

College of Science
UtahStateUniversity

Faculty and Staff Activities and Achievements

January 2012

Awards and Honors

Recognized for his dedication to students and contributions to the field of math education, Jim Cangelosi was named a 2011 Carnegie Professor of the Year. One of 31 professors from across the nation selected for this year's prestigious honor, the Louisiana native's award was announced at a Nov. 17 ceremony in Washington, D.C. Administered by the Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education, the award recognizes outstanding professors for their influence on teaching and their extraordinary commitment to undergraduate education. Cangelosi is the 11th Utah State professor to receive the award since the program's 1981 inception. USU has more than twice as many honorees as any other higher education institution in Utah.

Presentations

undergraduate* graduate**

Biology

Dr. James Pitts of the USU Department of Biology led a Hymenoptera BioBlitz at Great Basin National Park in Baker, Nevada in August 2011. A BioBlitz is an intensive survey of the fauna or flora of a site, usually involving both professional biologists and volunteers who work together intensively for several days. In this case the subject included ants, wasps, and bees, and the event attracted 80 participants, the largest number ever involved in a BioBlitz at the park. Dr. Pitts was accompanied by five USU Biology graduate students, and together they delivered six presentations during the three-day event. Preliminary results indicated that at least 25 families and 65 species were added to the known fauna of the park, based on collections made at 167 localities.

Chemistry & Biochemistry

Alvan Hengge presented an invited seminar entitled, "Protein Motions and Catalytic Promiscuity in Phosphatases," at the following institutions in China:

Nankai University, State Key Laboratory of Elemento-Organic Chemistry, Tianjin, China, September 21, 2011

Institute of Chemistry, Chinese Academy of Sciences, Beijing, China, September 23, 2011

Lanzhou University, State Key Laboratory of Applied Organic Chemistry, Lanzhou, China, September 27, 2011

Joanie Hevel presented an invited talk titled "Investigation of the Molecular Origins of Protein Arginine Methyltransferase I (PRMT1) Product Specificity: A Tale of Two Methionines" at the Enzymes, Coenzymes and Metabolic Pathways Conference, Mexico, 17-21 November 2011.

Lisa M. Berreau presented an invited talk titled "Photochemically-induced Dioxygenase-type CO Release Reactivity of Metal Flavonolate Complexes" in the Main Group Chemistry Symposium at the 67th Southwest Regional ACS Meeting, Austin, TX, 9-12 November 2011.

Geology

Prof. James Evans is a 2011-2012 Earthscope Lecturer. In the fall, he presented a talk titled "Earthquake Petrology: The Signatures of Seismic Slip and Fluid Flow in Faults" at Montana State University, Idaho State University, and BYU-Idaho.

Physics

On September 20, October 7, and November 11, 2011, the Physics Department opened its new teaching observatory to the public for a night of stargazing. Approximately 200 people took advantage of these outreach opportunities.

On November 18, 2011 James Coburn presented his annual night of physics demonstrations. This year's title was "Magnificent Mechanics" and approximately 400 people attended this outreach event.

Eric Held, along with Dr. Ross Spencer of BYU, were the local organizers of the 53rd Annual Meeting of the American Physical Society Division of Plasma Physics (APS-DPP) in Salt Lake City, UT, 14-18 November 2011.

The Center for Atmospheric & Space Sciences

The following talks were presented at the Fall American Geophysical Union (AGU) held in San Francisco, CA, 5-9 December 2011:

R. A. Akmaev, T. J. Ruller-Rowell, F. Wu, J. W. Meriwether, J. J. Makela, Ludger Scherliess, A. D. Richmond, and A. I. Maute. (Invited) "Nighttime Variability in the Thermosphere Forced From Below: Whole Atmosphere Model (WAM) Simulations."

J. Doyle, D. C. Fritts, R. B. Smith, S. D. Eckermann, and Michael J. Taylor. (Invited) "Overview of the Southern Andes - ANtarctic GRavity Wave Initiative (SAANGRIA)."

Jan J. Sojka, Michael David, Joseph B. Jensen*, and Robert W. Schunk. (Invited) "Ionospheric Change and Solar EUV Irradiance."

Charles Swenson, Chad S. Fish**, G. Crowley, G. D. Earle, B. J. Anderson, L. P. Dyrud, Herbert. C. Carlson, P. J. Erickson, Bela G. Fejer, C. J. Mertens, Ludger Scherliess, J. L. Semeter, and A. B. Christensen. "The Storm Time Energy and Dynamics Explorers".

Michael J. Taylor, Pierre Dominique Pautet, Yuchen Zhao, John Pugmire**, Neal Criddle*, G. R. Swenson, A. Z. Liu, and J. H. Hecht. "Investigating Gravity Waves and Mesospheric Temperature Variability Over the Andes Mountains."

Publications

undergraduate* graduate**

Biology

Keith A. Mott and David Peak. 2011. Alternative Perspective on the Control of Transcription by Radiation. *Proceedings of the National Academy of Sciences* 108: 19820-19823.

Gall, B. G.**, E. D. Brodie III, and E. D. Brodie, Jr. 2011. Survival and Growth of the Caddisfly *Limnephilus flavastellus* after Predation on Toxic Eggs of the Rough-skinned Newt (*Taricha granulosa*). *Canadian Journal of Zoology* 89(6):483-489.

Chemistry & Biochemistry

Constantin Romanescu, Alina P. Sergeeva**, Wei-Li Li, Alexander I. Boldyrev, and Lai-Sheng Wang. 2011. Planarization of B7- and B12- Clusters by Isoelectronic Substitution: AlB6- and AlB11-. *J. Am. Chem. Soc.* 133: 8646-8653

Katarzyna Grubel**, Gajendrasingh K. Ingle**, Amy L. Fuller**, Atta M. Arif, and Lisa M. Berreau. 2011. Influence of Water on the Formation of O₂-reactive Divalent Metal Enolate Complexes of Relevance to Acireductone Dioxygenases. *Dalton Transactions* 40: 10609-10620.

Geology

Bradbury, K. K., Evans, J. P., Chester, J. S., Chester, F. M., Kirschner, D. L. 2011. Lithology and Internal Structure of the San Andreas Fault at Depth based on Characterization of Phase 3 Whole-rock Core in the San Andreas Fault Observatory at Depth (SAFOD) Borehole. *Earth and Planetary Science Letters* 310: 131–144, doi:10.1016/j.epsl.2011.07.020.

Garson, D. E., Gaines, R. R., Droser, M.L., Liddell, W.D. and Sappenfield, A. 2011. Dynamic Palaeoredox and Exceptional Preservation in the Cambrian Spence Shale of Utah. *Lethaia* DOI 10.1111/j.1502-3931.2011.00266.x

Susanne U. Janecke and Robert Q. Oaks, Jr. 2011. New Insights into the Outlet Conditions of Late Pleistocene Lake Bonneville, southeastern Idaho, USA. *Geosphere* doi: 10.1130/GES00587.1

Mathematics and Statistics

M.J. Garlick, J.A. Powell, M.B. Hooten, L.R. McFarlane. 2011. Homogenization of Large-scale Movement Models in Ecology. *Bull. Math. Biol.*

This paper was selected for inclusion in the Faculty of 1000 (F1000) library, which places the article in the top 2% of published articles in biology and medicine.

The Center for Atmospheric & Space Sciences

R. A. Heelis and Jan J. Sojka. 2011. Response of the Topside Ionosphere to High-Speed Wind Streams. *Journal of Geophysical Research* 116, A11314, doi:10.1029/2011JA016739.