



# Insights

College of Science

Alumni Newsletter

Vol. 3 Issue 1

## MacMahon's Musings

I have been trying to keep you informed about our constantly growing student body, especially the disproportionate increase in the College of Science. Such rapid growth puts pressures on us in a variety of ways. We run out of lab space and equipment, rooms are packed to the point where the crowding distracts students, and we need more teaching assistants. The state cannot cover the costs of all of our needs, so I have asked the departments to help by obtaining funds to be used for teaching from sources other than the university or the state.

As you know, we expect faculty members in the college to obtain research grants to support their personal research and that of their graduate students. Such grants help keep our faculty members current in their fields, provide employment for a large number of people, and accrue overhead dollars that can be spent by the university in furtherance of its educational and research objectives. It is less common, especially for the sciences, to accumulate sums of money that have been obtained specifically for the purpose of increasing the quality of education.

I am pleased to report that our faculty were successful beyond my expectations. During this calendar year, four departments in the College of Science have been awarded over \$2.4 million in grants to increase the quality of education for our students. These grants come from a variety of sources including the Howard Hughes Foundation, the National Science Foundation, and the US Department of Education.



Dean James A.  
MacMahon

**MUSINGS**

*continued on page 11*

## Willard L. Eccles Fellowship Benefits College of Science

The Willard L. Eccles Foundation, a philanthropic organization, has long been a supporter of higher education at Utah State University. Over the past several years, it has provided research funds for faculty who work on human welfare projects such as disease control, clean-up of environmental contamination sites, and food production in third-world countries. Fortunately for USU, the Eccles Foundation has extended their generosity through fellowships, now available to graduate students in the College of Science who desire to promote human well-being and health.

These fellowships target students with outstanding academic achievement who creatively and ambitiously seek to solve research problems. Applicants submit an essay identifying plans to better the world and a resume indicating special academic efforts, skills, and achievements. Each fellowship provides \$15,000 a year for three years, thus enabling the recipient to focus talents and time on graduate studies and thesis research projects. The Willard L. Eccles Foundation awards one fellowship each year.

James MacMahon, dean of the College of Science, believes the fellowships lure academically superior graduate students to USU. "The fellowship is an investment by the Eccles Foundation in helping us attract the best students, and by attracting really good students, the faculty are able to do a lot of really good research." MacMahon knows others outside of Utah often don't realize that USU already has a great science program, students, and faculty, so he looks forward to the



Thomas Buckley studies the mechanisms that govern stomatal movements.

far-reaching impact the Eccles fellowship recipients may have. As they go on to continue their research, publish papers, and work, USU's reputation as an excellent educational institution will grow.

One Eccles Fellowship recipient is **Thomas Buckley**. While vacationing in Utah last summer, he was impressed with USU's graduate program in Biology. "There definitely seemed to be opportunities for working in different

### Inside Insights

Alumnet Responses .....	10
Alumni Highlights .....	8
Eccles Fellowship .....	1
Faculty & Student Awards .....	4
Graduation Activities 1994 .....	6
New Dept. Head .....	3
New Faculty .....	9

**FELLOWSHIP**

*continued on page 2*



## ECCLES

continued from page 1

disciplines with cooperation from various departments, and that's rare." Buckley, who graduated from James Madison University in Virginia, studies biology, math, and chemistry. Currently his research centers on the mechanisms that govern stomatal movements in plant leaves. After constructing models of the stomata, Buckley tests his mathematical theories against actual stomata in the laboratory, thereby extracting greater knowledge about their movements.

Buckley's research reflects a small part of his great interest in and concern for our natural surroundings. "I've always wanted to help the environment." Through educating people and helping them understand biological systems, many of our environmental and even social problems could be solved, ac-

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*"We've become so powerful in being able to control our environment that we're building up a potential for danger for our future. We must take advantage of our own technology to solve our problems."*

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David Bouchard investigates the origin of water in local wells.

cording to Buckley. "As a society, our lack of understanding of natural systems limits our ability to interact with them in a positive way. If we knew we were damaging the earth, we wouldn't do it. We've become so powerful in being able to control our environment that we're building up a potential for danger for our future. We must take advantage of our own technology to solve our problems."

Another fellowship recipient is **David Bouchard**. A graduate student in geology from Maine, Bouchard emphasized that the fellowship was instrumental in bringing him to Utah State. While here, his research will focus on conducting an isotopic study of groundwater taken from local wells. If his theory is correct, his research will indicate that water in local wells comes from the surrounding mountains and deltas rather than from the Bear River. Bouchard's findings could prove invaluable to local farmers who have not been able to irrigate because of water rights issues.

