," small, inexpensive private schools. There were thousands of these schools all over Japan. Most people lived within walking distance of a terrakoya. People from the three non-Samurai classes shared these schools, and little discrimination was seen among them. The teachers in these schools included Buddhist monks, poor Samurai and others. Students ranged in age from five to 19 years old.

Japan's literacy rate during the Edo Era (about 50 percent of all men) may have been the highest in the world at that time. While curriculum varied, three subjects were common to almost all schools:

- Reading the basic classics of ethics, history, and Chinese literature.
- Writing, by both the 51 Japanese

phonetic characters and the hundreds of Chinese characters;

- And arithmetic, including the use of the Japanese abacus.

#### **Pre-World War II education**

In 1867 the Meiji government created centralized, authoritarian political systems to move the nation toward westernization. Regional clan governments were changed into deputy governments answering to a central authority.

Education was ruled by the Ministry of Education, which organized both institutions of higher education and commoners' schools in a system of compulsory education. A four-year or six-year elementary education was required. Middle school, which took five years, was for students who would advance to high schools and universities. Students who chose professional careers did not normally attend middle school.

Seven imperial universities were designated for teaching elite students. Certain high schools were chosen to prepare top students for university education. Talented students from all classes were admitted, based solely on competence. Graduates were expected to lead the nation.

Aristocrats, members of the former Samurai class, and the rich, however, could send their children to these elite schools more easily than poverty-stricken commoners. There was also a special university for aristocrats.

The curriculum at these top schools was dominated by German, French, British, and American literature, philosophy, and culture. High school students often read original German or French philosophy books by Kant, Hegel, Nietzsche, Goethe and others, while middle school students read classical, Tang-dynasty Chinese poems, and composed poems in that style.

Where top students of the Edo Era were sent to Tokyo for in-depth training, junior government bureaucrats in the Meiji Era were often sent to Europe and the U.S. to study.

A majority of the commoners who got a higher education attended public profes-

*Continued on page 20*

## Education and learning in Japan

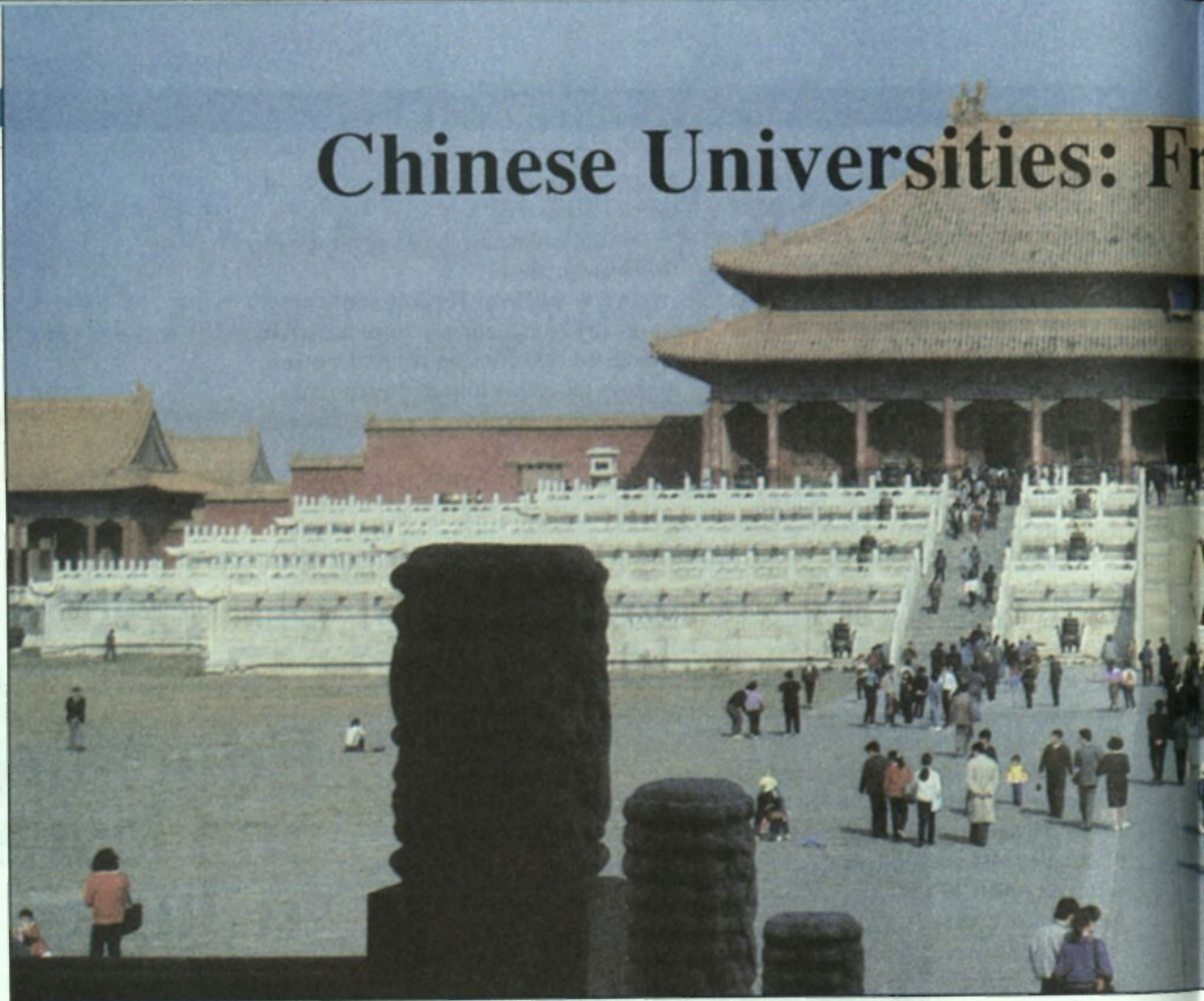
By Yoshiyuki Takahashi

*'Obsessed parents believe success requires that they push their children to attend prestigious, private middle schools, elementary schools, even kindergartens. The Hell of Exams starts as early as pre-school.'*

*—Dr. Yoshiyuki Takahashi*



# Chinese Universities: Fr



The court of the Imperial Palace in Beijing was where examinations for government

*China and American higher education have a long, historic relationship. Since the Communist takeover in 1949, Chinese universities have endured radical restructuring, the cultural revolution, and general upheaval that preceded the massacre of student-led demonstrators in Beijing's Tiananmen Square. Since 1979, however, China has used the American educational system as a model for reorganizing its schools — including its universities. Wu traced the development of Chinese education from its historic origins:*

**“H**istorically, you didn't go to school. You had a teacher to teach pupils at home,” said Wu. “The classical way that the emperor selected intellectuals to be the officers of the government was through examination. You had to pass the exam in your city, then you went to the provincial capital.

“Say I passed the exam in Huntsville. Then, in a year or two, I would go to

Montgomery to take the state exam. If you passed that, you were qualified to go to the capital to take the exam before the court and the emperor. That was the highest exam. That system lasted more than 1,000 years, until the late 19th or early 20th century, when the Chinese learned of western society and began to have western education.”

At the turn of the century, a group of Chinese students were sent to study in the United States. The youngest was about 12. After Yale University helped them prepare for college work, the students attended and graduated from American institutions, including Harvard and Yale, Wu said. “That's how the Chinese learned the western educational system.”

