New Website for Siler Lab

A new website has been developed by Assistant Professor Cameron Siler (Biology/Assistant Curator of Herpetology at the Sam Noble Oklahoma Museum of Natural History). The website was designed for the Siler Lab with the goal of bridging the gap between scientists, students, and the public, taking an exciting, novel approach to research-based website development. Focusing on simplicity and integration, information is presented in four streamlined categories (Research, Publications, News, The Lab). Not only is the site responsive across mobile and desktop computer platforms, but the website dynamically changes with new posts regularly, and social media links integrated throughout the site allow visitors to share exciting research and news. The Siler Lab hopes the site will have something for everyone, and will excite and involve a greater audience in biodiversity research and education outreach activities at OU. Check out the new site at www.cameronsiler.com.

OU Research Featured in Discover Magazine’s Top 100 Stories of 2014

The research of Professor Christina Warinner (Anthropology) will be featured in the January/February issue of Discover Magazine’s Top 100 Stories of 2014. Warinner’s research on ancient dental plaque was selected from an estimated 1 million science stories from around the world.

Discover Magazine ranks, “Medieval Dental Plaque Offers Dietary Clues,” at No. 69. In her recent studies in Nature Genetics and Nature Scientific Reports, Warinner and an international team investigated human dental plaque and found direct ancient DNA evidence of wheat, pork, mutton and Brassica (a plant belonging to the mustard family) consumption in Medieval Europe, and ancient protein evidence of cattle, sheep and goat milk consumption dating as far back as the European Bronze Age.

Warinner says these studies have far-reaching implications for understanding the relationship between diet and evolution. Read more at http://www.nature.com/ng/journal/v46/n4/full/ng.2906.html and http://dx.doi.org/10.1038/srep07104. Warinner’s research has been published in the LA Times, Scientific American, Nature, Archaeology Magazine and other prestigious journals and top-tier publications.

Additionally, Warinner’s research will be featured in a series of articles published in a special issue of the Philosophical Transactions of the Royal Society that resulted from a major symposium on “Ancient DNA: the first three decades” at the Royal Society of London. These articles will be available online from Royal Society Publishing on Dec. 8, 2014.

Chemistry Professor Elected 2016 President of American Chemical Society

Professor Donna Nelson (Chemistry & Biochemistry) has been elected as the 2016 President of the American Chemical Society, the world’s largest scientific society. She will serve as president-elect in 2015. As president, Nelson will focus on advocacy and improving public appreciation of chemists and chemistry, which she believes could lead to better funding and more employment opportunities within the science.

“Chemists’ creativity gave the world vital benefits and luxuries, and producing future benefits and luxuries is dependent upon our continued creativity,” Nelson says. “This is only possible though if science is appreciated and funded sufficiently.”

Nelson has taught organic chemistry to more than 10,000 students, and as an expert in the field of chemistry, she has advised Congress, professional organizations and television producers on topics related to chemistry. She has also served on the Dow Chemical Advisory Board and was the science advisor for the hit television series, “Breaking Bad.”

Nelson has been honored with the Oklahoma Chemist Award and induction into the Oklahoma Higher Education Hall of Fame. She has been named a fellow by the American Chemical Society, Ford Foundation and the American Association for the Advancement of Science Fellow. She has also served on the Dow Chemical Advisory Board and was the science advisor for the hit television series, “Breaking Bad.”

Faculty Recognition

- Forensic Archaeologist Kent J. Buehler (Oklahoma Archeological Survey) was recently presented with the Oklahoma State Bureau of Investigation’s Director’s Award. This is the OSBI’s highest award for civilians and was given for Buehler’s work in the recovery of human remains and evidence from clandestine graves and other death scenes.
- Professor Kimball A. Milton (Physics & Astronomy) was elected a Fellow in the American Physical Society, an honor restricted to 1/2 of 1% of the membership. His citation reads “For studies of the development of quantum field theory in the 20th century, particularly the contributions of Julian Schwinger.”
- Associate Professor Katerina Tsatsura (Gaylord College of Journalism & Mass Communication) was elected Vice Chair Elect of the Public Relations Division of the International Communication Association, one of the largest and most prestigious research associations for scholars and academics in the field of communication. Her four-year term to serve the Division will start in May 2015 at the ICA annual meeting in San Juan, Puerto Rico.