Through this research and other graduate work, Bouchard hopes to obtain a thorough scientific background in preparation

for his goal—to become the Secretary of the Interior or the head of the Environmental Protection Agency. He believes that, as a public servant, he can have the greatest impact on the most people. "Hopefully I'll contribute to society in some minute way. This fellowship is really going to help me."

For recipient **Douglas**

**Goodwin**, the Willard L. Eccles Fellowship also translates to direct help for the environment. With this fellowship, plus additional support through a grant from the National Institute of Environmental Health Sciences, Goodwin studies the chemical mechanisms of lignin peroxidase, an enzyme secreted by

white rot fungi. This fungi possesses a unique ability to degrade lignin, one of the most chemically difficult parts of wood to break down. Therefore, Goodwin and his fellow researchers hypothesize that white rot fungi may also degrade environmental contaminants in the soil such as DDT, TNT, and other toxic materials. Goodwin's research contributes to the overall study of how the fungi degrades lignin and pollutants. "Our group hopes that these and other findings will lead to a practical method for degrading environmental pollutants in actual waste sites."

Goodwin was pleasantly surprised to discover he enjoys research. "Since I started my research, I've realized there's something neat about working on things that no one else has thought of before. Sure, people work on the same thing, but each person comes up with a different approach."

The College of Science appreciates the generosity and commitment of the Willard L. Eccles Foundation. Its contribution of research funds as well as fellowships will greatly benefit humanity. "It is this kind of gift that helps us do things we could not possibly do with state funds," said MacMahon. Many thanks go to the Willard L. Eccles Board, whose current members are Ruth P. Eccles, William H. and Barbara Coit, Stephen G. and Susan Denkers, Stephen E. Denkers, and William E. Coit, all good friends of the College of Science. ♦



Douglas Goodwin studies white rot fungi in his effort to help clean up the environment.



# Department of Biology Selects Brodie as New Department Head

The College of Science welcomes **Dr. Edmund "Butch" Brodie, Jr.**, as the new head of the Department of Biology. A native of Oregon, Brodie came to USU from the University of Texas, Arlington, where he served as department chair for nine years. He has also taught at Adelphi University in Garden City, New York, and Clemson University in Clemson, South Carolina. Brodie received an undergraduate degree in biology from the Oregon College of Education and MS and PhD degrees in zoology from Oregon State University.

With a strong interest in amphibians and reptiles, Brodie's research currently centers on behavioral ecology and evolution, specifically anti-predator mechanisms in salamanders. Certain salamanders have evolved toxins or distasteful skin secretions with accompanying behavior patterns to utilize these chemicals. "A main interest of mine in the last few years is doing field work in Guatemala, studying the behavior and taxonomy of animals in the rainforest areas that are disappearing."



Dr. Edmund Brodie, Jr.

Brodie always includes undergraduate and graduate students in his research projects; in fact, most of his publications are co-authored with students. Not only does Brodie recognize that collaborations offer students a better educational experience, but he also finds working with other people simply "more interesting."

On a recent trip to Guatemala, Brodie's group discovered a new lizard species in a threatened oak forest. This lizard will probably be extinct soon since local inhabitants are quickly cutting down the forest to provide charcoal. Brodie notes with sadness that such finds make his research both terrifically exciting and terribly frustrating. "This is a situation for which there are no answers. We just have to learn as much as we can before the oak forest is gone. There is never enough time or money to do all of the work I would like to do."

Brodie's numerous publications include an article, "Tetrodotoxin resistance in garter snakes: An evolutionary response of predators to dangerous prey," co-authored by his son, also a research biologist. "It is unbelievably satisfying to have a son with the same interests as my own," said Brodie. He and his wife, Judy, also have a daughter who is a student at Oregon State.

When asked which of his publications brought him the most pleasure, Brodie responded without hesitation, "The book I did for Golden Books." *Venomous Reptiles*, a pocket reference book, has sold more than 80,000 copies. "More people have read that than all of my other publications put together!"

Brodie's research has taken him throughout the world where, along with doing field work, he has collected more than 300 masks. Several of these masks adorn his office walls, including one of himself, complete with cigar, created by some of his students. The remaining masks fill the walls of his home. "I have a very patient wife," Brodie noted.

Brodie is excited to serve as biology department head. With the tremendous growth USU has experienced in the past few years—there are now more than 800 biology majors—he sees providing a quality education as the main challenge facing the department. "Our present challenge is to be able to deliver the same quality of education to more students given a fairly level amount of resources. This department is committed to quality education—that's one of the things that attracted me to USU."

