

# Geography Connection

University of Utah Department of Geography

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## Letter from the Chair



*Dr. Tom Kontuly*



Academic year 1998–99 was an exciting time for the Department of Geography. In the course of the conversion from 10-week quarters to 15-week semesters, we revised both undergraduate and graduate core requirements. The department continues to emphasize earth systems science,

urban/economic systems, and geographic information science in teaching and research.

Dr. Roger McCoy retired from departmental service in June 1998 and Tom Cova and Rick Forster joined us in January 1999. Tom (finishing his Ph.D. from the University of California – Santa Barbara) specializes in Geographic Information Systems (GIS), urban modeling, transportation geography, and natural and technological hazards. Rick (with a Ph.D. from Cornell University) focuses on remote sensing, quantitative methods, and the application of radar interferometry to studies of glaciers and ice caps.

Graduate students and faculty instituted a fund to start an endowment in the name of Dr. McCoy, with the money to be used for undergraduate or graduate student education in geography. We are close to making the endowment minimum. As an endowed fund, the principal is invested and the earned interest provides money for student assistance. By supporting an endowment fund, you ensure that your gift will continue to benefit students in our department. If you are interested in donating to this cause, please send your check in the enclosed envelope and mark the appropriate box.

Because of legislative budget cuts this year, the department is struggling to keep up with student needs. If you would like to help us with a donation this year, please know that no matter what the amount, students desperately need and appreciate your help. Your contributions truly make the difference between a good department and a great one. Gifts of all sizes have a permanent impact and you have my personal guarantee that all money received will be used to meet student needs. Just mark the box of your choice on the envelope and we will use the money as you have designated. Remember, this is tax deductible and the university will send you a receipt for your records.

The department currently enrolls 91 geography majors, 29 urban planning majors and 49 graduate students. If you are interested in learning more about the department, check out our home page at [www.geog.utah.edu](http://www.geog.utah.edu), or e-mail me at [kontuly@geog.utah.edu](mailto:kontuly@geog.utah.edu).

*Tom Kontuly, May 1999*

## GIS Certificate Program Blends Geography and Computer Science

The Department of Geography has created a new Geographic Information Science Certificate Program that integrates coursework in geography and computer science. The interdisciplinary certificate, a cooperative venture between the geography and computer departments at the University of Utah, provides a solid education in the geographic and computer science foundations of GIS as well as the geospatial analytical and computer skills increasingly demanded by employers.

"We're very excited about this new program," says Harvey Miller, Associate Professor of Geography and Director of the Geographic Information Science Certificate Program. "We've had a tremendously positive response from the computer science department as well as from all levels of the university administration. The university is very supportive of geographic information science and views GIS as a cross-cutting source of teaching and research excellence."

Robert Kessler, Associate Professor and Chair of the computer science department, concurs: "It is clear to us that this certificate program will allow students to become highly marketable GIS experts."



*Dr. Harvey Miller*

In addition to the strong integration between geography and computer science, the GIScience Certificate Program has other innovative features. One feature is three emphasis areas that allow students to tailor their educational experience to their intended GIS career path. An Emphasis in GIS Application provides students with the skills required for solving common applications of GIS and related geocomputational techniques. This emphasis combines skills and knowledge of three domains: i) substantive geography and geospatial analytical techniques; ii) GIS skills obtained through advanced GIS coursework, and; iii) software skills for solving computational problems in basic science and application settings.

An Emphasis in GIS Application Development produces GIS professionals who command the basic skills in the applied GIS emphasis plus the skills required for developing new GIS applications. Additional knowledge and skills include: i) software engineering tools; ii) knowledge of algorithms and data structures; iii) data modeling and database design, and; iv) interface design or scientific visualization principles. These topics include both the foundation computer science techniques (obtained through computer science coursework) as well as their applications in geographic science (obtained through geography coursework).

