Greetings from Dean Comer

Another eventful Fall semester has come to a close! Featured in this newsletter are even more examples of the exciting accomplishments of the College of Arts and Sciences’ excellent students, faculty, staff and alumni, including award-winning books, notable lectures, and our 2013 Distinguished Alumni Award winners.

The College encourages and supports collaborative teaching and research across disciplines. Two current examples of this are in the Department of Sociology and the Department of Physics and Astronomy.

In the fall of 2009, the Criminology Research Group (CRG) began holding weekly research meetings in the CAS Social Science Research Laboratory (SSRL). The group is led by Sociology Professors Dusten Hollist, James Burfeind, and Daniel Doyle, and SSRL Administrator Chuck Harris. The CRG is founded upon the belief that student learning through research is an essential component of the learning experience at the University of Montana and since its inception has involved graduate and undergraduate students in grant funded research.

In the past three years, The CRG has been collaborating with members of the Statistical Analysis Center at the Montana Board of Crime Control on a series of grant-funded projects. These projects have provided explanations for the mechanisms that contribute to minority overrepresentation in the Montana Juvenile Justice System.

In October, a 16 inch telescope dome was added to the roof of the Skaggs building. The telescope will provide a permanent place for students to study the stars, without having to rely on the weather. The telescope will be outfitted so it can be operated entirely with computers.

“The technology and access really opens the doors for students’ research,” Professor Nate McCrady said. “New possibilities include researching the physics of eclipsing binary stars — two stars that rotate around each other so that one will occasionally block the view from Earth of the other.” It also dovetails with Project Minerva — a collaborative study that UM is involved in that searches nearby stars for planets that may be capable of sustaining life. The benefit of having a dedicated telescope on campus will be exclusive access for projects students are working on, so they can study specific subjects over long time periods.

Please keep updated on all departments and exciting research and collaboration within the College on our website, www.cas.umt.edu/casweb/.

Cheers,

Chris
Student Experiences

Erin Helmholz, Communications

Erin Helmholz was raised in Bellevue, Washington and began her undergraduate education at the University of Montana in Fall 2010. She fell in love with Missoula on her first visit to the University and declared a theatre major her freshman year. Although her interests led her to a different major, Erin credits her public speaking skills and love of performing to her experience in theatre. She will graduate this spring with High Honors and a B.A. in Communication Studies with an emphasis in Organizational Communication and a minor in Theatre. Erin has enjoyed all of her communication courses, applying many of the skills she’s learned to improve her academic and personal relationships. She particularly enjoyed her experience with the Learning by Giving Foundation, where she and her classmates researched community needs, evaluated grant proposals, and ultimately distributed $10,000 in grants to three deserving Missoula nonprofits. Erin’s senior honors project is focused on interviewing public relations professionals about their experiences with and attitudes towards social media in public relations.

Outside of the communication department, Erin has taken full advantage of the opportunities presented to her by the University of Montana and the city of Missoula. She is a member of Alpha Lambda Delta Honor Society and acted as public relations officer for Golden Key International Honor Society, organizing and participating in numerous community service events throughout the Missoula community. She sang in UM’s women’s choir, First Presbyterian Church choir, and the Sweet Adelaide’s Christmas Choir. Erin worked at ASUM Children’s Learning Center, leading activities and playing with preschoolers. Erin was also a peer academic advisor through the Undergraduate Advising Center through the Office for Student Engagement at the University of Montana. Erin was also a peer academic advisor through the Undergraduate Advising Center through the Office for Student Engagement at the University of Montana.

“I look forward to spreading the word about my excellent experience at the University of Montana”

Kimberly Ledger, Biology

Kimberly Ledger started UM in the spring semester of 2011. She is finishing her Bachelor’s degree in Biology within the Ecology and Organismal Biology option. During her time at the University of Montana, she is most appreciative of the undergraduate research she has conducted and relationships she has built outside of the classroom. While she has gained incredible knowledge from the curriculum of her courses, she feels that her experiences beyond the classroom have built on this knowledge and given her invaluable insight into the world of biological research, driven her critical thinking development, and enhanced her curiosity of the natural world.