The College of Science is pleased to welcome Dr. Brodie and wishes him well in his endeavors. ♦

## The College of Science Congratulates . . .

### Biology

**Ted Evans**, tenure and promotion to Associate Professor  
**Keith Mott**, promotion to Professor  
**Greg Podgorski**, tenure and promotion to Associate Professor

### Computer Science

**Scott Cannon**, promotion to Professor

### Mathematics and Statistics

**Adele Cutler**, tenure and promotion to Associate Professor  
**Richard Cutler**, tenure and promotion to Associate Professor  
**Joe Koebbe**, tenure and promotion to Associate Professor  
**Zhi Qiang Wang**, tenure and promotion to Associate Professor

### Physics

**Howard Demars**, promotion to Associate Research Professor  
**JR Dennison**, tenure and promotion to Associate Professor



# The College of Science Honors

## Teacher of the Year



D. Andy Anderson

**D. Andy Anderson**, a principal lecturer in the Department of Biology, was named Teacher of the Year in the College of Science. Anderson has been a member of USU's faculty for 11 years. When

asked why he enjoys teaching, he stated, "The thing I like the best about my teaching position here, first and foremost, is that the students are nice people."

Anderson elicits the best in his students by creating a productive learning environment. "When you get up and tell students information in biology, you're asking them to learn something. If you want them to do that, they have to know why it's important to you."

The first day of each class, Anderson tells his students about himself and why the subject is important to him. "Professors should be role models for learning, and to do that you have to tell students who you are. You have to be somebody they can relate to."

Anderson uses storytelling as a teaching tool and to foster a positive relationship with his students. "I am convinced that one of the best learning methods is telling stories. Some of the stories I tell are about myself, my family—people."

Anderson teaches a wide variety of classes in microbiology and physiology. Fall quarter, he also taught a new class, Biology 310, Bioethics.

Concerning his award, Anderson stated, "In doing a job that I truly like, it's nice to be recognized for something that I enjoy anyway."

## Researcher of the Year

**Homer F. Walker**, a professor in the Department of Mathematics and Statistics, was selected as Researcher of the Year for the College of Science.

Concerning Walker's research contributions, his department head, Jerry Ridenhour, stated, "The methods on which Walker has worked have been

undergoing rapid development in recent years and have already achieved notable scientific and industrial successes, e.g., in aircraft dynamics modeling at Boeing and in semiconductor modeling at Bell Labs. He has made major contributions to the development of these methods."

Walker's current research focuses on numerical methods for very large-scale linear and nonlinear systems, especially those that arise from partial differential equations used to model physical phenomena. He first became interested in this area in the mid-80s while at the Lawrence Livermore National Laboratory and while conducting research in Houston. Walker stated, "This is interesting work not only because the systems are so big—their size alone is enough of a challenge, but they have some interesting mathematical properties that can be explored and perhaps exploited."

Walker has been a member of USU's faculty for nine years. He currently teaches a new course related to his research in large-scale systems.

When asked about his career in mathematics, Walker stated, "Since I was a kid, I always felt mathematics was interesting and important." His love and enthusiasm for mathematics make him an asset to the College of Science.



Homer F. Walker

## Advisor of the Year



Vicki H. Allan

**Vicki H. Allan**, a professor in the Department of Computer Science, was named the College of Science Advisor of the Year.

As an undergraduate advisor in the department, Allan established an innovative system of electronic advising for her students. Every two or three

weeks, she sends electronic mail to each of her advisees and informs them of current departmental and college issues. She also informs them of pertinent job information. Through this system of electronic advising, she efficiently keeps all of her advisees better informed.

Department Head Donald Cooley said, "I have never found one of [Allan's] advisees to be anything but well informed on academic and graduation issues."

Allan enjoys advising students and helping them prepare for future careers. When asked what she likes the most, she stated, "It's exciting to see what they're thinking and see them succeed." Allan knows the key to success is persistence—"I try to emphasize how important it is to stick with it."

Allan's students appreciate the help she offers. "Dr. Allan is a very encouraging and motivating person and takes great interest in the work of her students. I am sure that her other students would agree with me when I say she is an extremely good advisor," one student remarked.

Allan's peers share her students' sentiments. According to one colleague, "Every advisor is expected to provide the basic guidance students need to complete a degree. Vicki does much more; her 'advice' is certainly eclectic. Vicki advises students on being good students and making wise choices, not just on completing requirements. She helps them understand what it means to be computer scientists, not just CS students."

## Graduate Student of the Year

**Gretchen G. Moisen** was selected as the College of Science Graduate Student Researcher of the Year.

Highly respected by her colleagues, Moisen, a graduate student in the Department of Mathematics and Statistics, helped conduct research in applied statistics, with particular application to forestry and the assessment of map accuracy for environmental monitoring.



Gretchen G. Moisen



# Outstanding Faculty and Students

In praise of Gretchen's accomplishments, a faculty member stated, "Usually when writing a letter of recommendation for a good student, I make a comment to the effect that I think the student will be a good researcher. With Gretchen I use the present tense: She is already an established and successful researcher. I believe she has the potential to become a national leader in her chosen research area."