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Finally, an Emphasis in GIS Software Development is tailored for computer science students. The objective of this emphasis area is to produce computer scientists who are well versed in the unique problems involved in capturing, storing, analyzing and communicating digital geospatial data. The computer science degree program provides the background in foundational and advanced software design skills while the supplementary geography coursework provides foundational and advanced skills in geographic information science. This educational experience provides the basis for advancing the design and implementation of software for representing and analyzing digital geospatial data.

In addition to these emphases, the GIScience Certificate Program offers flexibility in combining the GIScience education with other educational experiences at the University of Utah. Depending on the emphasis area, students can obtain the certificate in conjunction with all three degree levels (Bachelor's, Master's and Ph.D.) or independent of a degree-seeking program as a non-matriculated student. Students can also obtain the certificate in combination with any degree program at the university. This flexibility allows students to combine the strong GIScience and computer science skills provided by the certificate with substantive knowledge in any application domain relevant to GIS.

The Department of Geography will administer the program as well as provide the infrastructure for the GIS coursework. The department houses the Digitally Integrated Geographic Information Technologies (DIGIT) Laboratory, a major GIS/remote sensing teaching, research and production facility. Greg Gault, Director of the DIGIT Lab, says his facility is ready to support the new certificate program.

"We have state-of-the-art GIS research and teaching facilities, including a large interoperative network integrating UNIX and Windows NT platforms, mass storage for geospatial data and imagery and the latest versions of GIS, remote sensing and geospatial analysis software," says Gault.

As the major GIS research and production facility on campus, the DIGIT Lab also provides students with the opportunity to work on real-world GIS projects as part of their educational experience.

"The combination of strong GIS education along with project experience creates students who are in high demand," says Professor Miller. "Students are heavily recruited out of our program and we've done an excellent job placing graduates in a variety of settings, both locally and nationally. The GIScience Certificate Program will only enhance the desirability of the students from our program."

For more information on the University of Utah Geographic Information Science Certificate Program, see the Department of Geography homepage at: [www.geog.utah.edu](http://www.geog.utah.edu). ■



## New Faculty Members Bolster Department

Katrina Moser, Rick Forster and Tom Cova have traveled varying academic paths during their careers, but fortunately all three have found the road to the Department of Geography at the University of Utah.

Joining the faculty in July of 1997, Assistant Professor Katrina A. Moser is interested in an array of physical-related domains, including paleolimnology, quaternary sciences, biogeography, paleobiogeography and environmental sciences. More specifically, Katrina's research emphasis is on climate change, aiming to understand the characteristics of climates in the past and using that information to predict future climate patterns.

"I am currently examining fossil records preserved in lake sediments to garner clues about what climates were like in the past," says Dr. Moser. "Such climate archives yield clues about how climates may behave in the future."

The platform for much of her research is the Environmental Change Observatory (ECO), which was established at the University of Utah's Research Park in 1998. The lab uses microfossils, including pollen and diatoms (microscopic algae), for studying a variety of environmental concerns, including landscape processes, terrestrial disturbances, lake water acidification and eutrophication, heavy metal pollution and, of course, climate change.

"It's very exciting for me to be able to set up such a fully-equipped, state-of-the-art research facility," Katrina says. "The benefits are great, as ECO has certainly fostered greater student involvement, both in the lab itself and through research out in the field."

Dr. Moser comes to Utah via our country's neighbor to the north, Canada, where she received a Masters and Ph.D. in Geography from McMaster University and Bachelor of Education and Bachelor of Geology degrees from Queen's University. She was also a postdoctoral fellow at the University of Toronto before journeying south and west to Utah.



New faculty members (L to R) Katrina Moser, Rick Forster and Tom Cova.

Says Katrina: "I'm fortunate to have landed at the University of Utah. The faculty and students over the past two years have really made me feel at home."

Katrina's husband, Desmond, works nearby in a research faculty position with the Geology Department. As well, the two are proud parents of a 9-month-old daughter, Mirielle. To contact Dr. Moser, please e-mail her at [katrina.moser@geog.utah.edu](mailto:katrina.moser@geog.utah.edu).