The school system set up by the Chinese mirrored the American system: Twelve years of elementary, junior high, and high school work, followed by four

## ‘Currently they a

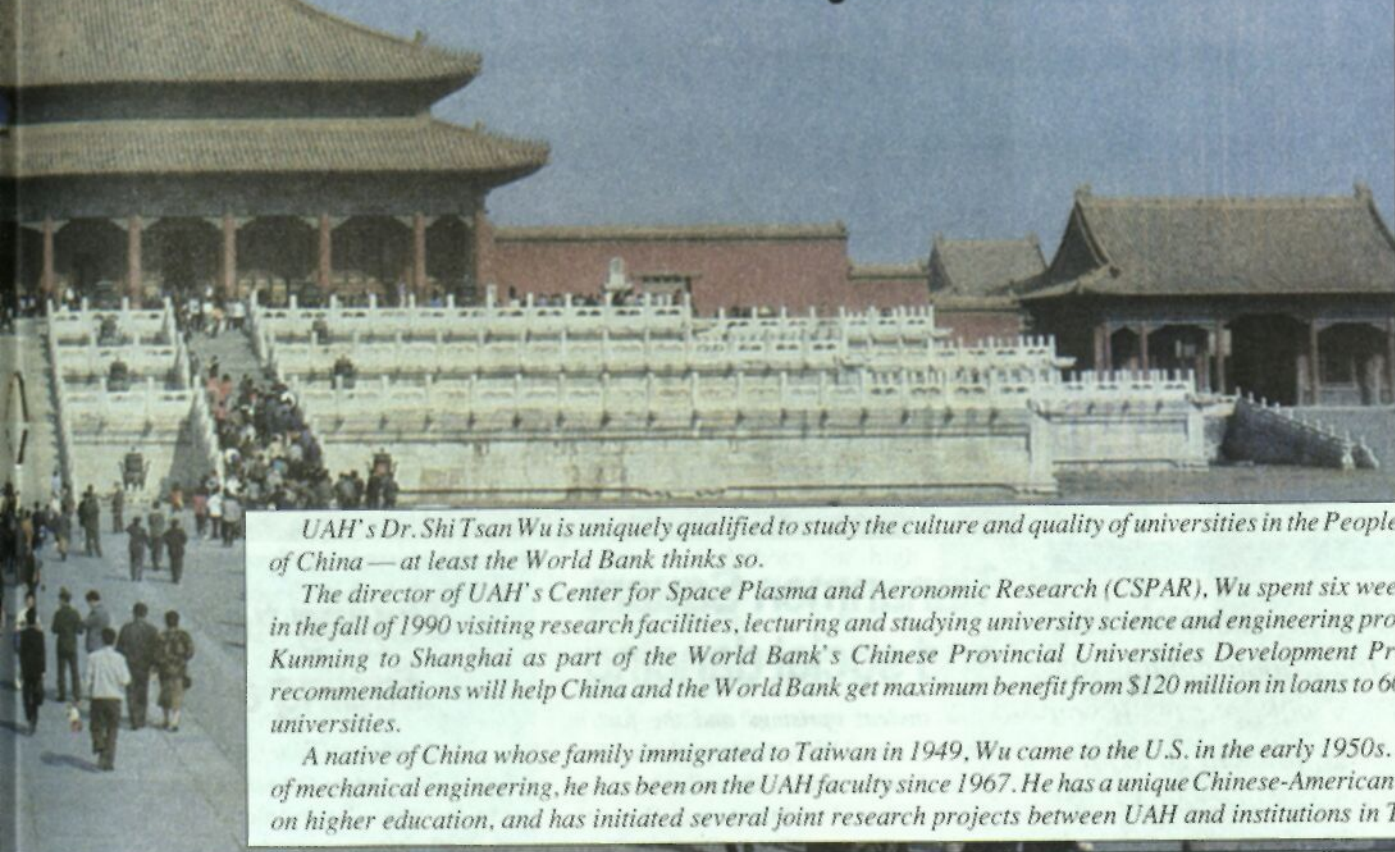
years at a college or university to earn a bachelor's degree. Then graduate school, with masters' and doctoral degrees.

“That system was changed after the Communists took over,” said Wu. “There were two changes: First, they shortened the high school and elementary school. Instead of 12 years, it became 10 years. Graduates went to college at the age of 16. And some college programs are five years long. They also have four-year colleges, but they don't give graduates a degree. You just graduate. There's no degree.

“It had to do with ideology. They didn't want class distinctions. From 1949 to 1980-something, all the people in the army and the armed forces didn't have ranks for that reason.



# From 昆明 to 上海



UAH's Dr. Shi Tsan Wu is uniquely qualified to study the culture and quality of universities in the People's Republic of China — at least the World Bank thinks so.

The director of UAH's Center for Space Plasma and Aeronomic Research (CSPAR), Wu spent six weeks in China in the fall of 1990 visiting research facilities, lecturing and studying university science and engineering programs from Kunming to Shanghai as part of the World Bank's Chinese Provincial Universities Development Project. Wu's recommendations will help China and the World Bank get maximum benefit from \$120 million in loans to 60 provincial universities.

A native of China whose family immigrated to Taiwan in 1949, Wu came to the U.S. in the early 1950s. A professor of mechanical engineering, he has been on the UAH faculty since 1967. He has a unique Chinese-American perspective on higher education, and has initiated several joint research projects between UAH and institutions in Taiwan.

ment service were administered to China's top students — including Dr. S.T. Wu's grandfather.

Photo by Dr. S.T. Wu

## are... exactly like us'

"And the Communists restructured the universities. Usually, in the American system, a comprehensive university has science, engineering, agriculture, several different things. (See story, page 16.) In China, they restructured to separate the engineering from the science."

While there were no undergraduate or graduate degrees, that didn't mean China didn't have graduate education, Wu said. "All the graduate education was in two kinds of places: Certainly each university had a graduate school, but also there were research institutes and the Chinese Academy of Science. At that time they patterned their system from the Russian system. The Russian academy has many institutes and they nurture their graduate students. But

they didn't have a diploma. And if they write a thesis or report, they don't call it a thesis.

"In 1979 Communist China opened again. Now the whole education system swings back to the American system. You've got to remember that most of the intellectuals, the people in higher education and high tech were all educated in the United States. They've all got Ph.Ds from the United States in the '30s, '40s, and '50s.

"The only reason they changed to the Russian system is because the government wanted the change. As soon as the government relaxed, they automatically went back to the American system because that's the system they are familiar with.

"Not only did the universities swing back, even public school now becomes 12 years again, six years in elementary school and six years in high school. I asked, 'Did you people really find that 10 years were not enough? Do you have

evidence to show that it's not enough?' They said, no, they simply just changed back.

"Currently they are back to exactly like us. The big universities have started to build up their original programs. If a school doesn't have a science program, they've started to build a science program. If a school doesn't have an engineering program but has a science program, they have started to build an engineering program.

"It has been less than 10 years, but they have degrees now. They grant doctorate degrees, bachelors. They're completely back to our system, including diplomas."

The educational system is not the only institution that has changed since 1979, said Wu. The once-rankless Chinese military has revived the use of rank, "just like us." ❧





*'The university administration is very careful about guiding students. They will not say, 'If you don't do this, you will go to jail.' They will try to use some other activity to guide the students (away from) political activism.'*

—Dr. S.T. Wu

## Tiananmen Square and social dancing

*Are student uprisings and the foxtrot linked in China? Wu speculates that may be case in the aftermath of the military action against student demonstrators in Beijing's Tiananmen Square. "Everywhere in China they like the social dance — on campus, everywhere suddenly. That I had not seen ten years ago. The night I arrived in Nanjing I stayed in the guest house because that was Friday night, and it was noisy. Not rock and roll. My kids said, 'That's supermarket music.' — the foxtrot, the waltz. They love to dance."*

The government's brutal response to the Tiananmen Square demonstrations has had a chilling effect on China's universities, Wu said. "The university administration is very careful about guiding students. They will not say, 'If you don't do this, you will go to jail.' They will try to use some other activity to guide the students (away from) political activism. That's what they do. Maybe that's why they all go to the dancing parties, because (then) they become politically passive."

*A few students at Wu-Han University, above, read notices and fliers at an important campus "communications center." This is a sign that it is quiet at the university. During periods of intense political activity, this area will be packed with students and other people looking for information.* ☛

## Paying tuition, finding a job

*Changes in the Chinese university system in the 1980s meant the return to China of something familiar to American college students: Tuition.*

"Right now, some students have to pay tuition," said Wu. "Before 1985 everybody was definitely on the public payroll. After they learned the capitalist system, with these economic changes, some students have to pay. Some students don't have to pay. It depends on what kind of background they have."

"Also, before '85, (the government) guaranteed you a job after you graduated. When you passed the university entrance exam you were all set; it was in the mill. Right now, you don't have a guaranteed job. That's good and bad. The bad part is, a lot of corruption happens. If you want to find a job, you have to pay. That's what people complain now, that they have to know people, and there's all kinds of relationships."

There is tremendous demand for the limited number of graduates, "so if you want any kind of job, there's no problem," said Wu. "But everybody wants to have a better job. Also, everybody wants to live in the big cities, like Beijing and Shanghai. It's very, very tough."