Another faculty member noted, "[Moisen] adds significantly to the research environment among applied statisticians in the department."

Moisen's contributions reach beyond USU. She has been invited to present her work at several professional conferences. She is currently working with Kevin Hestir, Richard Cutler, and Tom Edwards, writing a pre-proposal to the EPA to pursue further research topics in environmental monitoring.

Moisen's research embodies "a blend of statistical theory and application having extreme relevance to accuracy issues, particularly those related to large-scale attempts to quantify uncertainty in national biological resources."

Under the direction of Assistant Professor Richard Cutler, Department of Mathematics and Statistics, Moisen is currently writing a PhD dissertation.

## Graduate Student Teacher of the Year

### Cinnamon

**Hillyard** was named the College of Science Graduate Student Teacher of the Year.

Throughout her graduate studies, Hillyard has been involved in two major research projects. She first

developed a software package within the MAPLE software to use for variational calculus. Her master's thesis was written based on this research. The project Hillyard is now working on relates to the numerical approximation of solutions of hyperbolic conservation laws and will result in her PhD dissertation.



Cinnamon Hillyard

Concerning her experience with her master's thesis research, Hillyard stated, "My work on a master's thesis enabled me to become proficient with various mathematical computer packages. I have often used these packages to present examples and graphs of the principles that I am currently teaching. This visual aid, although requiring extra preparation, enhances my lectures."

As a graduate student, Hillyard has taught a number of math courses, including Math 101, 105, 106, 215, and 220. She is currently teaching Math 222.

Hillyard was the only graduate student to teach a pilot course of Math 220 using graphical calculators. A faculty member stated, "I believe that was a real indicator of the respect our department has for Hillyard's prowess as a mathematics teacher. Hillyard willingly took up the challenge, worked very hard using new instructional techniques, and made a success of her course."

Hillyard states, "To be successful in both teaching and research, one must keep a balance. This can be a difficult task, but if they are balanced effectively, they can and do enhance each other. I have learned such skills as thinking on my feet and being able to communicate mathematics in a coherent manner. The development of these skills improved my research writing and presentations."

Hillyard is currently writing a PhD dissertation under the direction of Assistant Professor Joseph Koebbe, Department of Mathematics and Statistics.

## Valedictorian

The College of Science congratulates **Ronald G. Call** for being selected as the 1994 Valedictorian.

Call graduated with a 3.96 GPA with a composite teaching major in biological science and a minor in chemistry. His plans include teaching at the high school or middle school level and continuing study in graduate school.

Call was on the Dean's List and was a member of Blue Key and Phi Kappa



Ronald G. Call

Phi Honor Societies. He also worked as a technician in Dr. Steve Aust's lab, using fungi to degrade toxic chemicals.

In addition to his studies, Call likes to draw, paint, garden, read, and play racquetball. He also enjoys being an amateur radio operator.

Call selected Assistant Professor Bradley Kropp, in the Department of Biology, as his escort for the university and college graduation ceremonies.

Since graduation, Call has been teaching science in a Utah high school, putting his excellent education to good use.

Call appreciates the support of his wife, Brenda, and their son, Daniel.

## Scholar of the Year



Travis R. Taylor

**Travis R. Taylor** has been selected as the Scholar of the Year in the College of Science.

During his years at USU, Travis was involved in the Get Away Special Program (GASP).

Sponsored by NASA, the program gives students the opportunity to put experiments aboard the space shuttle. While involved in GASP, Travis designed an experiment to test the effects of gravity on molecular diffusion. He also participated in undergraduate research on two organosynthetic projects with Eric Edstrom's lab.

This past year, Travis worked as a teaching assistant in the Department of Chemistry and Biochemistry. Through his experiences as a teaching assistant, Travis became interested in making the theories of chemistry understandable to students and is considering a career in academics.

Along with his studies, Travis enjoys mountain biking, theatre, and reading humorous biographies of famous scientists. Travis thanks all the faculty members at USU who were involved in his educational experiences. He also thanks the many students who have "catalyzed his intellectual growth and development."

Travis now attends Berkeley, studying molecular reaction dynamics. ♦



# Faculty, Alumni, and Students Enjoy Commencement Activities

Photos by Eugene Underwood



A Golden Aggie, 1944 USU alumnus, visits with Dean MacMahon.



A graduate's family enjoys refreshments at the graduation open house.