Assistant Professor Richard R. Forster's research focuses on events and processes in polar regions, specifically the spatial and temporal characteristics of snowmelt and glacier dynamics.

Major techniques he utilizes are remote sensing methods, particularly for snowmelt research in the Arctic, and Interferometric Synthetic Aperture Radar (InSAR), used for the study of glacier dynamics and mass flux of ice streams in the Antarctic. He is also investigating the sensitivity of the West Siberian Lowland to climate conditions, both past and present.

"My current research is on snow and ice in polar regions, but I plan to extend my focus to include those subjects in relation to the Wasatch Mountains," says Rick. "There is a lot of expertise within the department and within the local community on local snowpack hydrology, and I hope to draw on that in the future."

Hired by the department in January of 1999, Dr. Forster was most recently Senior Research Associate at the Byrd Polar Research Center of the Ohio State University. Prior to his post-doctoral work, he earned a Ph.D. in Geophysics with a minor in Remote Sensing from Cornell University in 1996, a Master's degree in Electrical Engineering from the University of Kansas, and a B.S. in Electrical Engineering from Lafayette College.

Rick's academic pursuits have taken him around the globe, where he has conducted field work in the Patagonian ice fields of Chile, the Andes Mountains in Bolivia, and ice streams in Antarctica.

"These experiences have strengthened my beliefs on the importance of field-work," says Rick, who currently teaches an introductory course on remote sensing. "I would always like to have a field component to my research. I think it's very

important to get out there and actually see the features and landscapes you're working with when utilizing satellite imagery."

Rick can be reached via e-mail at [rick.forster@geog.utah.edu](mailto:rick.forster@geog.utah.edu).

Assistant Professor Thomas J. Cova's interests are rooted in urban and regional modeling and planning, with a primary focus on transportation and location problems. His secondary focus is related to the human dimension of natural hazards, especially emergency management issues.

Over the past couple of years Tom's research has specifically centered on the role of residential transportation networks during an evacuation, and he has developed a method for systematically identifying neighborhoods that might face difficulties evacuating due to limited egress.

Says Tom: "I enjoy geographic research that has an applied component. If I can see the societal benefits to pursuing a particular geographic question, it motivates me to make a contribution."

Also hired by the department in January of 1999, Tom is finishing his Ph.D. in Geography for the University of California-Santa Barbara, where he completed his Master's degree in 1995. Prior to his graduate studies, Tom obtained a B.S. in Computer Science from the University of Oregon.

Tom's future research and teaching goals include continuing his work in transportation and location domains, with a special emphasis on the issues related to emergency planning.

"Joining the Geography Department has increased my interest in researching the human dimensions of hazards," he says. "Every week I discover a new hazard in Utah that I didn't know about. I think the department is in a great place to pursue hazards and GIScience research."

On a personal note, Tom comes to Utah from Santa Barbara with his wife Asha, a counselor and social worker, and has made the transition well.

"Salt Lake City is now the furthest east I have ever lived," says Tom, who grew up in Oregon and California. "I'll miss the ocean, but I love the landscape in Utah. I look forward to a lot of adventures here."

Tom's e-mail address is [cova@geog.utah.edu](mailto:cova@geog.utah.edu). ■

## Faculty Affairs

As usual, the department faculty - in addition to its extensive teaching pursuits - has been exploring a variety of research goals and interests.

**Professor Chung Lee**, continuing his research in eastern Asia, visited the northeastern region of China in the summer of 1998 to collect field data on modern Korean migration into China and to discuss a probable joint research project with Yanbian University. The project will conduct land use analysis around Mt. Paektu, a 2774-meter volcano on the border of China and North Korea. Still in the planning stage, the research will be conducted using remote sensing, Geographic Information Systems (GIS) and various field techniques. In early 1999 Dr. Lee again traveled to Asia, this time to South Korea to collect and analyze data on Korean migration to Japan during the 4th to 9th centuries.