## Staying off the roller coaster

*How does a relatively poor country like China get ahead of the U.S. in some fields of basic scientific research? With persistence and consistency, says Wu, who visited China's three major solar observatories.*

**‘W**hen I visited those three solar observatories, I discovered that each has a new instrument, either already installed or in the process to install, or new equipment is in the factory soon to be delivered. This is very sophisticated equipment. It's not just something you can buy from the shop. It's advanced research equipment.

“For example, in the Beijing observatory they installed a 9-channel filtergram for their solar magnetograph. That means they can observe nine different spectral lines scanning at the same time. China is not a rich country, so I asked, ‘How can you people do this?’

“‘Very simple,’ they said. ‘China’s science academy declared that astronomy is a fundamental science. We’re not asking for payoffs or looking for cost effective things.’

“So they identify a certain amount of resources and promise to the scientific community, ‘You have so much money for the next five years. Do what you want to do.’

“Then this particular scientific community sits down, discusses it, talks and talks, and finally, what I saw was the end of the five-year program,” Wu said. “I got to see the result. They decided that each observatory (would get) some special equipment and they got funding to make it.

“The United States is rich, but our science policy — particularly scientific funding — is like a roller coaster. There’s no way for us to plan anything. Even now, we don’t have any solar observatory that has new equipment coming up on the horizon.

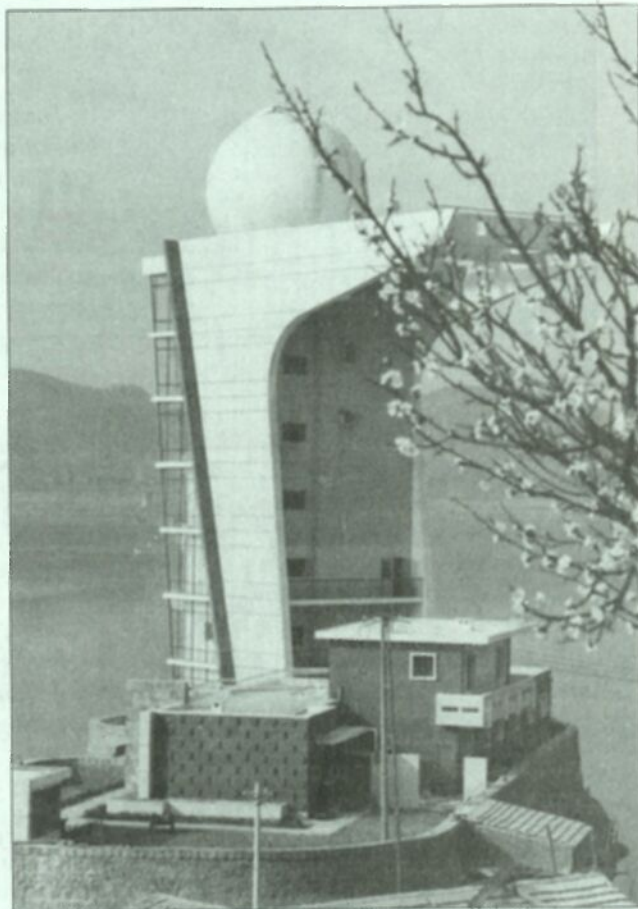
“The United States has no planning. For example, we go through the (research grant) selection process. But there are a lot of experiments that were selected and now they’re cancelled. You don’t know what you’re going to get next year. I’m not blaming the (funding) agency. I blame the whole

American budget system, because the agency has no way to plan. The agency only gets its budget yearly. It doesn’t know what Congress will do.

“I think the Congress has to come up with some kind of science policy. Not only science, but also education. Science and education don’t have results within 18 months. You need long, sustained effort. In the 1960s, right after Sputnik, we had a lot of summer workshops for high school teachers. In the ‘70s and ‘80s we didn’t have any. Now, in the ‘90s, we’re going to have plenty. What does that mean when you pump the money in and then you stop?

“It means you make progress, but progress just like a roller coaster. It averages out that you probably make a little progress. If you give it sustained, long planning, then you continue going up.

“This you not only see in China, but look at ESA, the European Space Agency. Now they are much healthier than our space science community, because they’re steady. My point is, we need a steady policy, so then people will know how to plan.” ☛



*To get the maximum benefit from them, the Chinese scientific community carefully husbands its resources, including architecture. The 1960s-era design used for the Huairou Solar Station, above, was adapted for the Purple Mountain Observatory, below, which opened in 1989.*





## Once you're in, you're in

*The toughest part about getting a college education in China may be getting in.*

**I**n China, to get to the university is tough, period," said Wu. "You probably have seven or eight million high school graduates, but universities probably can only accommodate . . . a half million at most.

"Admission is by examination, which is not fair. It is a two-day examination, maybe six or eight hours each day to screen people. I went through that in Taiwan. That's very tough.

"It's very difficult to get into a university, but very easy to ride through — as long as you study," he said. After surviving the screening exams,

"when they get to the university, students don't have that kind of competition. They don't feel that pressure. First of all, you've

selected a bunch of good ones. Those people know how to take exams now."

The difficulty of undergraduate programs varies "depending on what type of university you attend," Wu said. "If you are an engineering or science student, it's difficult to get by without some rigor. But very few drop out. First, people know it's not easy to get in. Even if you play a little bit, you still ride it out. If you get C's you still get out (with a degree)."

Most undergraduate programs are "meaningful for basic training," Wu said, "but there is a lack of research. They don't do a very good job training those independent skills. They don't have student-professional organizations like we have here. I suggested that they organize one, like SEDS (Students for the Exploration and Development of Space), like the Physics Society student chapter or the American Society of Mechanical Engineers here. That helps you to do good work."

From that perspective, Wu said, "the U.S. is quite unique, I believe. That's a strong point (Chinese students) don't have. They just go to class, take the exams, and go home." ☛



*Despite a heavy schedule of lectures and official tours, Dr. Wu found time to visit the emperor's summer palace in Beijing.*

## Re-coupling engineering and science

*Between 1949 and the early to mid-1980s, China's comprehensive universities were split into specialized institutions (see story, page 14). Universities that taught engineering did not teach science, and vice versa. Recently, however, those institutions have been re-coupling science and engineering — a program Wu advocated when he visited China in 1979.*

**W**hen I first went back, I said, "That's something very, very funny. The engineering school doesn't have science. The science school doesn't have engineering. But engineering and science should not be separate — if you really want to do a good job." I believe they got a lot of those kinds of comments."

If he had been looking for Chinese graduate students between 1949 and 1982, "I'd rather take those graduates of physics, mathematics, and chemistry. They can do some kind of engineering job because they have taken some applied science courses.

"But if I take those that only come from an engineering school, they really can only do a technology job, not an engineering job, because they don't have enough fundamental science. Right now those engineering schools are restructuring to recover from that deficiency, extending to include science. I think a lot of schools are already changing. I went to a very famous (engineering) school in Beijing, Tsing-Hwa University, which is like MIT in this country. Now they have a physics department, and chemistry."



# Learning and the unasked questions

*During his six weeks in China, Wu delivered dozens of lectures to faculty and student groups. Unlike his UAH classes, however, the Chinese scholars asked no questions in the classroom—one of the major differences between U.S. and Chinese education.*

“They don’t have many questions in public. They do have questions privately. They don’t ask in the classroom, but after the class they come to talk to me one-to-one and ask questions. That is a difference between the education over there and education over here.

“I went to school up to the bachelor’s degree in China. We’re sort of shy to ask questions because we’re afraid to ask the wrong question. Also, the instructors, the teachers don’t like you to ask questions. Chinese society is pretty much authoritarian, so you have to respect the teachers. You are just listening to what they say.

“Here, education leads you to think. This is my own interpretation. I think in oriental schools — not only in China but probably in Japan, too — you go to school to really learn. You don’t ask until you learn. Then you ask.