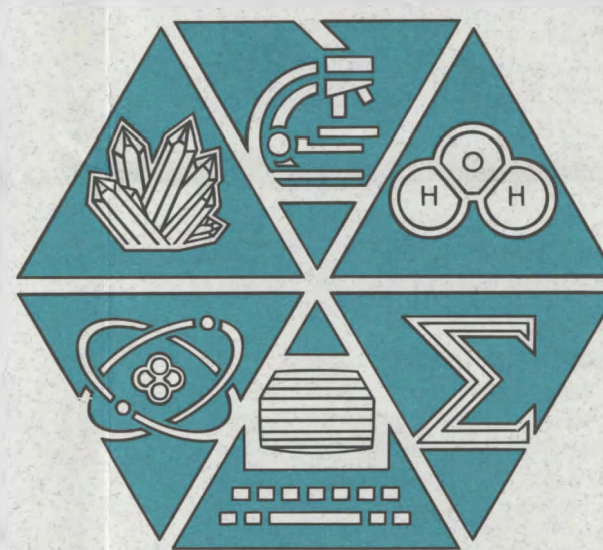
An excited graduate and her family reminisce.



College of Science Senator, Kris Madsen, receives recognition from Dean MacMahon.



Chemistry major Travis Taylor receives the Scholar of the Year Award from Dean MacMahon.



A beaming graduate celebrates with friends and family.



Faculty members Butch Brodie, Joe Chapman, and Jim Shaver visit following the Awards Program.



Mike Christiansen and Eric Nelson of the Lightwood Duo entertain with a variety of music.



Gretchen Moisen receives the Graduate Student Researcher of the Year Award.



# Alumni Highlights

## Two Alumni Recognized for Their Achievements

USU alumnus **Randy L. Bell** has greatly improved the quality of many lives through his exemplary research and discovery efforts.

Bell attended USU from 1969 to 1973 on a National Merit Scholarship from the University Club. He has many good memories of his education at USU and feels that the level of teaching "was superb." He particularly remembers Chemistry Department Head Dr. Garth Lee, who advised him to go to graduate school in biochemistry.

Bell followed this counsel and feels that it has served him well. During his senior year, Bell served as the College of Science senator, and he received the Outstanding Graduate award in the College of Science in 1973. From USU, Bell went on to the University of Oregon, where he received a PhD degree in chemistry in 1977.

After serving a three-year post-doctoral fellowship at the Department of Hematology, Washington University Medical School, Bell's drug discovery career took off. He began with Riker Pharmaceuticals in St. Paul, Minnesota, and then joined Abbott Laboratories, Abbott Park, Illinois, in 1987.

His responsibilities at Abbott include managing a drug discovery team working in biochemistry and pharmacy. This team seeks to develop new anti-inflammatory and anti-allergic agents.



Randy L. Bell

USU from 1971-1973, live with their five children in Lindenhurst, Illinois.

They recently discovered zileuton (generic name), which will be marketed as Leutrol pending FDA approval. Zileuton has been shown to be effective in asthma and allergic rhinitis patients, and is in a new class of agents called leukotriene modulators. Interestingly enough, Bell has suffered from asthma since childhood and currently takes zileuton, with positive results.

He and his wife, Joann Johnson Bell, who attended

USU alumnus **Donald J. McGraw** typifies the standard of excellence for which the College of Science strives. His professional experience, honors, and community involvement are truly noteworthy.

Donald received an MS degree in bacteriology and public health from USU in 1967. His major professor was Dr. Winslow Whitney Smith (now Emeritus). He

held a research assistantship for one year and a

teaching assistantship for another year in the areas of general, food, and aquatic microbiology.

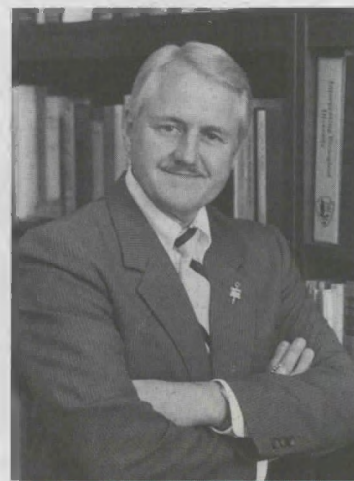
He went on to get a PhD degree in biology with history of science as the major and minors in both phycology and microbiology at Oregon State University.

His varied professional experiences include working for the Civil Service at the US Army Dugway Proving Ground in Utah and teaching courses in ethology, oceanography, marine biology and biology, microbiology, botany, genetics, and history of science at several colleges and universities.

McGraw has also worked for the US National Park Service as a Ranger-Naturalist in California and Arizona and served as Chief Sanitary Microbiologist for the National Shellfish Sanitation Program of the US Public Health Service in Davisville, Rhode Island.

Along with his many activities, McGraw has also authored more than twenty major and minor articles, reviewed more than twenty-five books, and orally presented many papers.