**Associate Professor Harvey Miller** has spent extensive time helping to guide the department's GIS research and education, including the overseeing of a new GIS Certificate Program and a GIS Professional Education Program. His research also includes developing GIS methods for measuring space-time accessibility and conducting dynamic traffic congestion modeling using GIS. In addition, Dr. Miller is working on a book entitled *GIS for Transportation* (Oxford Press) and is involved as a speaker, organizer and participant in many recent workshops, including an NCGIA (National Center for Geographic Information and Analysis) workshop on "Knowledge Discovery in Databases" and an international workshop on "Intelligent Transportation Systems and GIS for Transportation" in Hong Kong.

**Professor Phillip Emmi**, director of the urban planning program, is addressing transportation planning in the face of imminent population growth along the Wasatch Front. As a response to looming transportation stresses, he has designed a research program that will result in an alternative long-range design for land use and public transport in the region. Beginning with projected data (year 2020) about the future distribution of urban activities by traffic zone within the four-county region, Dr. Emmi seeks to define where the development of an appropriate number of urban activity centers might be encouraged. Then he aims to link them

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# Graduate Students Research a Multitude of Interests

Like the discipline of geography itself, our graduate students' pursuits cover a broad spectrum of human and physical interests. And, with the department located in such a great recreational setting, their extracurricular activities are just as interesting and diverse.

**Daphne Minton's** (Ph.D.) dissertation topic is on pesticides in the Imperial Valley, CA., as a chronic technological hazard. She has also helped create a multimedia CD-ROM communicating the department's research in the U.S./Mexico border area. In her free time Daphne enjoys riding her horses on her property in Syracuse, UT., with her fiancée **Scott White**, who is a fellow Ph.D. candidate in the department. An instructor at Weber State this past year, Scott is currently finishing up his dissertation, which focuses on the visualization of a GIS-based water balance model.

**Kelly Boardman** (Master's) and **Annje Bohn** (Master's) are also researching the border region, focusing on conceptual approaches to modeling non-point source water pollution in the Tijuana River Watershed and utilizing BASINS, a watershed model developed by the Environmental Protection Agency. Both love the outdoors - Kelly enjoys snowboarding, rock climbing and mountaineering, and Annje likes to hike, bike and canoe (though she says she doesn't get to recreate as much as she would like to during the hectic school year).

**Brad Dearden** (Ph.D.) is studying contemporary human migration trends in Europe, particularly Germany, and is using GIS applications to analyze and research migration studies and patterns. In addition to his teaching activities within the department, Brad is working on "Electronic High School", which involves developing geography courses on the Internet for high school students.

Also utilizing GIS is **Bert Granberg** (Master's), who is working on a GIS-based oversize vehicle routing application for the Utah highway network. He is also working on various DIGIT Lab projects that involve facilities management, automated geocoding and database construction. A true powder hound, Bert spends many of his winter hours backcountry skiing in the Wasatch Mountains.

**Phoebe McNeally** (Master's) is using GIS and remote sensing to determine pipeline routes and is extending her feasibility study database for construction and facility management purposes. A transplant from Maine, Phoebe likes to downhill and telemark ski at her favorite resort, Alta.

Second year Master's student **Amy Bloom** is working on reconstructing past environments from alpine lake sediments, using diatoms found within the sediments. Though Amy is a true Cubs baseball fan from Chicago, she has adopted the Salt Lake Buzz minor league team as her local club.

**Vickie Solomon** (Ph.D.) is interested in conservation and GIS and is also studying animal behavior, particularly movement and foraging habits. Two special projects she is working on are optimal emergency warning siren location and GIS customization for the University of Utah Seismograph Station. A mathematician by previous education but a geographer at heart, Vickie loves to travel, having been to five of the seven continents.

New graduate student **Randy Rath** (Ph.D.) is using remote sensing to detect changes in vegetation, focusing on the detection of climate



change and effects from pollution. When not working in the lab he likes to play basketball or hit a few balls on the university's golf course.