During her junior and senior years, Kimberly has worked on an independent project in Dr. Ragan Callaway’s laboratory. Dr. Callaway and colleague Dr. Robert Pal from the University of Pecs in Hungary, have served as mentors for Kimberly’s investigation into the effects of the invasive forb Solidago canadensis on species diversity in both its native range of North America and its invasive range of Eastern Europe. Through this project, Kimberly has gained field and greenhouse research experience, traveled to several European countries, developed international collaborative relationships, presented at multiple conferences, and received several awards. Additional notable experiences include summer field courses at the Flathead Lake Biological Station, regular attendance in Organismal Biology and Ecology seminars, courses taught by Dr. Douglas Emlen, and involvement in Dr. Emlen’s lab. Kimberly appreciates the people who have been a part of her academic journey and cannot imagine an undergraduate career that would have provided a more holistic view of scientific research and preparation for the future.

“I look forward to spreading the word about my excellent experience at the University of Montana”

Success. Fall 2013 is her last semester on campus as Erin looks forward to traveling to Washington, D.C. for a semester long internship through The Washington Center. She will be interning with Tricom, a communication company located right outside D.C. After graduation, Erin plans to work for a public relations agency or communication department in a mid-size company somewhere in the US and looks forward to traveling abroad whenever the opportunity arises. While at the University of Montana, Erin is proud that she has, “explored Missoula’s every crook and cranny, learned to play the guitar and made connections to last a lifetime”. Each parade, Saturday market, and festival downtown has been thoroughly enjoyed and she cannot wait to visit soon after graduation. She sings praises of “Zootown” everywhere she goes and looks forward to spreading the word about her excellent experience at the University of Montana wherever her adventures take her.
**Student Experiences**

**Sam Dexter, Environmental Studies**

Sam Dexter was born and raised outside of Portland, Maine, yet always felt a draw to the Rocky Mountain West. He earned his B.A. in International Political Economy from Colorado College, graduating cum laude and with distinctions from the Political Science Department. His undergraduate thesis focused on reassessing traditional understandings of democratization trends in the Middle East and North Africa. Additionally, he spent extended time in the Himalayas as a student and a volunteer. After serving as a field biologist in the deserts of Utah, Sam continued his migration and became a M.S. candidate and teaching assistant in the Environmental Studies Department at the University of Montana. He will complete the degree in the Spring of 2015.

Though his career at UM has thus far been short, he has been quite active. This winter he will accompany his advisor Professor Dan Spencer to Vietnam in order to study climate change on the Mekong Delta. Here, he will spend several additional weeks conducting natural resource management research with faculty at Can Tho University. In addition, UM faculty recently nominated Sam as a delegate to the United Nations Climate Change Conference in Warsaw, Poland, where he represented the University in international negotiations. His other pursuits include volunteering as a citizen scientist to monitor watershed conditions, and serving on the editorial board for the UM publication *Camas*. His Master’s work focuses on the interface of science, policy, and values – understanding how to properly integrate environmental research into development goals. His work thus far includes exploration of market based mechanisms for conservation.

After obtaining his M.S., Sam plans to work in the Foreign Service as an environmental officer, administering economically and ecologically sustainable development projects internationally. “In the face of global economic liberalization and current climate trends,” says Sam, “developing nations are not only left the most vulnerable, but possess the fewest resources for capacity building and resiliency.” He praises the Environmental Studies program as a vital element in his professional and academic path, commending the multidisciplinary coursework and active faculty. “The EVST department has a fantastic reputation for not only their academic qualities, but also their off-campus applied work.” He hopes to continue his positive relationship with UM and the greater Missoula community with continued volunteer work, as well as encouraging the growth of working relationships between UM and international universities.