Extensively involved in civic affairs, McGraw currently serves as Chairman of the Board of Directors of a historical association in cooperation with the National Park Service. Since September 1988, McGraw has also been the associate provost and adjunct in Biology at the University of San Diego. ♦



Donald J. McGraw





# Two Departments Add New Faculty

## Department of Physics Welcomes Dr. Jill Marshall



Dr. Jill Marshall

**Dr. Jill Marshall** joined the Department of Physics as an associate professor in August, filling a newly-created position which emphasizes science education research. "I feel very strongly that this is an important job, particularly teaching people who are going to be teachers," stated Marshall. "They will be the first teachers of all of our future scientists. Every Einstein, every Marie Curie, is going to be in third grade at some point . . . and either be turned on to science or turned off to science."

Marshall received a BS degree from Stanford University and a PhD degree from the University of Texas at Austin. Her graduate research at the Los Alamos National Laboratory Meson Physics Facility focused on polarized proton scattering. Specializing in instrument development for space research, Marshall spent the last 10 years at the Southwest Research Institute in San Antonio, Texas, and was part of the design team for the Cassini Saturn Orbiter Plasma Spectrometer, scheduled for launch in 1997.

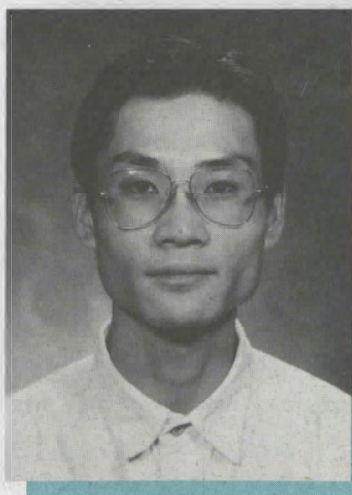
Marshall has contributed greatly to science through her research; however, she is excited to leave the lab and enter the classroom. While she agrees that research is important, Marshall believes she can have a greater impact as a teacher. "I think I've changed a lot more lives when I've gone into classrooms. There you have a much broader effect than the small community that actually gets the knowledge that your research has produced." Marshall particularly enjoys student interaction in the classroom. "That's the great joy of it, that you really can see them respond when they understand. You feel like you have immediately done some good."

One of her goals is to bring more women into science, a field which has long been occupied by men. "You have the same people, thinking the same way, for so many years, it's very hard to break out of the mold and see things differently. Women can bring a different approach to science problems." To reach her goal, Marshall developed the Find Your Wings math/science exploration program for elementary school girls, and the program has since been adopted by the Girl Scouts of America.

In addition to teaching, Marshall will contribute ideas for the revision of USU's general education program. She recommends a class which combines science, math, and writing. This provides greater opportunities for students to apply abstract concepts to actual physical phenomena, and according to Marshall, learning takes place in the application of knowledge.

The College of Science welcomes Dr. Jill Marshall. We look forward to her contributions.♦

## Xiadong Zheng Joins the Department of Mathematics and Statistics



Dr. Xiadong Zheng

**Xiadong (James) Zheng** joined the Department of Mathematics and Statistics in September 1994 as an assistant professor. Zheng came to the United States from Fujian, a southern province of China, seeking an education and profession in statistics. "In China, most universities have only undergraduate classes in this subject. It seems that statistics is not very important in China because, so far, they use very simple applications. Statistics is very good in the states."

Zheng earned a PhD degree in statistics from the University of Wisconsin-Madison in 1994. As part of his graduate work, Zheng lectured there for a year and a half in the Department of Statistics. Zheng relates well to his students; he remembers the struggles of gaining a formal education. "Being a student is not easy. You have to support yourself. At the same time, you need to study. It's not easy, but I think that it's a good thing here. In China, undergraduate students do not work. They just get the money from their parents. I think it is good here that students work and, at the same time, study."

When asked why he came to USU, Zheng replied, "It's nice here. People are nice." He was attracted to the department because he felt he could make a contribution.

Zheng has acted as referee for the *Proceedings of the American Mathematical Society* and the *Journal of the American Statistical Association* and published four papers in refereed statistical journals. He also worked as a consultant for the National Wildlife Research Center on the

Bald Eagle and Mallard Duck Projects.

"Statistics is amazing. It has many applications," says Zheng, who enjoys teaching. In class, he uses interesting, current information to show his students that "statistics is not just several dry numbers. In order to teach, you have to show people that the subject is useful."

The College of Science is pleased to have Dr. Xiadong Zheng as an assistant professor.♦



# Alumn et Responses

**Steven R. Allen** (BS 1983, Biology) received an MD degree in 1987 from the Medical College of Wisconsin. He now works as a clinical research manager in Stockholm, Sweden, where he lives with his wife, Marie, and their three children. Allen enjoys gardening, computers, and reading.