**Tom Zajkowski's** (Master's) thesis is on demographic and geographic analysis in student recruiting and admission planning at the University of Utah. Tom spends much of his free time working on his new home in Draper, UT.

South African import **David Baxter** (Ph.D.) is focusing on migration impacts in Third World countries in his graduate research. When not hiking or swimming, David hones his athletic skills through kickboxing.

**Andy Byerly's** (Master's) academic interests include paleo-climate reconstruction, global warming and biogeography. He is currently working with Dr. Moser on high-resolution climate and lake level reconstruction of the Lahontan Basin in California and Nevada. A smokejumper and rescue mountaineer by training, Andy is spending five weeks on Mt. McKinley (Denali) in Alaska during April and May, 1999, as a rescue ranger for the National Park Service.

Master's student **Christopher Beynon** is investigating the nature of politics and power and how they affect the Envision Utah process, a regional initiative to create a common growth strategy for the Wasatch Front. Basketball is his main weekly activity, but on weekends he likes to hike and camp with his labrador retriever.



*The Outreach Committee, comprised of (L to R) Andy Byerly, Amy Bloom, Christopher Barney and Phoebe McNeally, represents the department on campus and throughout the community. Recently the committee has been organizing events and projects to foster greater geographic awareness among Salt Lake area high school students.*

**Richard Warnick** (Master's) is interested in public land management issues, cartography, GIS and remote sensing. He recently contributed a chapter to *Contested Landscape*, a book on the politics of Utah wilderness slated for publication this summer by the University of Utah Press.

Employed by the National Weather Service for 18 years, **Greg Smith** (Master's) is interested in incorporating GIS techniques into the study of snowmelt characteristics and resulting river runoff volumes. He is also interested in developing flash flood guidance indices, which would combine geographic and hydrologic information with real time operational meteorological data. When not studying weather and climate, Greg takes in the outdoors while backpacking in the Yellowstone-Tetons area of Wyoming, and by attending as many outdoor blues music festivals as possible.

**Christopher Barney**, a first-year Master's student, is studying land use planning, housing, urban dynamics and GIS in the urban planning realm. He is considering exploring the relationship between different land use mixes and travel demand in modern urban settings for his thesis. Snowboarding, indoor soccer and skateboarding are Chris's preferred extracurricular activities.

Doctoral student **Renee Gluch's** research focuses on urban applications of remote sensing and GIS. Her Master's thesis, completed at the

department in 1998, is an evaluation of an urban growth change detection technique using Thematic Mapper and SPOT imagery. Renee is a Utah native who enjoys backpacking, skiing and scuba diving.

**Nobbir Ahmed** (Ph.D.) is currently studying GIS-T modeling and the uses of visualization as an analytical tool. Nobbir, a native of Bangladesh, is in his first year of graduate study at the department.

**Jeremy (Che-Ming) Chen** (Ph.D.) is interested in the application of hyperspectral imagery for urban analysis. "Dimensionality Reduction Techniques for Hyperspectral Images: A Comparison of PCA and MNF Methods" is the title of a current project on which he is working. In his free time, Jeremy enjoys both winter and summertime activities, with skiing and fishing ranking among his favorites.

The application of GIS and remote sensing to an earthquake epicenter database for mapping and decision making is the focus of **Lorraine Nelms's** (Master's) research. Taking advantage of the many opportunities that the campus offers, Lorraine – along with fellow graduate student Amy Bloom – is a docent at the Utah Museum of Natural History.

**Matthew Sheehan** (Master's) has written an application for an interactive GIS that can be accessed over the Internet. Originally hailing from England, Matt is a self-proclaimed "soccer-playing, beer-drinking ski bum" when not conducting high-level geographic information science research.

Master's student **Etsushi Shimano** also hails from a foreign land (Japan) and is currently conducting longitudinal migration analysis using a panel study of income dynamics.

**Jason Talbot** (Master's), who received his undergraduate degree from the department, is interested in GIS, urban planning and land use issues. Jason is a native of southern Utah, and enjoys all the hiking, camping and fishing the state has to offer.