“I hope to continue my positive relationship with UM and the greater Missoula community”

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**Student News Brief**

The Department of Philosophy Ethics Bowl Team (Hayden Hooker, Joel Johnson, James Rolph & Neil Bennett), recently placed second at regionals and are one of only 32 teams in the nation who will compete at the National Intercollegiate Ethics Bowl Competition in Florida, February 2014.

The UM Debate Team, sponsored by the Department of Communication Studies, continues to grow, placing in tournaments regularly. The season will end with the NW Parliamentary Championships with the top two teams attending nationals in Arizona.

**MASA**, the Anthropology student group, held a Fall banquet to raise funds for student conference involvement and research. They have been assisting with the Brown Bag Lecture Series and raising funds to assist soldiers during the holidays.

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**CAS Picture Trivia**

Guess where this picture was taken. Answer on Page 4.

*Photo by Rick & Susie Graetz*
Dorothy Bridges, ’80 B.A. Liberal Arts, was a 2013 recipient of the University of Montana Distinguished Alumni Award. Bridges’ pioneering career in the banking industry and commitment to community development and make her an outstanding UM Alumnus.

Currently, Bridges is a senior vice president at the Federal Reserve Bank of Minneapolis responsible for community development and regional outreach as well as the public affairs department, a position she assumed July 2011. Most recently, she was president and chief executive officer of City First Bank of D.C., a lending institution in Washington, D.C. that focuses on community development finance. Prior to that, she was president and CEO of Franklin National Bank, a community bank located in Minneapolis. She is the only African-American woman to head a Minnesota bank, and one of only a few nationwide.

“When I left New Orleans as a teenager and moved to Montana to go to college, I did not know what to expect. Of course, it was a very different community, as you can imagine. But one thing was the same as in New Orleans – people went out of their way to support me. There were host families in Missoula who welcomed African-American students. At college I wanted to fulfill my lifelong dream of becoming a pediatrician. Of course, after I graduated, I went in a completely different direction. That tends to happen in life: you start with one idea about what you want to do and then you find yourself doing something else. A campus recruiter from a bank recommended that I enter the banking profession. So I did, and I’ve been in the banking business for more than 30 years now.”

In 2009, the Washington Business Journal reported her as one of Ten People To Watch, noted for her work as an advocate for the poorest neighborhoods, and the American Banker placed her in their 25 Women To Watch; she was the Iota Phi Lambda Sorority Inc’s Business Woman of the Year in 2005. Ms. Bridges was also recognized by Finance and Commerce, a weekly business publication in Minnesota, as one of the 2002 Top Women in Finance. Her work in the urban community earned her the Minneapolis University Rotary Club’s Citizen of the Year in 2003. In 2000, she received the Women of Achievement Award from the Twin West Chamber of Commerce and was named by Mpls./St. Paul Magazine as one of their “100 People to Watch – Minnesota’s Rising Stars.”

Dorothy has had a long, successful and distinguished career. “My path to and career in community development was informed by events in my childhood and in my adult life that have taught me the importance not only of perseverance in times of hardship but also the support we get from family, friends and even total strangers.” One thing is evident throughout Dorothy’s long and successful career, and that is her passion of giving to others and her service. Among a long list of leadership volunteer roles Dorothy has held, she is currently a University of Montana Foundation trustee. One of her favorite stories is one of the meaning of service, told by Harry Emerson Fosdick, an American clergyman, early in the last century. He said:

“The Sea of Galilee and the Dead Sea are made of the same water. It flows down, clear and cool, from the heights of Hermon and the roots of the cedars of Lebanon. The Sea of Galilee makes beauty of it, for the Sea of Galilee has an outlet. It gets to give. It gathers in its riches that it may pour them out again to fertilize the Jordan plain.

“But the Dead Sea with the same water makes horror. For the Dead Sea has no outlet. It gets to keep.”

Planned Giving

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Call David Gant at 406.243.6274 or david.gant@mso.umt.edu to learn how you can support our mission while ensuring your family’s financial security, or visit our website at www.gftpln.org.