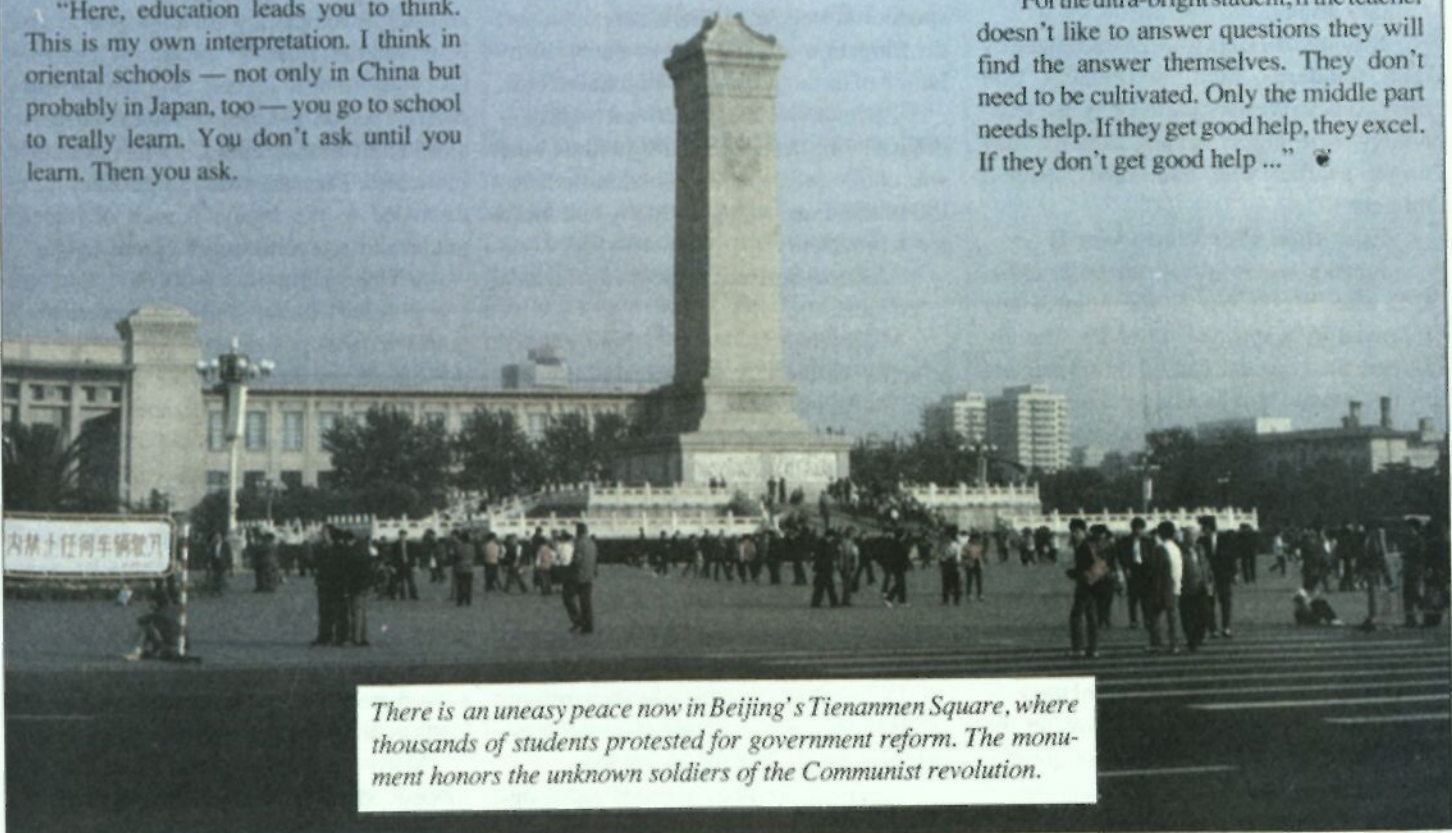
“I observed that in America, asking is a learning process. I have spent more than half of my life in the United States now. I go to school, teach, and do research. After 30 years, I learned to ask questions.

“In oriental society, learning and asking are separate. Here, it’s learning/asking. I observed from my own children when they were in elementary school, they probably

start from kindergarten to learn how to do research. In China, (if you ask college students) what kind of research are you going to do, they don’t know. This is a habit. You must teach kids to have the habit to search.”

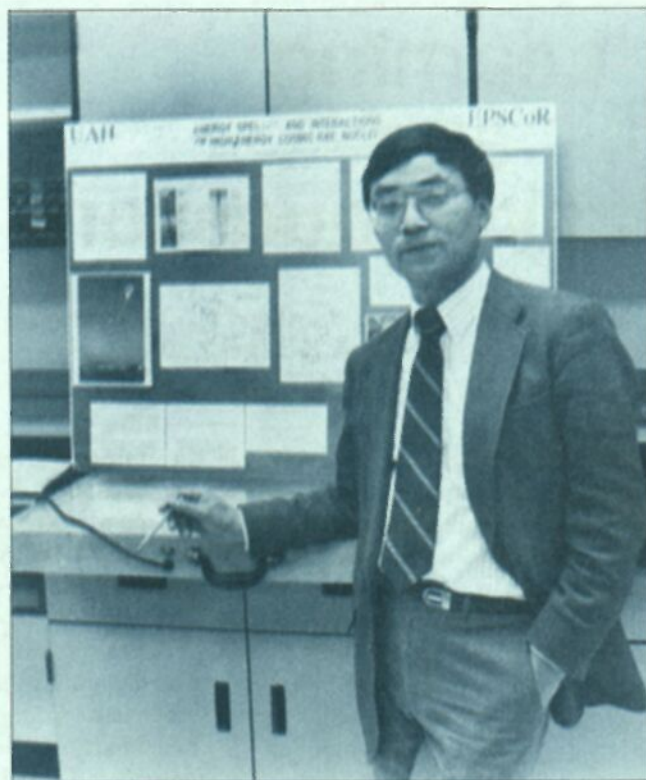
Being shy about asking questions “will not hurt extremely bright students. Extremely bright students will always do what they are motivated to do. Even if they don’t ask questions, they will think of it themselves and then maybe they find the answer someplace else. It will only make a difference on average students. Because you have this asking/learning process together, it will introduce the average students to more upper ground, will move them up.

“For the ultra-bright student, if the teacher doesn’t like to answer questions they will find the answer themselves. They don’t need to be cultivated. Only the middle part needs help. If they get good help, they excel. If they don’t get good help ...”



*There is an uneasy peace now in Beijing's Tiananmen Square, where thousands of students protested for government reform. The monument honors the unknown soldiers of the Communist revolution.*





Dr. Yoshiyuki Takahashi

## Education and learning in Japan *Continued from page 13*

sional schools, where they might study engineering, agriculture, teaching, business, or military affairs.

Schools of the era were characterized by high standards, multiple channels, and meritocracy. Western philosophy and technology were highly valued, although they might conflict with traditional Japanese thought.

### Education after World War II

Japan's unconditional surrender to the U.S. after World War II was immediately followed by a spiritual surrender. The unprecedented carnage caused by the war and by two atomic bombs was quickly taken by the people as a natural, or God-made disaster. They pledged to the A-bomb victims that they — the Japanese, not the Americans — would never repeat their mistakes again.

This spontaneous perception of the causality relationship was shared by most Japanese, perhaps due to the Buddhist view of life and humanity. This self-blaming meant there was little antagonism toward the U.S.

The years immediately following the war saw a revolution in Japanese government and culture. Those changes included

the adoption of a democratic constitution; destruction of the heavy-industry cartel; destruction of the elite, Meiji aristocratic classes; the formation of labor unions; the re-distribution of farmland; and educational reform.

The material abundance and high standard of living in the U.S. during and after the war convinced Japan to abandon both authoritarian European philosophy and Meiji westernization.

America replaced Europe as Japan's role model.

Major changes in education included adoption of the U.S. system of education, with six years of elementary school, three each of middle school and high school, and four years of college. Compulsory education was extended through middle school. The popularization of college education led to a revolutionary increase in the number of high schools, universities and colleges, including the "ekiben-daigaku," or college at every railway station.

Driving forces behind education reform at that time included American ideology, industrial needs, and parental desires.

American ideology stressed equal op-

portunity and individual rights to education and a better life.

Japanese industry needed a large number of new workers who knew science and technology.

Parents who had endured poverty before, during and after World War II did not want their descendants to suffer the same misfortune. They saw that higher education could help their children climb social and economic ladders. Parents were eager to provide the means for their children's education, even if it meant making sacrifices in the comfort and convenience of their own lives.

What were the results of these three forces working together? A large number of well-educated young people were supplied to meet the demands of post-war industry.

But pre-war standards and authority still classified the relative value of university graduates. At the top were University of Tokyo graduates, who dominated government offices and corporate executive suites.

There were repercussions, including the destruction of traditional Japanese academic values and an oversimplified, more materialist view of the purpose of life.