Doctoral student **Michael Hernandez** is busy researching the application of geographic information sciences in natural hazards assessment. In a more general sense, Mike is interested in utilizing remote sensing and GIS within the broad expanse of physical geography. He tries to get close to the physical environment as much as possible by hiking and playing golf.

**John Harty** (Master's) comes to the department with extensive field experience, having recently spent several months doing research at McMurdo Station and the South Pole in Antarctica. John's graduate studies focus on regional and population geography.

Lake Bonneville geomorphology and isostatic rebound in the Bonneville basin is the focus



*Master's students Kelly Boardman (left) and Annje Bohn (right) look at a map of the Tijuana River Basin while conducting research this March along the U.S./Mexico border.*

of **Tammy Wambeam's** Master's research. Rafting, hiking, cross-country skiing and basketball keep Tammy busy in her hours away from school.

Master's candidate **Dan Moshin's** emphasis is in historical geography and resource management. Though he is interested in a variety of topics, his thesis will probably focus on the construction of a model outlining the flow of platinum from source to end-use. Dan is also working on a second bachelor's degree in Environmental Science (his previous bachelor's degree is in history) and likes to recreate outdoors when his dual class load permits.

**Lynne Baumgras** (Ph.D.) is using remote sensing data to determine the onset of arctic melt. A geologist by training, Lynne's extracurricular interests include studies within the various disciplines of geology, hydrogeology and engineering. ■

## Staff Stuff

In these fast-paced academic and technological times, staff members of the Department of Geography are invaluable assets in helping facilities, resources and activities run smoothly.

The DIGIT (Digitally Integrated Geographic Information Technologies) Lab is an integral component of what keeps the Geography Department ticking. **DIGIT Director Greg Gault** is busy managing the lab and working with graduate student research assistants to secure funding for thesis and dissertation research. He also assists the College of Social and Behavioral Science in the administration of computing resources, collaborating with faculty members to support research and technology transfers. One of several on-going DIGIT activities is the Great Salt Lake Dynamic Visualization Project, contracted to the lab by the Utah Reclamation Mitigation Community Council. **Ryan Berringer** and **Ming Hung** (Ph.D. candidate) are working to visualize and detect changes in wetlands acreage due to climactic conditions and urban encroachment, using Multi-Spectral Scanner data and Thematic Mapper imagery. Providing this information to the public via the

Internet will be the project's eventual application.

**Administrative Assistant Susan VanRoosendaal** and **Executive Secretary Lisa Clayton** continue to handle the everyday challenges of the department, constantly helping to create solutions to problems that arise for faculty, students and staff. Susan's projects include assisting in the Outreach Program, helping to determine course schedules, assigning teaching assistantships, handling budget and travel needs, and assisting Harvey Miller with the Geographic Information Science Certificate Program. When not helping everybody else out, Susan helps herself relax by boating, camping and gardening in the great Utah outdoors.

Lisa's recent projects include working out the kinks in the university-wide semester conversion, processing incoming graduate student applications, helping to expedite undergraduate scholarships, and handling many other day to day tasks. Currently enrolled in courses to earn a management certificate and busy raising two children, Lisa is excited for summer to arrive so she can go hiking, water-skiing, camping and swimming with her family. ■

# Students Hit Death Valley for Lively Spring Break Research

What do Death Valley, Pyramid Lake, Quaternary environments and geomorphology have in common? Fourteen students were given the chance to explore and learn about these places and subjects on the Western Great Basin Field Seminar trip (Geography 6810) during spring break with Dr. Don Currey.

Since 1972, Professor Currey has led students into the field to get a first-hand look at how the western Great Basin - including portions of Utah, Nevada and eastern California - was formed and how it has changed throughout time. Though Dr. Currey emphasizes the geomorphology and glacial history of the area, individual students throughout the trip researched subjects such as biogeography, limnology, paleolimnology, archeology and anthropology. The students also compiled a field guide to enhance presentations and to be used as a reference on future trips.