The lecture, co-sponsored by the UM Chemistry Department, was part of UM’s Center for Biomolecular Structure and Dynamics Seminar Series and was also offered as part of UM’s Global Leadership Initiative programming.

Dr. Yonath was the first woman in 45 years to win the Nobel Prize in Chemistry and she also is the first woman in the Middle East to win the prize in the sciences.

She led teams from the Weizmann Institute in Israel and the Max Planck Institute in Germany, which solved the complete spatial structure of both subunits of a bacterial ribosome. This information gave scientists ground-breaking insight into how the genetic code is translated into proteins on the ribosomes.

The journal Science cites this achievement among the top 10 most important scientific developments of 2009. Her achievements have fueled intensive international research in the field, and her findings are vital in the development of advanced antibiotics.

Dr. Yonath currently is an institutional professor for the Helen and Milton A. Kimmelman Center for Biomolecular Structure and Assembly at the Weizmann Institute of Science in Israel.

Andrew Roberts, an internationally renowned expert on Napoleon and World War II, presented the second annual Swanberg Lecture in Military History in October 2013. The presentation “Why Hitler Lost” was well attended and thought provoking. Dr. Roberts is the Merrill Family Visiting Professor of History at Cornell University.

A renowned speaker who trained at England’s Cambridge University, Roberts has given talks about the lessons of war across Europe, Asia, Australia and the United States, including the White House.

He is the author of nine books on military history from Napoleon to Hitler. His best-known work, “The Storm of War: A New History of the Second World War,” was the British Army Military Book of the Year Award in 2011 and reached No. 2 on The Sunday Times best-seller list.

Research News  A sampling of recent awards for scholarship, teaching and outreach by CAS Faculty

Ashley McKeown, Anthropology, Analysis of Human Skeletal Remains from the Elkins Site
Mizuki Miyashita, Anthropology, Documentation and Analysis of Stress & Prosody in Blackfoot
Christopher Palmer, Chemistry & Biochemistry, System for field sampling and analysis of explosives
Nigel Priestley, Chemistry & Biochemistry, Non-nucleoside inhibitors of Human DNA methyl transferase I
Aaron Thomas, Chemistry & Biochemistry, MT INBRE Native Math Advancement UM
Robert Yokelson, Chemistry & Biochemistry, Filling a Critical Gap in Indonesia
Douglas Raiford, Computer Science, K-Mer Classification (metagenomics)
Helen Naughton, Economics, Ecosystem Valuation of Whitebark Pine in Greater Yellowstone Area
Heather Bruce, English, Intersections: At the Crossroads of Science and Literacy
Sarah Halvorson, Geography, Montana Geographic Alliance Grant
Carrine Blank, Geosciences, Acidic Wastewater Treatment
Joel Harper, Geosciences, Modeling Greenland NASA Data
Mark Kayll, Mathematical Sciences, Strengthen Math Collaboration in Big Sky Country

Jonathon Bardsley, Mathematical Sciences, Poisson Based MCMC Sampling
Andrew Ware, Physics & Astronomy, Smoke Dynamics & Aerosol Properties
Nate McCrady & Dan Reisenfeld, Physics & Astronomy, Minerva Project
Gyda Swaney, Psychology, InPsych Program
Greg Machek, Psychology, Practicum and Internship Supervision Grant for School Psychologists
Dustin Hollist, Sociology, Evaluating Economic Analysis Approaches for Montana’s Drug Task Forces; Evaluating the Effectiveness of Montana’s Juvenile Detention Risk Assessment Instrument
Vicki Watson, Environmental Studies, Clark Fork River Benthic Algae Monitoring
Anna Sala, Biological Sciences, Fire and Tree Mortality; Fuels and Fire
Joel Berger, Biological Sciences, Mountain Goat Ecology in Glacier National Park; Trophic Downgrading at Rocky Mountain National Park
Peter Rice, Biological Sciences, Monitoring Site Restoration; Natural Resource Condition Assessment; Suppression of Flowering Rush
Frank Rosenzweig, Biological Sciences, Molecular Characterization; Characterization-Adaptive Evolution
Erin Landguth, Biological Sciences, Riverscape Genetics Simulation
Sarah Ceretl, Biological Sciences, Dissecting Microcircuits
William Holben, Biological Sciences, Understanding Etiology: Mapping CI
Mining for the Nation:
The Politics of Chile's Coal Communities from the Popular Front to the Cold War
by Jody Pavilack
Department of History

