The AAAS, Pacific Division will hold its 95th annual meeting this June at the University of California, Riverside. The Division is especially pleased to welcome participants from the Northwest and Southwest Regions of Sigma Xi, The Scientific Research Society and also the annual Molecular Reproduction and Development Conference to our annual meeting. We take pleasure in acknowledging the University of California, Riverside (UCR) and John Wiley & Sons, Inc., publishers of the journal Molecular Reproduction and Development, as contributing sponsors of the meeting.

The Division’s Program and Special Events Committee and the local Program Committee on the UCR campus have been hard at work assembling a program of exceptional scientific merit and interest. All scientists, including professors, teachers, students, and others, are invited to present the results of their research either orally or as posters at this meeting. All registrants for the meeting may attend all of the technical sess-

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RIVERSIDE, CITRUS, AND THE UNIVERSITY OF CALIFORNIA

History of Riverside

The City of Riverside’s rich heritage begins with the original residents of the area, the Cahuilla and Serrano Indian tribes, who lived in the niches in the rocky hills and foraged for food. Their first known European contact occurred in 1774 when a Spanish expedition of 34 men led by Captain Juan Bautista de Anza, who were seeking to chart a colonization route from Arizona into California, entered the area. The natives continued to live relatively undisturbed for almost the next fifty years until 1821, when the lands of California became the property of Mexico and Mexican and Spanish settlers poured into the area to establish ranchos, presidios, and missions.

Shortly thereafter, Juan Bandini, a prominent political figure in California, was granted by the Mexican government a very large land grant, El Rancho Jurupa, that included parts of what were later to become both San Bernardino and Riverside Counties. He later presented part of this to Abel Stearns, the husband of one of his daughters. The Stearns later sold the land to Louis Rubidoux, a former fur trader, who started a cattle and grain ranch on the property. After Rubidoux’s death, part of the land was purchased by John North, who solicited investors to found the Southern

1Material for this section was assembled from information accumulated from the following sources:
the Riverside Convention and Visitors Bureau
http://en.wikipedia.org/wiki/Juan_Bandini
http://www.parks.ca.gov/?page_id=649
http://www.ucr.edu/about/facts.html
http://medschool.ucr.edu/about/mission_history.html

See HISTORY, page 4
Executive Director’s Report on the 180th Meeting of AAAS
13 – 17 February 2014
Chicago, Illinois

The 180th meeting of AAAS was held this past 13 – 17 February at the Hyatt Regency Hotel in Chicago, Illinois.

You may remember that just prior to the 179th meeting in Boston last year, Boston was hit with a major storm which left up to two feet of snow in parts of Boston, caused Logan Airport to be closed, and resulted in Massachusetts Governor Deval Patrick ordering all automobiles off the streets and highways for a time. It felt a bit like déjà vu this year, with a seemingly endless stream of storms and very cold weather moving through the area. We arrived Wednesday afternoon and were relieved to see traffic moving well. But as the days progressed, we saw alternating sun and snow, including a bout of thunder snow and some very cold temperatures. Thankfully, the downtown hotels where the meeting was held were all interconnected by underground tunnels, so we didn’t need to venture out into Chicago’s winter wonderland. In the meantime, the AAAS meeting was revving up and running full speed ahead.

On Thursday morning my colleagues from the other three AAAS Divisions (Arctic, Southwest and Rocky Mountain, and Caribbean) and I reported on the activities of our Divisions to the AAAS Board of Directors. My report included a review of the geographical boundaries of the Division (in the U.S.: California, Hawaii, Idaho, western Montana, Nevada, Oregon, Utah, Washington; in Canada: British Columbia and Alberta; in the Pacific Basin: China, Japan, New Zealand, Australia, Oceana, and all other Pacific Basin countries that weren’t part of the U.S.).

see DIVISION ACTIVITIES, page 8

DIVISION NEWS

Dr. Christianson to Remain Executive Director for a Little Longer

The recent search for a replacement for Dr. Christianson as Executive Director following his announced intention to retire was not successful. In light of this, he has offered to continue in the position while the Division’s Executive Committee reformulates the position description and launches a new search. More to follow.

Dr. Chiappelli Steps Down as President of the Division

In an announcement citing personal and health reasons, Dr. Francesco Chiappelli, Division President for 2013/14, on 6 November resigned all of his positions within the Division (President and also Chair of the Division’s Oral Biology and Dental Medicine Section). Members of the Executive Committee were saddened at this unexpected turn of events and wish Dr. Chiappelli the best for the future. Effective as of the date of Dr. Chiappelli’s resignation, Dr. Richard Cardullo (University of California, Riverside), the Division’s President-Elect, moved into the Presidency to fill out the remainder of Dr. Chiappelli’s term.