The increased number of students seeking prestigious university educations increased the competition for admission to the better schools. A family's economy, class or history no longer matter. Only test scores decide a person's success or failure. There is almost universal acceptance of this standard of success. The nationwide surge of competition led to the frantic pursuit of better grades and test scores, and to "juken-jigoku" — the Hell of Exams.

Obsessed parents believe success requires that they push their children to attend prestigious, private middle schools, elementary schools, even kindergartens. The Hell of Exams starts as early as pre-school.

People who fail can succeed in life only by their own ingenuity, overcoming tough discrimination. There are two paths to success, the authorized, main-stream path and the individual, unauthorized path. The latter, however, is less respected. It carries an implicit mark of failure, of being "less bright as a raw material." This is accepted by persons in all social strata.

Many reforms have been tried without success. Many Japanese believe over-com-

Photo by Terrell Johnson



petitive education is a necessary evil. They do not consider it a good system.

There is some consensus that the system provides a supply of "sort-of-prepared" workers for their tough industrial society. There is also consensus that too much training and the emphasis on conformity have killed diversity and creative ingenuity.

New reforms, in the name of internationalization, encourage diversity of both students and schools, again taking American education as a role model!

### The Japanese education

Regular Japanese elementary, middle and high schools are in session Monday through Saturday, 34 hours a week, 44 weeks a year. (That means school is in session about 264 days a year. An American worker with six holidays and a two-week vacation will work only about 244 days a year. — Ed.)

Free textbooks are provided to students by the government. These are highly standardized by the Ministry of Education. Unique, individual views of subjects are discouraged. A standard view is emphasized — even demanded!

Instructional manuals for teachers are very detailed, with step-by-step, hard-to-fail directions. The material is easy to teach to promote high efficiency. Critical points are highlighted and underlined. Even homework and examples to show in class are provided in full in the teacher's manual.

School-to-school variation in teaching technique is minimal. The regional fluctuation of academic achievement is about one percent.

Most students in elementary through high school also attend training schools or, if their parents can afford it, study with private tutors at home after school. Auxilliary training schools, "shingaku-juku," were initially make-up schools for students who had learning difficulties.

After the late 1960s, they became supplementary "grade-up" schools for students who want to take the challenging admission exams for the most prestigious schools. They are now fashionable in every town and village in Japan.

Students spend one to three hours each, from three to six days a week in these schools, receiving condensed drills and technical instructions for solving given problems. Memory enhancement is normally empha-

sized.

It is reported that more than 50 percent of all students attend some type of juku. That figure is climbing toward 75 percent. This has posed problems, including overwork and stress for children, undermining regular schools, and increasing the financial burden on parents. There is also no viable quality control of juku teachers and programs.

Numerous self-training sub-textbooks and drills are also published. Most students use a lot of these books, which are characterized by their abundant "keywords and names to memorize." Analysis and interpretation are summarized and are to be memorized, not debated or analyzed.

There are also "study magazines." They are, of course, big sellers. Typical students may subscribe to two magazines per month.

Japanese children also read a wide variety of fiction books and comics. These somewhat stimulate children's imagination and support some kind of personality building. One of the most successful stories among students is the story of Doraemon, a below-average boy who does not improve his capabilities or personality. Instead, he is miraculously helped by a robot sent from the future by his descendants.

Perhaps it reflects a wish of many children — to be saved from the stress of learning, and to find a fantasy in their daily lives.

### What are the effects?

Children have become more passive and less creative in their judgements and actions. They learn conditioned reflex responses to cover most subjects in an attempt to get better test scores with the least effort in the shortest period of time. Anything that can be is memorized. Thinking, analysis, research and revision are discouraged.

Top students must turn to extracurricular self training to gain independent thinking and analysis skills. In fact, these top students cannot remain passive learners, because the academic requirements, including admission exams, at elite, prestige universities cannot easily be met by memorizing and drills.

Most students solve problems, but only so they can enter the top schools, not to solve them for their own sakes. Japan's mass education may be working to improve existing condition, but only as long as there are clearly defined problems with known solutions. ☛

*'Children ... learn conditioned reflex responses to cover most subjects ... Anything that can be is memorized. Thinking, analysis, research and revision are discouraged.'*

—Dr. Yoshiyuki Takahashi



Joe Carden, center, president of AmSouth Bank, N.A., of Huntsville, and UAH President Frank Franz, left, listen as Glenn Dasher, chairman of UAH's Art and Art History Department, explains the origins and unique character of the staff-generated art that adorns the president's offices. A gift from AmSouth supports the university's endowed chair in the humanities, which include art and art history.



## Tag YOUR wild animal

Whatever it might be.



In addition to helping us track the sometimes elusive Charger, these tags help support scholarships for talented students from within Alabama. Special UAH tags cost only \$50 more than a regular license tag, and are available at license commission and probate judge's offices in every Alabama county. And you don't have to wait for your old tag to expire: Turn in your old tag, pay the fee, and you can have a new UAH tag today!







## 1992 City Champions!

UAH claimed the 1992 city intercollegiate athletics championship when the Charger men's tennis team swept the Alabama A&M University Bulldogs, 9-0. In head-to-head competition earlier in the year, UAH won in women's volleyball and men's basketball, while A&M claimed victories in soccer and women's basketball. The 2-2 split put the city championship squarely on the tennis team's shoulders. Darren Otten, left, a senior electrical engineering student from LaGrange, Ill., led the Chargers with victories in number one singles and doubles.

## UAH goes cross country for new sport

The NCAA is bringing cross country back to UAH.

The NCAA has decided that UAH can no longer count its crew program toward the minimum number of varsity sports required by the NCAA, so UAH is adding men's and women's cross country to its athletic program, starting next fall.

"In the past, the NCAA has allowed schools to count non-NCAA sports (including rowing) toward their minimum requirement," explained Athletic Director Paul Brand. "For us in Division II, that means four sports for men and four for women. We got a letter last April informing us that we weren't going to be able to continue doing that.

"There is not an issue with men's sports. We offered five — including crew — so we were still OK with them. But we only had four sports for women, so we must get a women's sport in place by next fall.

"Cross country is a natural in this community," Brand said. "It is a very popular sport here. There are lots of runners, lots of interest. We're looking at this from a total program development point of view."

It doesn't hurt that cross country is also an inexpensive sport, with limited needs for equipment and uniforms.

UAH had a short-lived cross country program in 1985 and 1986, but it and a fledgling golf program were cancelled in a cost-cutting move.

The new cross country coach is Michael Scarano, who is also assistant women's basketball coach. Scarano is recruiting a team for the fall '92 season. Seven meets are scheduled, including a September 5 meet at Alabama A&M.

"I think the first year is going to be mainly setting the foundation," he said. "Within a couple of years, I think we can be fairly competitive."

While UAH is adding cross country, it is not dropping its crew program, Brand said. Crew will continue as a varsity sport at UAH.

The change might help the rowing team become more competitive, he said. Most crew programs are sanctioned by organizations whose eligibility rules aren't as strict as NCAA regulations.

"We had to impose NCAA rules on them," Brand said. "For instance, co-op students aren't considered full-time students by the NCAA, so they weren't allowed to compete. We lost a number of good athletes, and that put us at a competitive disadvantage."

The athletic program will provide an operating budget and coaching stipend for the crew team. Crew scholarships will be phased out, but current members of the crew team will keep their aid until their eligibility is up, if they continue to row.



## The good news is ...

The good news for the UAH ice hockey team is, it finished the 1991-92 season with a winning record (15-11-1), earning an invitation to the NCAA Independent Tournament in Alaska.

The bad news is, the team didn't go.

The Athletic Department didn't have the \$5,000 it would have cost to send the team to Fairbanks.

"It was a decision based solely on the financial implications," said Athletic Director Paul Brand. "We were looking at a substantial cost, with no income really derived from it. Then, to complicate things, we also have a deficit in the hockey program's operating budget for this year. The extra cost was just too much too much to take on."

Coach Doug Ross had to tell the team about the decision the week before its season-ending series at the U.S. Air Force Academy. "That was a tough day in the rink," said Brand. The team went on to sweep two games from the Falcons, clinching the winning season.

After a rugged start, the Chargers finished strong, earning nine wins and a tie in the last 12 games.