The dramatic story of Chile's coal miners in the mid-twentieth century has never before been told. In *Mining for the Nation*, Jody Pavilack shows how this significant working-class sector became a stronghold of support for the Communist Party as it embraced cross-class alliances aimed at defeating fascism, promoting national development, and deepening Chilean democracy. During the tumultuous 1930s and 1940s, the coal miners emerged as a powerful social and political base that came to be seen as a threat to existing hierarchies and interests. Pavilack carries the story through the end of World War II, when a centrist president elected with crucial Communist backing brutally repressed the coal miners and their families in what has become known as the Great Betrayal, ushering Cold War politics into Chile with force. The patriotic fervor and tragic outcome of the coal miners' participation in Popular Front coalition politics left an important legacy for those who would continue the battle for greater social justice in Chile in the coming decades.

An Archaeology of Desperation:
Exploring the Donner Party's Alder Creek Camp
by Kelly Dixon
Department of Anthropology

The Donner Party is almost inextricably linked with cannibalism. In truth, we know remarkably little about what actually happened to the starving travelers stranded in the Sierra Nevada in the winter of 1846-47. Combining the approaches of history, ethnohistory, archaeology, bioarchaeology, and social anthropology, this innovative look at the Donner Party's experience at the Alder Creek Camp offers insights into many long-unsolved mysteries. Centered on archaeological investigations in the summers of 2003 and 2004 near Truckee, California, the book includes detailed analyses of artifacts and bones that suggest what life was like in this survival camp. Microscopical investigations of tiny bone fragments reveal butchery scars and microstructure that illuminate what the Donner families may have eaten before the final days of desperation, how they prepared what served as food, and whether they actually butchered and ate their deceased companions. The contributors reassess old data with new analytic techniques and, by examining both physical evidence and oral testimony from observers and survivors, add new dimensions to the historical narrative.

TED Talks Under the Big Sky

The University of Montana hosted TEDxUMontana in September. The program featured nine speakers, two TED Talks videos and two performances with a 30-minute intermission for interaction and discussion. Art historian H. Rafael Chacón talked about how an academic exercise turned into a personal journey when he had his DNA sequenced by the National Geographic Geno 2.0 Project. Chris Comer (pictured above), a neuroscientist and dean of UM's College of Arts & Sciences, shared what new research reveals about our brain and literary imagination. Exercise scientist Steven Gaskill had ideas about how to design a school day that includes a lot more movement and a lot more learning. Neva Hassanein, an environmental studies professor, and Mark S. LoParco, director of UM Dining, talked about food democracy and lessons learned from the UM Farm to College Program, one of the leading local food-purchasing programs in the nation. Anthropologist Kimber McKay challenged our culture's definition of marriage by sharing stories from her fieldwork in Nepal's northwestern Himalayan district of Humla. Composer and sound designer Dale Sherrard provided unique perspectives on the art of listening. Entomologist Diana Six told the story of how a little beetle has ecologically and economically altered North America's forests. And Josh Slotnick, co-founder of Garden City Harvest and the PEAS farm, described the transformative power of doing humble work with others.

To learn more about this event, visit the UM website at http://umontana.edu/tedx/speakers/default.php.
Each year we are fortunate to hire new faculty members who bring enthusiasm, experience, and knowledge from a variety of sources. In this issue, we highlight our four newest professors. These new faculty are housed in the departments of Geography, Mathematical Sciences, Psychology and Sociology. Together, these new assistant professors bring over 45 years of academic study in higher education across mathematics and the social sciences, with a combination of broad national and international study experiences. These new faculty bring with them the latest knowledge in their areas as well as bristling enthusiasm to the classroom, their students and their research interests.