2015 is a Big Year for the Pacific Division!

The Pacific Division was formed as a result of the call by AAAS for help in organizing its 1915 meeting in San Francisco. The AAAS constitution was amended in 1914 to accommodate divisions, and the fledgling division held its first meeting in conjunction with the AAAS meeting that following year. 2015 brings us back to San Francisco and we plan to celebrate this 100th anniversary of the first meeting of the Pacific Division at that time. Put it onto your calendar now and plan to join us in mid-June 2015 for this centennial meeting!
HISTORY, from page 2

California Colony Association, a community of people devoted to establishing good schools, churches, and libraries. The new town was initially called Jurupa, but shortly, in 1871, the name was changed to Riverside, honoring the fact that it stood next to the Santa Ana River. Riverside’s original square, called “Mile Square,” remains the heart of the city even today. Within a few years of its founding, railroad tracks were built connecting the city to far-off places.

By 1900, Riverside had become an incorporated city of 8,000. In 1907, by a vote of the people, it became a charter city instituting a Mayor-Council form of government.

During World War I, March Field, now March Air Reserve Base, was established for the training of army aviators. During World War II, March Field was expanded and another base, Camp Haan, was begun across from March Field. The site is now occupied by the National Veteran’s Cemetery. A third base was built, called Camp Anza, which later became a subdivision called Arlanza.

In 1920, Ernest Louis Yeager began the E. L. Yeager Construction Company, Inc., which, with the assistance of his three sons, completed over a half century of master construction projects. In the latter half of this century the Food Machinery Corporation was formed to produce machinery for packing citrus fruits both efficiently and rapidly.

A new Charter implementing the Council-Manager form of government was adopted in 1952 and ratified in 1953 by the State Legislature. The Charter has been updated several times since then, but still maintains the 1952 governmental framework.

Riverside Today

In recent years Riverside has given much attention to diversifying its economy and creating a sustainable community. In 2004 Partners for Livable Communities recognized Riverside as one of America’s “Most Livable Communities” in the mid-sized city category. The award—which is given out every decade—recognizes Riverside’s strides in preparing itself for a global economy through strategic business plans. However, it also acknowledges Riverside’s constant nurturing of its community—something the city has done since it blossomed in the late nineteenth century.

After an unprecedented investment into city infrastructure and renovation, Riverside has reinvented itself. However, though fully revitalized, the city celebrates and showcases timeless historic attractions that have attracted visitors for decades.

With a $1.6 billion transformation, just about every area of Riverside has been transformed. Here are the Top 5:

1. Main Street Riverside has transformed downtown into an upbeat, walkable favorite featuring places to dine, shop and entertain.
2. The new Riverside Convention Center, opening in 2014,
will increase the indoor meetings facilities to over 65,000 square feet, including unprecedented technical advancements throughout the complex.

3. The multi-million dollar expansion and enhancements of convenient hotels, including the world famous Mission Inn, makes Riverside more accommodating than ever.

4. Riverside Aquatics Complex is one of the nation’s top facilities to make a splash for competitive swimming, synchronized swimming, diving and water polo.

5. The Fox Performing Arts Center — including sophisticated venues, The Box and The Showcase — have elevated the star power of concerts, performances and more.

Riverside prides itself on its background, and there is strong community support for the historic preservation of architectural structures. Riverside has 22 properties listed on the National Register of Historic Places.

History of Citrus Agriculture in California and Riverside

California’s citrus heritage began in 1769 when Father Junipero Serra, while building a trail of missions in California, planted some citrus seeds, currently thought to have originated from China and reflecting trees that had been cultivated there for thousands of years. In 1840 a frontiersman named William Wolfskill planted several hundred lemon and orange seedlings that he obtained from the San Gabriel Mission on land that is now in downtown Los Angeles, launching the California citrus industry. It was known by this time that eating oranges prevented scurvy, and oranges were in much demand, especially by the “49ers” of the California gold rush.

In 1873 the U.S. Department of Agriculture sent to Eliza Tibbits in Riverside two or three seedlings of a new mutant orange tree that was earlier discovered in a Brazilian monastery. The mutation caused the fruit to be seedless and also to develop a second much smaller fruit at the end of the larger one.

ANNOUNCEMENTS

PACIFIC DIVISION Heads to San Francisco, California in 2015

The Pacific Division will hold its 2015 meeting at San Francisco State University 14 – 17 June, 2015. This will be a very special meeting, marking the centennial year of Pacific Division meetings. Mark your calendar now for this event and keep an eye on the Pacific Division website, http://pacific.aaas.org, for additional details.