Neustadt Festival Held on Campus

World Literature Today partnered with the Weitzenhoffer Family College of Fine Arts and African & African American Studies to sponsor a dance and theater performance event during the Neustadt Festival held Oct. 22–24, 2014. World Literature Today sponsors the biennial Neustadt International Prize for Literature, a $50,000 juried award that is often referred to as the “American Nobel.” This year’s winner, novelist Mia Couto from Mozambique was on campus during the Neustadt Festival to participate in several public events. The School of Dance and Drama students performed a musical choreo-drama adapted from Couto’s story “The Birds of God,” with original choreography by Melanie Bratcher and Clara Cravey Stanley, directed by Susan Shaughnessy, and followed by a Q&A with the author.
• Professor Paul Spicer (Anthropology/Center for Applied Social Research) will become Editor-in-Chief for the Infant Mental Health Journal in Jan. 2015.

• Professor Robert Nairn (Civil Engineering & Environmental Science) and students in the Center for Restoration of Ecosystems and Watersheds (CREW) hosted Takaya Hamai, Manami Ikeda and Norihiro Yamaji of the Japan Oil, Gas and Metals National Corporation (JOGMEC) from Oct. 26–28, 2014. In addition to sharing metals biogeochemistry data, discussing passive treatment design information, and visiting research laboratories on the Norman Campus, a tour of the Tar Creek Superfund Site and Mayer Ranch passive treatment system was provided.

• Associate Professor Renee McPherson (Geography & Environmental Sustainability) was selected by the Association of American Geographers to participate as an observer at the United Nations Framework Convention on Climate Change and 20th session of the Conference of the Parties. She attended during the second week of the meeting, Dec. 8–12, 2014, in Lima, Peru.

• Professor Mohammed Atiquzzaman (Computer Science) presented a keynote talk on Seamless Data Communications in Space Networks at the 7th International Conference on Internet and Distributed computing in Calabria, Italy on Sept. 22, 2014. The focus of the talk was on connecting space crafts and satellites in space to the terrestrial Internet to facilitate easier and faster download of data from measuring equipment on-board spacecraft. The research was carried out with funding from National Aeronautics and Space Administration (NASA).

• Professor Subhash N. Shah (Petroleum & Geological Engineering) has been elected by the American Institute of Chemical Engineers Board of Directors as a Fellow, the highest grade of membership. The AIChE Annual Meeting was held Nov. 16–21, 2014 in Atlanta, GA, where Shah was recognized and awarded a certificate and a pin.

• Professor Maureen Taylor (Gaylord Family Chair of Strategic Communication) has been invited to join the prestigious Arthur W. Page Society. Membership in the Page Society is by invitation only and signals that a professional has advanced the field of public relations and corporate communication, and reached a pinnacle in their career. As a senior public relations and strategic communication educator and researcher, Taylor joins a membership of more than 450 including chief communication officers from the world’s major corporations, public relations agencies and academic institutions.

• Stuart Asprey (Art & Art History) had artwork selected into the national jured ceramic exhibition “Un-Wedged 2014” in Seattle, WA and was awarded the Juror’s (Best of Show) Award.

• Professor Michael R. Buckley (Management) was named a fellow of the Society of Industrial and Organizational Psychology this year. Society Fellows are “distinguished industrial and organizational psychologists who have made an unusual outstanding contribution to the field” of industrial and organizational psychology (www.siop.org). Fellows must be nominated and endorsed by active SIOP fellows.
A team led by the OU professor who invented the interband cascade laser has reached a major milestone in the development of interband cascade lasers by creating a robust technology that operates at room temperature and works continuously—an important component for building practical systems.

Professor Rui Q. Yang (Electrical and Computer Engineering) proposed the concept for interband cascade lasers 20 years ago. He continues to perfect the technology for use in multiple applications, such as detecting pipeline leaks, finding new oil and gas wells and in the NASA Mars rover Curiosity.