**Larry C. Anderson** (PhD 1971, Parasitology) is in his 23rd year of teaching at the University of Detroit School of Dentistry, Department of Basic Sciences. He teaches gross anatomy and head and neck anatomy as well as consulting in the oral surgery residency program at various hospitals in metropolitan Detroit. He just completed a sabbatical at the University of Otago, Dunedin, New Zealand, during the spring and summer of 1994.

**Vivian Telford Anderson** (MS 1970, Applied Technology; PhD 1975, Applied Technology) has taught college for 22 years, the past 8 at the University of Michigan-Dearborn. She currently coordinates and teaches introductory biology. She married Larry C. Anderson (see above) and together they have two daughters.

**Edward E. Burgoyne** (BS 1941, Chemistry) received an MS degree in 1947 and a PhD degree, both in chemistry, from the University of Wisconsin-Madison. He enlisted in the Army Air Corps for training and service as a weather officer and served in the Southwest Pacific theater, then Burgoyne became a captain in 1946 and a USAF Reserve Lt. Colonel in 1964. He retired from the service in 1978. Burgoyne worked as a research chemist with Phillips Petroleum from 1949-51, taught in the Department of Chemistry at Arizona State University-Tempe from 1951-1983, has received three patents, and has also published a textbook of organic chemistry. He and his wife, Mary Ida Ream, live in Tempe, Arizona, and have four children and twenty grandchildren.

**Ralph J. Hervey** (MS 1940, Soil Science) retired in 1970 after many years as an associate professor of soil microbiology at Texas A&M. He then worked as an epidemiologist at Scott & White Hospital in Temple, Texas, until 1978 when he became an associate of the Tropical Science Center in Costa Rica. His research has focused on human over population and ecological deterioration problems.

**Charles C. Hess** (BS 1968, Zoology/Premed with a Secondary Ed Science Teaching Certificate) graduated from USU during the height of the Vietnam war, so he joined the Air Force and was commissioned in early 1969. He flew the B-52 bomber, worked in intelligence for seven years, was the commander and professor of aerospace studies at Montana State University for three years, and concluded his career as the inspector general at Sheppard Air Force Base in Texas for the last four years. After his retirement, Hess and his wife, Marlean Neville, and the four of their seven children who still live at home moved to Merced, California, where he now teaches math at Merced College.

**Alan D. Holt** (BS 1977, Public Health; AS 1981, Nursing) went on to receive two additional degrees in 1984: an MA degree in physiology from the University of Missouri-Kansas City and one from the Truman Medical Center School of Nurse Anesthesia, also in Kansas City. He and his wife, the former Shelly Crocket from River Heights, Utah, live with their five children in Preston, Idaho, where Holt is self-employed as a freelance anesthetist.

**Steven B. Hooper** (BS 1974, Predental Biology) earned a DDS degree from the Baylor College of Dentistry in 1979 and now has his own practice in Panguitch, Utah. He married Ilene Krebs, also a USU graduate, and they have four children.

**Larry L. Larson** (BS 1972, Zoology; MEd 1984) began his teaching career in Idaho Falls, where he taught for four years. He has taught in the Cache County School District since 1977. Larson received the Governor's Medal for Science and Technology, has served as director of the Science Olympiad, and now presides over the Utah Science Teacher's Association. He and his wife, Arlene Griffin (BS 1972), have seven children and live in Richmond, Utah.

**Daniel B. Madsen** (BS 1969, Zoology) graduated from the University of Utah Medical School in 1974 and completed training at Rutgers University in New Jersey and LDS Hospital in Salt Lake City. He practiced internal medicine in Price, Utah, for 14 years before moving to St. George, Utah, in 1990. He married Jane Spence and they are the parents of seven children. He enjoys jogging, outdoor activities, and reading.