TEACHERS K – 14

The first ten K – 14 teachers to register in advance (meeting registration received no later than 31 May 2014) for this meeting will receive, upon request, a $75 stipend to help defray their costs to attend! This stipend is not available to those who register on-site for the meeting. A $75 check, if requested, will be included with your registration materials at the Pacific Division Meeting Registration Center.

Judges for Student Presentations at Riverside Meeting Sought

Student presentation judges are being sought for both oral and poster presentations at the Pacific Division’s annual meeting. Previous experience evaluating student presentations is generally a requirement for individuals who haven’t previously judged at a Pacific Division meeting. Judges must be available for a judges meeting Tuesday evening, 17 June, and be available to judge presentations Wednesday and/or Thursday, 18 and 19 June. For additional information, please contact Dr. Roger Christianson, 541-552-6747 or rchristi@sou.edu. If you are interested in helping with this very important aspect of the annual meeting, be sure to mark the appropriate box on the Advance Registration Form (on page 35 of this Newsletter) and you will be sent an application form.
*****IMPORTANT NEWS UPDATE*****

2013 Alan E. Leviton AAAS, Pacific Division Student Research Award Winners

ASHLAND, Oregon – In a recent article, Kelsey Brenna McCune, Department of Psychology, University of Washington, Seattle, Washington, was announced as the winner of the 2013 Alan E. Leviton AAAS, Pacific Division Student Research Award competition. However, we failed to also announce Ms. Amber Elizabeth Ciravolo, Department of Geosciences, University of Nevada, Las Vegas, Nevada, as the winner of a second Alan E. Leviton AAAS, Pacific Division Student Research Award for 2013. Ms. Ciravolo was awarded a grant of $600 for her project, Origin of Glass Shards from Pinnacle Point, South Africa. We sincerely apologize for this omission and are looking forward to seeing the report about her project in a future edition of this Newsletter.

HISTORY, from page 5

opposite the stem but embedded in the same rind as the main fruit. Because of its appearance, this variety of orange was soon dubbed the “navel” orange (often referred to as the Washington navel orange). It was found to grow extremely well in the rich soil alongside the Santa Ana River and was well adapted to the climate of Riverside. The seedlings were soon producing large, sweet, seedless fruits, which were in high demand. Interestingly, since the fruits were seedless, new trees could not be established by planting, but could only be established by grafting from one tree to the rootstock of another, which opened an entirely new chapter of the citrus industry. It has been estimated that nearly all of the navel orange trees in California have come from stock from Eliza Tibbits’ first couple of trees and may thus be considered clones of the original trees. Of additional interest is the fact that these clones are expected to be genetically identical (except for random mutations) to the original cultivars. This has helped to stabilize the quality of the fruit, as the fruit from Valencia (seeded) oranges comes from trees planted from seeds derived from sexual reproduction, thus leading to a continually changing genetic heritage and size, sweetness, etc. One of the original trees, now 141 years old, still thrives and bears fruit in Riverside.

By 1887 the navel orange had become the dominant crop in Riverside and other California cities. The completion of the transcontinental railroad in 1869 had opened the California citrus industry to markets across the country, insuring a booming market for citrus and especially these new navel oranges.

The success of the crops prompted a steady flow of agriculturalists and investors into the area who hoped to profit from the new citrus industry. The citrus industry also attracted numerous communities of immigrants; Chinese, Japanese, and Mexican workers flooded into the area hoping to acquire their own fortunes. At the turn of the twentieth century, Riverside contained the most successful agricultural cooperative in the world, the California Fruit Growers Exchange (now known as Sunkist Growers), which was the home of a superior research institution, the University of California Citrus Experimentation Station, which would eventually become the University of California, Riverside.

The development of refrigerated railroad cars and innovative irrigation systems established Riverside as the state’s wealthiest city per capita by 1895.

History of the University of California, Riverside

John Henry Reed, a retired school superintendent and dry goods merchant from Ohio turned citrus grower, is credited with first proposing the establishment of a scientific experiment station designed specifically for citrus research in Southern California, and organized a vigorous lobbying effort of the local citrus industry towards that end. As founding member and chair of the Riverside Horticultural Club’s experimental committee, he also pioneered a collaborative approach to conducting experimental plantings, and published more than 150 semi-technical and popular papers on citrus and other subjects between 1895 and 1915.

On February 14, 1907, the University of California Board of Regents established the UC Citrus Experiment Station (CES) on 23 acres (93,000 m²) of land on the east slope of Mt.

Citrus Experiment Station, circa 1916
Rubidoux in Riverside. However, the University’s decision to concentrate on the development of the University Farm in Davis lead to only two initial staff being assigned to the CES, only one of whom, Ralph E. Smith, a plant pathologist from Berkeley, was a scientist. Dubbed the Rubidoux Laboratory, the initial purpose of the station was to concentrate on various soil management problems such as fertilization, irrigation, and improvement of crops.