Yang’s research group collaborates with Professors Matthew B. Johnson and Michael B. Santos and their research groups in the Department of Physics and Astronomy in the OU College of Arts and Sciences. This latest development of room-temperature and continuous wave interband cascade lasers was a result of their collaboration with J. Gupta and colleagues at the National Research Council in Canada.

“Like a waterfall that cascades from level to level gaining energy with each step, interband cascade lasers are energy-efficient mid-infrared semiconductor laser sources for sensing chemicals in a number of applications,” says Yang. “The latest continuous wave interband cascade laser operates at room temperature yielding a more efficient product.”

Though small, the mid-infrared laser market is growing four times faster than the laser market as a whole, according to market analyst Strategies Unlimited. Yang owns four patents on interband cascade lasers and related devices with interest in assisting the technology transfer and commercialization of these semiconductor device components.

The National Science Foundation Small Business Technology Transfer Program supports OU research on interband cascade lasers and related optoelectronic devices. For more information, contact Rui Q. Yang at rui.q.yang@ou.edu or visit the Quantum Device Laboratory at http://qdl.ou.edu/.

**Vice President for Research Elected Fellow of the American Association for the Advancement of Science**

Dr. Kelvin K. Droegemeier (Vice President for Research on the Norman campus and Regents’ Professor of Meteorology) has been elected a Fellow of the American Association for the Advancement of Science.

“This action confirms that Dr. Kelvin Droegemeier is one of the outstanding scientists in the nation,” said OU President David L. Boren. “OU is indeed fortunate to have him as a faculty member and as a leader of our university’s scientific community.”

Droegemeier was elected a Fellow in recognition of leadership efforts at the national and international arenas to develop unique partnerships in the atmospheric sciences across academia, government and industry.
President’s Monthly Research and Development Highlights

“Creating Tomorrow”

DECEMBER 2014 • VOLUME 9, ISSUE 9

New Publications


Department of Communication Wins Awards at the National Communication Association Meeting

The National Communication Association meeting was held on Nov. 19–23, 2014, in Chicago, Il. The following individuals received awards:

• Associate Professor Ryan Bisel (Communication) and Liz Minei (recent Ph.D. graduate) received the Dennis Gouran Research Award for the Top Journal Article in Group Communication in 2013 for their article “Negotiating the Meaning of Team Expertise: A Firefighter Team’s Epistemic Denial” published in Small Group Research, 44, 7-32 (2013).

• Professor Michael Kramer (Communication) and his co-editors, Laurie Lewis and Loril Gossett received the best edited book award from the Applied Communication Division for their book Volunteering and Communication: Studies from Multiple Contexts (2013, Peter Lang).

• Assistant Professor Lindsey Meeks (Communication) won the best paper award in the Political Communication Division for her study Let’s Get Personal: Examining the Effects of Personalization in Candidates’ Online Self-Presentations.

• Assistant Professor Sun Kyong (Sunny) Lee (Communication) won a Top Paper Award in International and Intercultural Communication for her paper, Advancing a Theory of Cross-Cultural Adaptation: A Proposal of a New Construct for Specification of Levels and Measurements in the Model.

• Associate Professor Elaine Hsieh (Communication) won a Top Four Paper Award in Language New Publications

“I am deeply touched by this recognition and am extremely grateful to the many individuals throughout my career who have mentored, supported and inspired me,” said Droegemeier.

Now in his 30th year at the University, Droegemeier serves as the Vice Chairman of the National Science Board. President George W. Bush first appointed Droegemeier to the Board in 2004, and President Barack H. Obama re-appointed him in 2011. Oklahoma Gov. Mary Fallin appointed Droegemeier to the Governor’s Science and Technology Council in 2011 and as chair of the sub-committee on academic Science and Technology.

Droegemeier also has served as a board member of Oak Ridge Associated Universities Council on Governmental Relations, University Corporation for Atmospheric Research, Southeastern Universities Research Association, Association of Public and Land Grant Universities and the Alliance for Science and Technology Research in America.