**SOCIOLGY**

Dr. Jackson Bunch earned his Ph.D. from the University of Georgia where he studied Sociology with an emphasis on Crime, Law and Deviance. Professor Bunch’s research interest in Sociology focuses on the causes and consequences of victimization. He has examined how lifestyles influence victimization risk and how victimization, in turn, affects lifestyles. Most recently, he has examined the relationship between criminal activity and victimization risk, focusing on how offending and victimization influence one another over time. Early in his college career, Dr. Bunch knew he wanted to become a professor, but it wasn’t until he took his first Sociology course that he knew he had found his intellectual home. When not working, Dr. Bunch enjoys the outdoors, spending time with his dogs, brewing beer and playing guitar — but, as he notes, not simultaneously.

**MATHEMATICS**

Professor Cory Palmer obtained his Ph.D. from the Central European University in Hungary. While an undergraduate at UC Berkeley, Dr. Palmer spent a year studying abroad in Budapest, Hungary. It was here that his love of mathematics flourished. After finishing his B.A. in the US, he returned to Hungary for his doctoral studies. Professor Palmer’s area of expertise is Combinatorics and Graph Theory. He credits his interest in these fields to his inspiring teachers. In his own classroom, he strives to challenge his students’ assumptions. For example, he often introduces the topic of Ramsey theory which guarantees that even the most disorganized systems cannot avoid some kind of patterns - that is there is order in chaos! Among the many things that Dr. Palmer enjoys about UM, is that he can see mountains out of nearly every window in his workplace.

**GEOGRAPHY**

Dr. Diep Dao completed her Ph.D. in Geography and Urban Regional Analysis at the University of North Carolina - Charlotte. Professor Dao’s specialty is Geographical Information Science (GIS), that is, the science of gathering, managing, processing, analyzing and visualizing geospatial data and information. The impacts of GIScience on the understanding of complex geographic phenomena and processes are magnified when relating them to cross-discipline studies ranging from regional development, economics, marketing, public health, criminology, transportation and from sociology to forestry, ecology, and natural resource management, to name a few. Professor Dao is looking forward to working with students and colleagues in a collaborative environment.

**PSYCHOLOGY**

Professor Craig McFarland earned his Ph.D. from the University of Arizona where he studied neuropsychology and conducted research into human memory and executive functioning. Following his graduate studies, Dr. McFarland completed a two year post-doctoral fellowship in Clinical Neuropsychology at the Boston Consortium in Clinical Psychology. Recently, he’s focused on prospective memory (PM) which involves how we remember to do something in the future. He is working to identify the cognitive mechanisms underlying PM and developing strategies to improve it. Professor McFarland describes his educational path as circuitous. While an undergraduate, he took some time off to “learn about life”. During this time he had two jobs, one at a retirement community, the other working a crisis-hotline, which contributed to his interest in neuropsychology. In these experiences he saw differences in how people remembered things and this sparked his interest in studying differences in cognitive functioning. When not at work, Dr. McFarland enjoys the outdoors and photography.

While their academic interests and fields of study are disparate and diverse, all four of these new faculty members agree that they have been greeted warmly by their work colleagues, their students have been engaged and Missoula is a wonderful and beautiful place to live and work. We welcome them to UM. ☀️
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We are happy to provide you with information about our giving programs including the Dean's Opportunity Fund, annual gifts, the
President's Club, setting up a scholarship, endowments, or including the College of Arts and Sciences in your will or estate plans.

Coming to Campus?
The College and the University of Montana have various events, lectures, programs and classes going on throughout the year.
Please contact us if you would like to visit the College, get a tour of the new buildings on campus,
attend a class, meet the Dean, or chat about your experience at the University of Montana.