### UAH Ice Hockey 1991-1992

(15-11-1)

UAH 7, Lowell 2  
 Merrimack 7, UAH 5  
 Providence 8, UAH 3  
 UAH d. Wisconsin-Superior (2 defaults)  
 University of Alaska-Anchorage (UAA) 4, UAH 2  
 UAA 6, UAH 4  
 UAH 6, Ryerson 1  
 UAH 13, Ryerson 4  
 Rensselaer 6, UAH 3  
 Rensselaer 8, UAH 7 (OT)  
 UAH 8, University of Alaska-Fairbanks (UAF) 6  
 UAF 9, UAH 5  
 UAA 15, UAH 4  
 UAA 8, UAH 1  
 UAH 6, Brown 2  
 UAH 7, Brown 5  
 Mankato St. 7, UAH 6  
 UAH 5, Mankato State 4  
 UAH 6, UAF 1  
 UAF 8, UAH 3  
 UAH 16, Iona 4  
 UAH 14, Iona 7  
 UAH 8, Seneca 5  
 UAH 4, Seneca 4  
 UAH 6, Air Force 4  
 UAH 6, Air Force 3.

### UAH Women's Basketball '91-'92

(10-16)

UAH 59, UC-Colorado Springs 56  
 W. Texas St. 95, UAH 40  
 Belmont College 86, UAH 61  
 UT-Chattanooga 83, UAH 42  
 Rider 77, UAH 66  
 UAH 86, Miles College 75  
 UAH 91, Talladega 77  
 Troy State 105, UAH 62  
 Auburn-Montgomery 104, UAH 71  
 Lincoln-Memorial 96, UAH 62  
 Carson-Newman 91, UAH 57  
 UAH 121, Stillman College 27  
 UAH by default, Wofford College

UNA 91, UAH 64  
 Jacksonville State 88, UAH 81  
 Lincoln Memorial 86, UAH 69  
 UAH 98, Tennessee Temple 36  
 Livingston 93, UAH 71  
 UAH 70, Miss. U. for Women 61  
 UNA 85, UAH 69  
 Troy State 84, UAH 78  
 UAH 84, Stillman College 51  
 UAH by default, Wofford College  
 UAH 95, Miss. U. for Women 83  
 Alabama A&M 75, UAH 71  
 Lincoln Memorial 82, UAH 73

### UAH Men's Basketball '91-'92

(6-22)

Delta State 101, UAH 73  
 B'ham Southern 92, UAH 87 (OT)  
 UAH 81, Livingston St. 79  
 B'ham Southern 86, UAH 78  
 Athens State 110, UAH 85  
 Montevallo 79, UAH 76  
 UAH 82, Lincoln-Memorial 70, (SAA Tournament)  
 UAH 81, Auburn-Montgomery 80  
 (SAA Tournament Championship)  
 Tennessee Temple 81, UAH 75  
 Armstrong State 81, UAH 65  
 BSU 78, UAH 51  
 W. VA. St. 94, UAH 92  
 Pfeiffer College 89, UAH 78  
 UNA 91, UAH 77

Wofford College 61, UAH 75  
 UAH 74, Newberry College 71  
 Troy State 102, UAH 82  
 Jacksonville State 76, UAH 66  
 Faulkner University 112, UAH 77  
 Lincoln Memorial 75, UAH 66  
 Livingston 85, UAH 68  
 Troy State 130, UAH 108  
 Delta State 89, UAH 68  
 Athens State College 73, UAH 88  
 Wofford College 82, UAH 75  
 UAH 98, Alabama A&M 88  
 UAH 74, Lincoln Memorial 73  
 UT-Martin 87, UAH 92.

### UAH Men's Tennis '92

(7-15)

Jefferson St. CC 7, UAH 2  
 Birmingham Southern 7, UAH 2  
 Troy State 6, UAH 3  
 AU-Montgomery 8, UAH 0  
 UAH 8, Sneed St. JC 1  
 Jefferson St. CC 9, UAH 0  
 Huntingdon 5, UAH 4  
 UNA 6, UAH 3  
 Livingston 7, UAH 2  
 UAH 9, Alabama A&M 0 (Mayor's Cup)  
 UAH 6, Alabama A&M 3

Belmont 7, UAH 4  
 UAH d. College of DuPage (forfeit)  
 Livingston 8, UAH 4  
 U. of the South 7, UAH 2  
 UAH 9, Belmont 0  
 Birmingham Southern 7, UAH 2  
 UAH 8, UNA 1  
 Jefferson St. CC 7, UAH 2  
 AU-Montgomery 8, UAH 1  
 UAH 6, Huntingdon 3  
 U. of the South 6, UAH 3

### UAH Women's Tennis '92

(3-12)

Jefferson St. CC 7, UAH 2  
 Birmingham Southern 9, UAH 0  
 Troy State 5, UAH 2  
 AU-Montgomery 9, UAH 0  
 UAH 6, Sneed St. JC 3  
 Jefferson St. CC 8, UAH 1  
 Huntingdon 7, UAH 2  
 UAH 8, Belmont 1

U. of the South 9, UAH 0  
 UAH 7, Belmont 2  
 Birmingham Southern 9, UAH 0  
 UNA 9, UAH 0  
 Jefferson St. CC 8, UAH 1  
 Huntingdon 6, UAH 3  
 U. of the South 8, UAH 1



## A letter from the Alumni Director



The search for the Alumni Association's "Outstanding Alumnus of the Year" will culminate on May 8 at the 1992 UAH Awards Celebration Dinner and

Dance at the Von Braun Civic Center, North Hall.

Co-chairs for the 1992 event are **Mark Thornton, '85 B.S., Electrical Engineering**, and **Ulla Doane, '75 B.A., German**. This year's theme, "Creative Excellence" was selected to honor **James Hudson, '88 M.S., Biology**, this year's award recipient and president of Research Genetics of Huntsville. Research Genetics is one of the world's largest producers of custom synthetic DNA for biological research.

The Distinguished Faculty Award will be presented to **Dr. James D. Johannes, '75 M.S., Operations Research**. Johannes has been at UAH for 18 years as a professor of computer science. He spearheaded proposals that led to both the B.S. and Ph.D. programs in computer science. We hope many of his former students will join us at the awards dinner.

If you did not receive an invitation, please call the Alumni Affairs Office at (205) 895-6085.

Thanks to this year's alumni association board, the first Alumni Career Conference will be Monday, June 1, from 3 to 9 p.m. at the Tom Beville Center. Company representatives will have an opportunity to interview highly qualified and experienced UAH graduates.

Hundreds of businesses have been invited to attend, says committee chairman **John Gamble, '73 M.A.S.** Gamble, who is personnel director for Teledyne Brown Engineering, encourages experienced alumni seeking new or improved employment opportunities to contact the Alumni Affairs Office and submit a resume by May 20. There is no fee.

*Renee Mooney*

## Class Notes

**Lt. Col. Harry W. Kuberg ('75 B.S., Chemistry)**, is commander of a U.S. Air Force clinic in Izmir, Turkey.

**Jeanette Vandermeer ('75 B.S., Nursing)**, of Tuscaloosa, teaches community health nursing at Capstone College of Nursing at The University of Alabama, and is president of the Alabama State Nurse's Association's District 2. She was nominated for a 1991 Alabama Nurse of the Year Award. She and her husband, A.W., have one son, James.

**Dr. Terry Bonds ('78 B.S., Chemistry)**, is an optometrist practicing in Jacksonville and Piedmont, Ala. He also speaks frequently at professional and medical conferences on several topics relating to patient care. He received his O.D. degree from UAB in 1981, and was UAB Medical Center National Alumnus of the Year in both 1988 and 1990. He was a founding member of the Alpha Tau Omega fraternity chapter at UAH. He and his wife, Kim ShRee, live in Jacksonville.

**Fred Trimble ('78 M.A.S., Management)**, of Decatur, Ala., is a self-employed consulting engineer. He is retired from Wolverine Tube, Inc., where he was engineering manager. He is a member of the Decatur Kiwanis Club. He and his wife, Carol, teach math, grammar and reading at the Decatur Adult Learning Center. They are members of First United Methodist Church in Decatur. They have three children, Carol, Frederick, and Claudia, and 10 grandchildren.

**Danny Ellenburg ('79 B.S., '84 M.S.E.)**, of Arab, is a senior technical manager at Intergraph in Huntsville. He was one of four Intergraph employees to volunteer to go to the Persian Gulf during the war with Iraq to set up Patriot missile systems and train the people who used the system. He went to both Saudi Arabia and Israel.