The rank of Fellow designates individuals whose efforts toward advancing science applications are deemed scientifically or socially distinguished. New Fellows will be presented with an official certificate and a gold and blue (representing science and engineering) rosette pin on Saturday, Feb. 14, 2015, at the Fellows Forum of the American Association for the Advancement of Science during the annual meeting in San Jose, CA.
and Social Interaction for her paper, *Emerging Trends and the Corresponding Challenges in Bilingual Health Communication*.

- Bobbi Van Gilder (graduate student, Communication) and co-author Shadee Abdi won a top paper award in the Gay, Lesbian, Bisexual, Transgender, and Queer Communication Studies Division, *Cultural (In) Visibility and Identity Dissonance: Queer Iranian Women and their Negotiation of Existence*.


## November New Awards

<table>
<thead>
<tr>
<th>Name</th>
<th>Dept./Center</th>
<th>Funding Agency</th>
<th>Project Title</th>
<th>Amount</th>
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</thead>
<tbody>
<tr>
<td>Matthew Pranter, Kurt Marfurt, Jamie Rich, Richard Elmore, &amp; Deepak Devegowda</td>
<td>Geology &amp; Geophysics/ Provost Office Administration/ Petroleum &amp; Geological Engineering</td>
<td>Mississippi Lime Consortium</td>
<td>Various Oil Companies</td>
<td>$160,000</td>
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<td>John Dyer</td>
<td>Electrical &amp; Computer Engineering</td>
<td>Collision Risk Model Optical Trackers Refurbishment and Deployment to Reagan National Airport</td>
<td>U.S. Dept. of Transportation, Federal Aviation Administration</td>
<td>$98,600</td>
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<td>Susan Walden</td>
<td>Engineering Dean</td>
<td>Oklahoma Louis Stokes Alliance for Minority Participation - Phase V</td>
<td>Oklahoma State University</td>
<td>$70,398</td>
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<td>Mohammad Al-masri</td>
<td>Modern Languages, Literatures, &amp; Linguistics/International &amp; Area Studies</td>
<td>Proposal to Administer the Flagship Annual Meeting</td>
<td>Institute of International Education</td>
<td>$118,325.44</td>
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<td>Marc Libault</td>
<td>Microbiology &amp; Plant Biology</td>
<td>Unraveling the Transcriptional Regulation of Plant Cell Elongation</td>
<td>State of Oklahoma, Center for the Advancement of Science and Technology</td>
<td>$49,960</td>
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<tr>
<td>Sharon Kessler</td>
<td>Microbiology &amp; Plant Biology</td>
<td>Conserved Mechanisms in Plant Fertility and Plant-Pathogen Interactions</td>
<td>State of Oklahoma, Center for the Advancement of Science and Technology</td>
<td>$49,736</td>
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### President's Monthly Research and Development Highlights

**“Creating Tomorrow”**

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<tr>
<td>Marc Libault</td>
<td>Microbiology &amp; Plant Biology</td>
<td>Genomics of Energy Sorghum's Water Use Efficiency/Drought Resilience</td>
<td>Texas A&amp;M University</td>
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<td>Scott Williams</td>
<td>Landscape Architecture</td>
<td>Mobile Outdoor Lighting Lab</td>
<td>Illuminating Engineering Society</td>
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<td>Ronald Gaddie &amp; John Antonio</td>
<td>Political Science/Engineering</td>
<td>Center for Intelligence and National Security</td>
<td>OU Health Sciences Center</td>
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<td>Hank Jenkins-Smith &amp; Carol Silva</td>
<td>Political Science</td>
<td>2015 Energy and Environment Survey</td>
<td>Sandia Laboratories</td>
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<td>Jody Worley</td>
<td>Human Relations</td>
<td>Healthy Start Program</td>
<td>Tulsa City-County Health Department</td>
<td>$5,000</td>
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Produced monthly during the academic year by the Office of the Vice President for Research, Norman Campus. Amy Tougas, Editor

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