"It was a great experience to be on a field trip with Dr. Currey," says graduate student John Harty. "I would highly recommend this course to anyone who has an interest in the outdoors and learning about the physical and human landscape in which we live."

Some of the recurring themes we investigated were evidence of Basin and Range tectonics (rising mountains and subsiding valleys), volcanic ash, tufa and biomarkers such as shells and bones. Rock hammers, shovels, trowels and hand-lenses were used throughout the fieldwork. And, of course, a field trip with Don would not be complete without his favorite military trivia and the trials and tribulations of coring, this time into the Bonnie Claire Playa just east of Death Valley.

The itinerary took students to southwestern Utah and across

Nevada to Death Valley, California. The caravan then headed west to China Lake, CA., up through the Owens River Valley and into the Mono Lake Basin. From Mono Lake the vans turned northeast toward the Truckee River and the magnificent Pyramid Lake, followed by a quick tour of the Carson Sink. The expedition finally returned home after 2000 miles and seven days on the road.

Every day was packed with exploration and discussion. With GPS units, topo maps and Dr. Currey's photographic memory and encyclopedic mind leading the way, the students explored obscure but fascinating locations. We are looking forward to a new adventure next year! ■



Professor Don Currey (on left, checkered shirt) and several students perform lake bed coring in the Bonnie Claire Playa near Death Valley, CA., during Spring Break.

## Planning Program Shapes Dynamic Academic and Career Paths

The Department of Geography's Urban Planning Program is a pre-professional, interdisciplinary degree program that offers core courses while relying on other departments for backup in substantive core areas and related fields.

The Program offers instruction in urban planning theory, methods, law, administration, analysis and design. These subjects are complemented by instruction in land use and environmental planning, urban growth management and regional planning. The Program's capstone course is the Community Planning Workshop, a practicum course in which students engage a real client to address significant planning problems. This year students are working with the newly incorporated municipality of Taylorsville, the Salt Lake City neighbor-

hood of Rose Park, and the town of West Valley City.

"The Community Planning Workshop is an excellent course, tying together the theories learned in other classes and applying them to real-world situations," says senior Dave Ohlson.

Adds MPA candidate Geoff Tallent, who is working toward a Certificate in Urban Planning: "You get the chance to acquire real on-the-job experience. It provides a taste of the professional world - one which involves working with many people in many different sectors - that is difficult to obtain elsewhere."

Placement of recent graduates into top-quality urban planning graduate programs is particularly effective. Graduates have gone on to schools such as Cornell University, the University of Chicago, UCLA, USC, Harvard University and MIT - often with significant fellowships. Program graduates otherwise find positions with state, regional, county or municipal planning departments or with private consultants in architecture, engineering and planning. ■

## Department Alumni We Want to Hear from You!

*There are several ways for you to contact the Department of Geography:*

- Come by the department next time you're on campus
- Give us a call at (801) 581-8218
- Check out our web site and contact us by e-mail
- Drop a note or donation to our address: 260 S. Central Campus Dr., Room 270, Salt Lake City, UT. 84112

*Let us know what you're up to, and be sure to include any change of address so we can keep in touch. We would love to highlight special alumni happenings if you have any interesting items for the next issue of our newsletter.*

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together with rapid rail transit lines, while considering how each activity center might be served internally by neighborhood-scale people movers. The research is conducted with a GIS using optimal facility location models and least-cost routing algorithms, with the hope of creating an alternative vision of transportation and land use in a region otherwise destined for internal strangulation.

Professor Merrill Ridd has been keeping his plate full with a variety of research pursuits, including analyzing growth of the Wasatch Front using GIS and remote sensing, editing a new edition of the ASPRS (American Society for Photogrammetry and Remote Sensing) *Manual of Remote Sensing: Remote Sensing of Human Settlements*, and co-authoring a forthcoming book which will examine satellite imaging of the Great Salt Lake. In addition, Dr. Ridd is a consultant to NASA and the EPA on urban heat island effects in the Salt Lake Valley.