**Jennie F. Godwin ('79 B.S.B.A., Management)**, of Nashville, is a senior market development manager for Northern Telecom. She is an executive MBA student in the Owen School of Management at Vanderbilt University. She is active in the Vine Street Christian Church, is a United Way volunteer, and is a member of the Nashville Ski Club.

**Margaret J. Goldthreat ('81 B.A., Art)**, of Collinsville, Ala., is a full-time artist with a studio in her home.

## Creative Excellence

The UAH Alumni Association  
Annual Awards Celebration Dinner

With Alumnus of the Year

**James Robert Hudson**

('88 M.S., Biology)

President, Research Genetics

*Reception, dinner, awards & dancing!*

**Friday, May 8, 1992**

Reception at 6 p.m.

Dinner at 7 p.m.

North Hall, Von Braun Civic Center



## Cheryl Bankston studies 'points of light'

Cheryl Bankston, a UAH senior in electrical engineering with an emphasis in optics, is studying 'points of light' this spring quarter as an intern at the White House.

Working in the Points of Light Office, which is directly below Vice President Dan Quayle's offices in the old Executive Building, Bankston is studying nominees for the president's daily "Point of Light" award.

The program, inspired by President George Bush's 1,000 points of light speech, promotes voluntarism.

"The president names a Point of Light every day, somewhere in the nation," explained Shara Castle, White House intern coordinator. "Cheryl will be doing research and constituent contacts and correspondence, and writing press releases. There's never a dull moment here. (The interns)

work long hours, typically 50 to 60 hours a week."

"Every day about 50 nominations come through," said Bankston, who was UAH's 1991 Outstanding Student Leader and had been president of the UAH Lancers before accepting the internship. "We sort of decide which ones should be considered. I do research on the nominees, then present my findings to a committee.

"Those who are selected, we do press releases for their hometown press. Whenever the president is in an area, we try to arrange for the Points of Light in that area to be photographed with the president."

While most White House interns apply for their jobs at least a year in advance, Bankston was virtually drafted.

"It all happened very quickly," she recalled. "I received a call from someone who

knew me from when I was a youth ambassador in 1987, asking if I would be interested. I mailed in a letter of application and, a week or so later, received a call that I had been selected."

While she short circuited the selection process, Bankston couldn't get entirely around the federal bureaucracy: Before leaving for Washington, she spent at least 15 hours filling out paperwork for the FBI, IRS, etc.

While White House interns work long hours, they do get some "off" time, said Ms. Castle. "We try to include them in events, in the life of the White House as much as possible."

"There is certainly a lot of adventure being at the White House and in Washington," Bankston said. "There's always adventure in Washington." ❧



**Lance L. Smith ('71 B.S., Industrial & Systems Engineering)**, of Renton, WA, is an environmental engineer at Boeing Defense & Space Group in Kent. He returned to the U.S. in October after spending three years in Saudi Arabia with Boeing working on the Royal Saudi Air Force's Peace Shield program. Peace Shield is a defense system that will, among other things, give the Saudi air force communication capability with airborne warning and control aircraft. (Boeing photo)

**Scott Bracey ('83 B.S.B.A., Management)**, of Scottsdale, Ariz., is a sales representative for the Data Storage Products Division of 3M. He is a member of the Data Processing Managers Association.

**Jerry Russell Robinson ('83 B.S., Nursing)**, of Birmingham, is a resident in family medicine at UAB Hospital's Family Practice Center. He received a Doctor of Osteopathy degree from the West Virginia School of Osteopathic Medicine in Lewisburg, W.Va. He and his wife, Kim, have two children, Emily and Tanner.

**Dr. Barrett W. McGee ('85 B.S., Biology)**, of Pisgah, is a dentist in private practice in Pisgah. He received his D.M.D. from the University of Alabama School of Dentistry in June 1990.

**Scott Seeley ('85 B.S.B.A., Finance)**, of Meridianville, Ala., has been promoted to vice president of commercial lending at First Alabama Bank, Huntsville. He is on the board of directors of the American Heart Association, is an ambassador for the Huntsville-Madison County Chamber of Commerce, a member of both the North Alabama International Trade Association and the Huntsville-Madison County Homebuilders Association, and a volunteer for the United



Way. He and his wife, Dixie, have one daughter, Morgan.

**Gail Busbey** ('86 M.A.S., Public Administration), is city clerk for Decatur, Ala. She is the 1992 president of the Alabama Association of Municipal Clerks and Administrators, and serves on the board of directors of the International Institute of Municipal Clerks. She was the state's City Clerk of the Year in 1988, and won the 1990 Governor's Volunteer Award, Health Division. She serves on the boards of the Morgan County Red Cross chapter, the Hospice of Lawrence and Morgan Counties, the Morgan County Mental Health Association, Friends of the



## SUPER PARTY!

For New Grads, Alumni, Family,  
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**Food! Live Music! Prizes!**

Wednesday, June 17, 1992  
6-9 p.m.  
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R.S.V.P., Alumni Affairs, 895-6085

## Mark Hess, '84, enjoys challenges as the governor's top legal advisor

When the Alabama Legislature is in session, a typical work day for Gov. Guy Hunt's top legal advisor might begin at 7:30 a.m. and end more than 12 hours later, often stretching past midnight as the session nears its end.

But for **Mark Hess**, ('84 B.A., History), those long hours are an opportunity to handle "a lot of ... fascinating things that you normally wouldn't experience in the course of a private law practice."

Hess, 30, has been in the governor's legal office since 1989. In February, he was appointed chief legal advisor, a cabinet-level position within the governor's office.

"It's quite a challenge," he said. "Every day there are new fires to be put out, new problems to be solved. The pace is pretty fast, especially during the legislative session."

*Pretty fast?* Hess and another lawyer in the office review each of the 1,500 to 1,600 bills that are introduced during a legislative session, looking at how each might affect the governor's administration, policies and programs.

Bills that are approved by the Legislature go back to the legal office for a second review, Hess said. Some bills may need additional research, while others will be vetoed by the governor.

"In the event that the governor wants to exercise his executive veto, we draft the

veto message for his signature," said Hess. "Or a legislator may call us from the floor during a debate. He has a bill that's being discussed. Is it unconstitutional? We will go into high gear to get an answer on that."

"All the while, we have lawsuits going through the courts and they have timetables for motions and replies. We handle all of those cases."

Working in the statehouse is not, however, without rewards.

"It is fascinating," Hess said. "It is eye opening to be involved in the laws that affect everyone's lives, to get a true picture of how things really work. The cases we handle are very interesting constitutional cases you don't see in a usual practice."

He also drafts bills for the governor. "There is a sense of pride of authorship that not many people get to experience," he said, "writing a bill that becomes the law of the land. It's very gratifying."

Hess, who has an aerial photo of UAH hanging in his office, says he received ideal preparation for law school and legal practice in UAH's history program.

"UAH offered a very fine History Department that placed an emphasis on research and original writing," he said. "I think writing and doing research are the two most important things an attorney does."

## Get carded... and help UAH



Save money on your MasterCard with a preferred interest rate and a reduced annual fee, and contribute to the UAH Alumni Association's Scholarship Program at the same time! First Alabama Bank offers the UAH MasterCard with:

- Annual fee of just \$10 for active members.
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- And 1% of all purchases is donated by First Alabama Bank to the alumni scholarship program!

For an application, call UAH Alumni Affairs at (205) 895-6085.



Regional Hospital, and Community Education for the Decatur city school system. She is a member of the Calhoun Community College Foundation, the Decatur Chamber of Commerce, the Decatur Women's Chamber of Commerce, and the Morgan County Volunteer Center.

**Carolyn Summerford ('86 B.S.B.A., Accounting & M.I.S.)**, of Hytop, Ala., is a CPA and partner in Devers, Summerford & Westmoreland, P.C., in Scottsboro. She is a member of the Alabama Society of Certified Public Accountants and the American Institute of Certified Public Accountants. She is a member of Hytop Holiness Church. She and her husband, John David, have one son, Allan.

**Virginia Lynn Brown Garrison ('87 B.S.E., Industrial and Systems Engineering)**, of Hartselle, tracks and budgets resources in the Program Control Office at NASA's Marshall Space Flight Center. She won a director's commendation award for quality improvement in 1991. She and her husband, Randy, have a son, Jordan.

**Steven Hill ('87 B.S.E., Electrical Engineering)**, is secretary/treasurer and co-founder of AEGIS, Inc., a Huntsville company that does research and development for

military and aerospace systems. He and his wife, **Andrea Pauli Hill ('90 B.S.B.A., Accounting)**, live in Madison.