## MUSINGS

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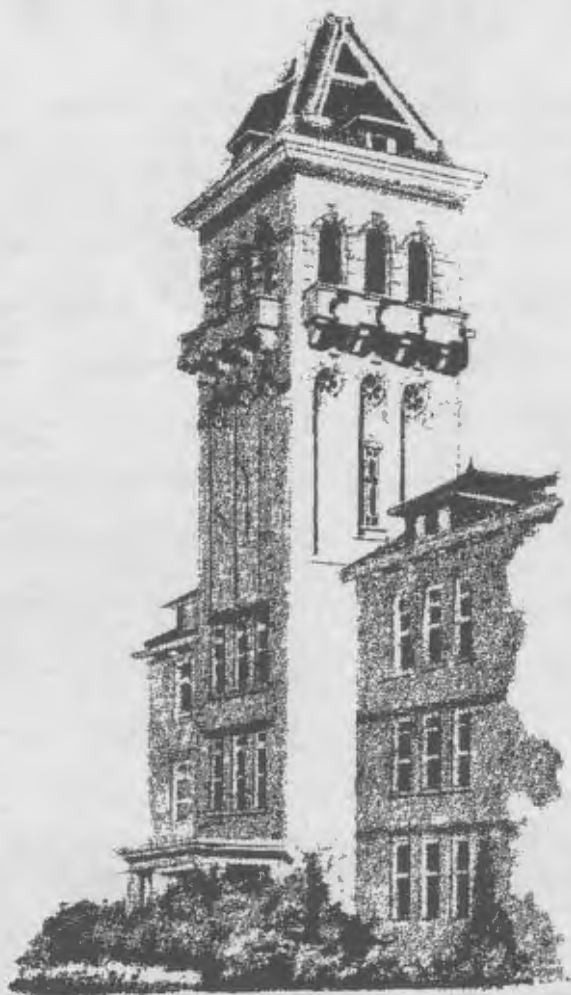
In the Department of Chemistry and Biochemistry, two grants, totaling \$384,000 have been obtained to purchase major equipment that would not be available through state funds or through donations from alumni. Both of these instruments serve undergraduate, as well as graduate students.

The Department of Mathematics and Statistics has developed an entire computer laboratory for the more efficient and modern teaching of mathematics, using a grant of \$108,000.

Our Department of Computer Science has been attempting to develop a computer literacy program that would affect every high school senior who would like to come to Utah State and, hopefully, every student who graduates from USU with a baccalaureate degree. In order to develop an interactive testing program, based on the principles of artificial intelligence, they have obtained two grants, totaling \$517,000, to develop a series of testing modules and a CD-ROM tutorial program.

Finally, there is the significant \$1.4 million grant from the Howard Hughes Foundation that has been awarded to the Department of Biology. These funds will be used to revamp parts of the undergraduate curriculum, to obtain equipment for teaching laboratories, and, significantly, to develop an outreach program that will help Native Americans obtain a better grounding in the sciences, especially the life sciences.

All in all, I think you will agree with me that this suite of awards speaks well for the quality of the faculty and especially for their dedication to the educational activities of their departments, the college, and the university.



## ALUMNET RESPONSES

*continued from previous page*

**Frank J. Nemanich** (BS 1972, Wildlife Fisheries; BS 1981, Environmental Health) went on to East Carolina University in Greenville, North Carolina, where he received an MS degree in environmental health. He is now president of West Slope Environmental, Inc., in Grand Junction, Colorado, where he lives with his wife, Penny. West Slope specializes in Phase I environmental assessments. Nemanich has two stepsons and two grandchildren.

**Rhonda Munk (Gillenwater) Pikelnny** (BS 1964, Medical Technology) works for the Group Health Cooperative of Puget Sound as quality control/quality assurance coordinator for laboratory services for 30 hospital, clinic, and point-of-care laboratory sites. She is a member of the Washington State Healthcare Reform Laboratory Initiative Issues Steering Committee and is also the 1994-95 Washington State Society for Clinical Laboratory Science president. In her spare time, she oil paints, dances, and vacations in Cabo San Lucas, Mexico.

**Denise Wolf Ramirez** (BS 1985, Secondary Ed/Biology; MEd 1992, Deaf Ed) taught life science for two years at the middle school level, then taught high school biology for one-half a year before returning to USU for an MEd degree. She currently teaches high school chemistry and biology at the California School for the Deaf in Riverside, California.

**Kevin A. Seeley** (BS 1985, Biology; MS 1988, Biology/Microbiology) received a PhD degree in botany/molecular, cellular, and development from Iowa State University in 1991. From there he took a post-doc at the Plant Gene Expression Center to study light-regulated signal transduction. Following a one-and-a-half-year research term, he took a second post-doc at the University of California-Berkeley to study cell cycle control in plants. When finished cloning the STR gene, he hopes to get an academic position.♦



# A L U M N E T

Dear College of Science Alumni and Friends,

We were thrilled by the number of responses received via ALUMNET in the last few months. Your standard of excellence, both personal and academic, has continued beyond a university education, and we are proud to be part of that success. Please keep us informed of your activities. Responses received after the printing deadline will be included in the next newsletter. If you have not written yet, we look forward to hearing from you soon.

Name \_\_\_\_\_

USU Degree(s) (year) \_\_\_\_\_

Other Degrees (year, school) \_\_\_\_\_

Address \_\_\_\_\_

About Yourself \_\_\_\_\_

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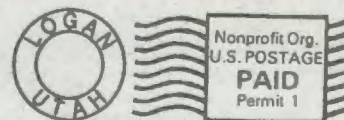
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