Assistant Professor Katrina Moser, who joined the department faculty in July of 1997, is currently using diatom analysis to try to better understand past climate change in northern Canada and the western United States.

New Assistant Professor Tom Cova is researching neighborhood evacuation analysis in the urban/wildland interface. Tom Cova also wrote a chapter in the book *GIS: Principles, Techniques, Applications and Management*, which reviews GIS applications in emergency management. Another new faculty member, Assistant Professor Rick Forster, is focusing on spatial and temporal characteristics of Arctic snowmelt through the use of remote sensing methods. He also is researching Antarctic glacier dynamics utilizing Interferometric Synthetic Aperture Radar (InSAR), and is co-author of an upcoming article in the *Journal of Glaciology*, entitled "Interferometric Radar Observations of Glaciers Europa and Penguin, Hielo Patagonico Sur, Chile".

Adjunct Associate Professor Fred May has been working on Utah disaster resistance, statewide hazard mitigation and hazards risk analysis. ■

# GEO DATA

## Utah Winter Weather Extremes

- ▲ Lowest Recorded Temperature,  $-69^{\circ}\text{F}$ , Peter's Sink (Feb. 1, 1985)
- ▲ Lowest Recorded Temperature, Salt Lake City,  $-30^{\circ}\text{F}$  (Feb. 9, 1933)
- ▲ Greatest Snowfall, Utah
  - 24 hours - 55.5 inches, Alta (Jan. 5-6, 1994)
  - Storm - 105 inches, Alta (Jan. 24-30, 1965)
  - Season - 743.5 inches, Alta (1983-84)
- ▲ Greatest Snowfall, Salt Lake City
  - 24 hours - 18.4 inches Oct. 17-18, 1984)
  - Storm - 23.3 inches (Jan. 6-10, 1993)
  - Season - 117.3 (1951-52)
- ▲ Highest Wind Speed, 124 mph, Hidden Peak, Elev. 11,000 ft. (Nov. 8, 1986)



Source: National Weather Service Forecast Office, Salt Lake City

## Colloquia Present and Discuss Cutting Edge Research

The Department of Geography's colloquium series has seen a steady stream of dynamic and diverse topics over the past year. Set in a relaxed environment usually over lunchtime, the colloquia have covered a broad array of subjects and attracted a mix of people from around the region, including faculty and students from other departments, professors from universities such as BYU and Arizona State, and local professionals.

Co-organizers Andy Byerly and Christopher Barney have worked hard to bring in a variety of interesting presentations.

"The colloquia have been a great opportunity from members of the department to learn more about current trends in geography," says Barney. "We get exposed to cutting edge views, research and technologies."

Adds Byerly: "The students and faculty

are able to learn more about the research going on in geographic sub-fields other than their own. The academic, professional and networking opportunities are fantastic."

Selected colloquium topics over the past several months include: "Intelligent Transportation: An Oxymoron?" by civil engineering faculty member Peter Martin; "South Africa: Cultures and Landscapes" by graduate student David Baxter; "Measuring Space-Time Accessibility" by Professor Harvey Miller; "Census from Heaven? An Estimate of the Global Human Population Using Nighttime Satellite Imagery" by Paul Sutton from the University of California-Santa Barbara's Geography Department; and "SmallWorld: An Object-Oriented Geographic Information System", by Dennis Beck and Ken Hansen of SmallWorld, Inc.

Alumni and other friends of the department are encouraged to attend and participate in the colloquium series. Please call the Department of Geography office at (801) 581-8218 or check out the department's web site for a schedule of upcoming presentations. ■



# Geography Connection

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## Whether in Bountiful or Botswana, Web Site Is Your Gateway to Department

The Department of Geography web site is an excellent source of information on all kinds of departmental happenings. Check out faculty bios, contact graduate students, read up on some of our latest research activities and facilities, or find out what courses are offered next semester. The web page also highlights the department's strategic plan and provides links to other department-maintained web pages.



[www.geog.utah.edu](http://www.geog.utah.edu)