**David Rogers ('87 B.A., Communication Arts)**, of Opelika, Ala., is writer/editor for East Alabama Medical Center in Opelika.

**Edward P. Van der Schalie ('87 B.A.)**, is stationed at the U.S. Navy's Naval Security Group in Misawa, Japan. He was recently promoted to Petty Officer, 2nd Class.

**Margaret Freeman ('89 B.S., Nursing)**, of Cullman, Ala., is marketing and communications director at Cullman Medical Center. She received the 1991 B.W. Bledsoe Kiwanian of the Year Award from the Cullman Kiwanis Club. She serves on the board of directors of the Cullman County Chamber of Commerce. She has one son, Michael.

**Greg Crowder ('90 B.S., Biology)**, of New Orleans, is a first-year pre-theology student at Notre Dame Seminary. He is a member of the Holy Spirit Parish in Huntsville, where he served with the St. Vincent DePaul Society.

**Tom Mauter ('90 B.S.E., Mechanical Engineering)**, of Center Star, Ala., has been

promoted to relief foreman at Champion International Corp.'s pulp and paper mill in Courtland, Ala. He and his wife, Cheryl, have three children, Cezan, Denver and Savannah.

**Angela Murphy ('90 B.A., English)**, of Urbandale, Iowa, is enrolled in the College of Podiatric Medicine and Surgery at the University of Osteopathic Medicine and Health Sciences in Des Moines.

**Darrell Prestridge ('90 B.S., Biology)**, of Lewisburg, W.Va., is a first-year student at the West Virginia School of Osteopathic Medicine. He is a member of the Undergraduate Academy of Sports Medicine, and the Christian Medical Society.

**Ellen Sosa ('90 B.S.B.A., Accounting)**, of Somerville, Ala., is assistant station manager for WAJF-AM in Decatur. She and her husband, Gary, have a son, Philip.

**Melissa Bagwell ('91 B.S.E., Electrical Engineering)**, of Huntsville, is an electrical engineer in the Air Defense Division of the Infrared Technology Branch of the U.S. Army Missile Command. She also operates the Performance Arts Dance Studio in Morgan City, where she teaches tap, ballet and jazz dancing.

## UAH Alumni Network

Help the UAH Alumni Association and UAH by completing this form and sending it to the address below.

Name \_\_\_\_\_

Address \_\_\_\_\_

Street

City

State

Zip

Phone: Work \_\_\_\_\_ Home \_\_\_\_\_

UAH Degree, Major, Graduation Date \_\_\_\_\_

Employer \_\_\_\_\_ Position/Title \_\_\_\_\_

News or Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Please let us know which of the following programs might be of interest to you:

- Student Recruiting     Career Networking  
 Higher Education     Government Relations

Clip and mail to: Editor, UAH, Alumni House 118, Huntsville, AL 35899



# Annual Giving Profile:

## Benjamin Goode

**Home:** Scottsboro, Alabama

**Major:** Mechanical Engineering

**Employment:** Co-op engineering aide at Sparta, Inc.

**UAH Activities:** Cheerleader, president of Sigma Nu Fraternity.

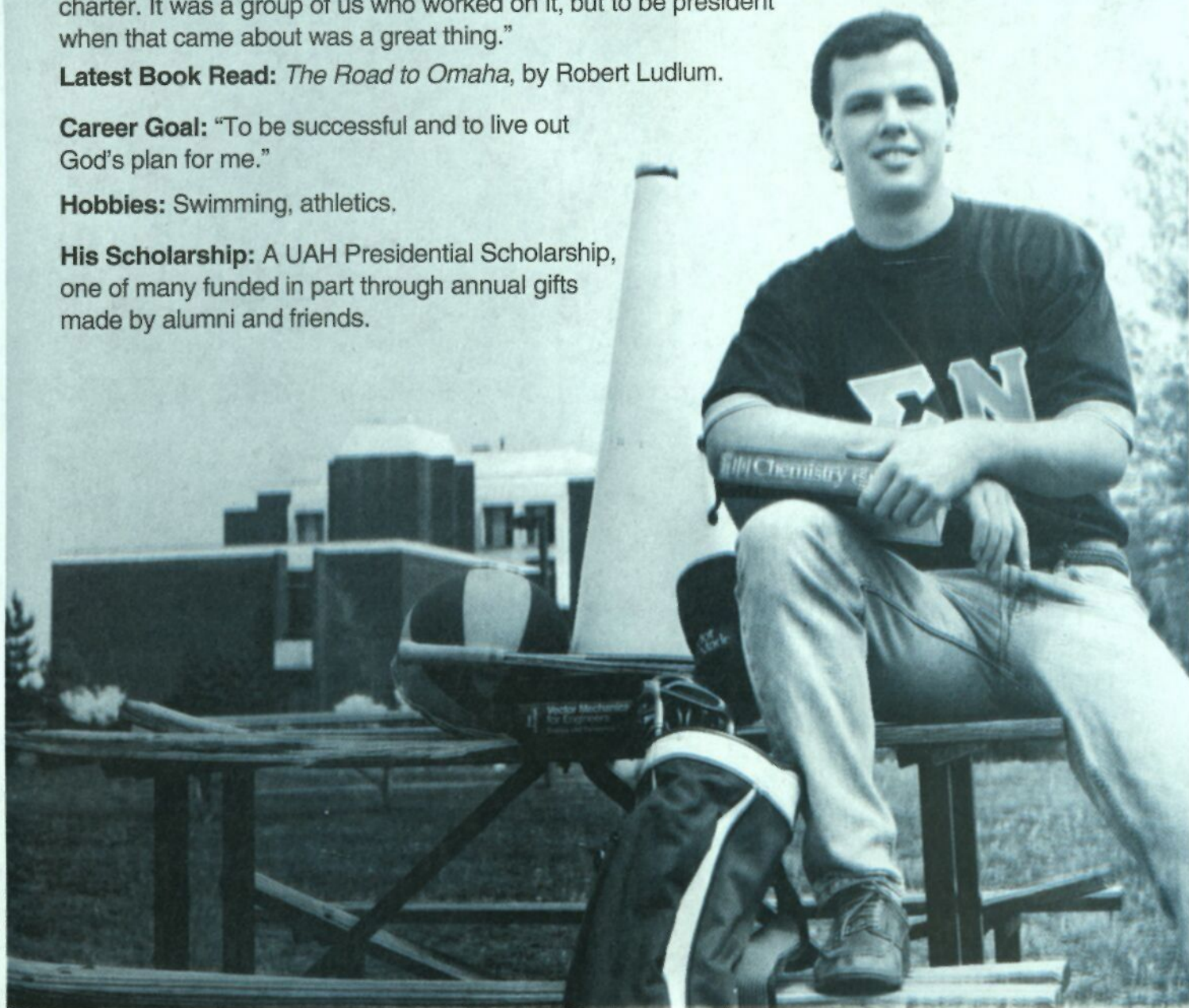
**Latest Accomplishment:** "That would have to be getting the fraternity charter. It was a group of us who worked on it, but to be president when that came about was a great thing."

**Latest Book Read:** *The Road to Omaha*, by Robert Ludlum.

**Career Goal:** "To be successful and to live out God's plan for me."

**Hobbies:** Swimming, athletics.

**His Scholarship:** A UAH Presidential Scholarship, one of many funded in part through annual gifts made by alumni and friends.





The parents of today's UAH students make many sacrifices for their children's educations. Many, including James and Roberta Kidd of Fayetteville, Tennessee, also go beyond the minimum requirements and participate in the UAH Parents Program.

During the first Annual Giving Fund campaign among parents, more than \$12,500 was pledged by 251 parents who are interested in adding a margin of excellence to UAH. Their contributions help ease the tremendous strain on UAH's academic program, library and faculty resources.

The Kidds are a special family at UAH: Seven of their eight children have attended UAH, six are graduates, and the youngest is enrolled for this fall. Mr. and Mrs. Kidd are proud of their children's academic records, and of the way they remained active in their churches and on campus as students.

James and Roberta Kidd make annual contributions to the university, and attend many UAH events throughout the year. UAH appreciates their contributions, and those of all of the parents of UAH students. For additional information about the UAH Parents Program, or other Annual Giving programs, call the UAH Development Office at (205) 895-6500.



Photo by Terrell Jensen

# UAH

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