In 1913, a record killing freeze in Southern California caused a panic throughout the 175 million dollar citrus industry, which demanded more state-funded agricultural research. After considerable lobbying by various groups in the San Fernando Valley, the UC Regents in late 1914 approved the relocation of the CES to its current site on 475 acres (1.92 km$^2$) of land 2.5 miles (4.0 km) from downtown Riverside, adjacent to the Box Springs Mountains.

The new station was to be governed autonomously under Webber’s direction. He spent the next few years personally recruiting the founding research team, eleven scientists organized into six divisions of agricultural chemistry, plant physiology, plant pathology, entomology, plant breeding, and orchard management. Webber also initiated the development of the Citrus Variety Collection on 5 acres (20,000 m$^2$) planted with approximately 500 species of citrus from around the world, which grew to become the greatest such variety collection internationally. In addition, he planted hundreds of other subtropical crops, including 70 varieties of avocado imported from Mexico that produced more than 45,000 hybrids through controlled pollination. He also helped in the founding of the California Avocado Association (Calavo) in 1914 and served as its president for two years, and organized the annual citrus institute of the National Orange Show in San Bernardino and the Date Growers Institute of Coachella Valley.

The original laboratory, farm, and residence buildings on the Box Springs site was designed by Lester H. Hibbard of Los Angeles, a graduate of the University of California School of Architecture, in association with a colleague, H.B. Cody. Built at a cost of $165,000, the architecture followed the Mission Revival style suggesting the Spanish colonial heritage of Southern California. The site, which became the early nucleus of the UCR campus, eventually opened in 1917, although the Division of Agricultural Chemistry continued to occupy lab space at the Rubidoux site.

After the 1945 passage of the GI Bill, a massive influx of former servicemen began to enter college and strained the capacities of many state public university systems. While this wave was expected to subside by the early 1950s, state and federal statistics released in the late forties all projected a massive demand for access to higher education in California in the near future. The UC system was then composed only of established campuses at Berkeley and Los Angeles, (Santa Barbara State had just entered the UC system in 1944) which were already operating near capacity. In 1947, the
of another Division at the time of inclusion of the Pacific Basin countries into the territory of the Pacific Division) and how we communicate with members (Newsletters, postcards, e-mail, meetings). I informed Board members of some recent events within the Division, such as plans to move forward in the wake of the failure of the recent search for my replacement and the resignation of Dr. Francesco Chiapelli from his position of President of the Division and also Chair of the Oral Biology and Dental Medicine Section. After that was a quick review of our 2013 meeting in Las Vegas followed by a report on our two Leviton Student Research awardees for 2013 and our AAAS-Larus awardee, who presented her winning poster the following Sunday in the General Poster Session. After a brief overview of our up-coming meeting in Riverside, I concluded my comments by inviting Board members to the meeting.

The AAAS Meeting began officially with the Presidential Address by Phillip A. Sharp, AAAS President and Institute Professor, Koch Institute for Integrative Cancer Research, Massachusetts Institute of Technology, followed by the usually lavish opening reception that included many delicious appetizers—a fine way to begin an excellent meeting!

The meeting days were filled with a plethora of fine symposia, plenary lectures, and opportunities to meet with colleagues. Especially entertaining was the presentation, Getting Beyond a Blind Date with Science, offered by Alan Alda, currently Visiting Professor of Journalism at Stony Brook University. Also appreciated was the three-day program for young scientists of the Junior Academy of Sciences. What a smart, well-dressed, and polite group they were! Jacqueline Torti (McMaster University), winner of the 2013 AAAS–Robert I. Larus Student Travel Award at our meeting in Las Vegas the previous June, was also present at the meeting, where she presented her winning poster, Assigning Causality to Anti-Cancer Agents: Decision Making in Early Phase Oncology Clinical Trials, in the general poster session of the meeting.

As usual, the two days of Family Days in the exhibit hall were crazy! With kids everywhere and often lined up several deep in front of various booths set up to introduce them to scientific topics, it was obvious that the children and parents alike were enjoying the offerings. Family Days have become an important part of each annual meeting, as they attract so many members of the general public to be a part of the meeting and experience science in a very hands-on way. There were likely as many parents and children from the community participating in Family Days as there were attendees and others participating in the technical sessions of the meeting!

Sunday morning was the AAAS Council meeting. The meeting started with remarks from AAAS President Phillip Sharp, which included among other things, the announcements that Marcia McNutt was appointed Editor-in-Chief of Science, AAAS will be starting a new on-line journal, Science Advances, scheduled to debut in 2015, a new office for AAAS in China has been formalized, and the new strategic plan for AAAS, dealing with how and where to make strategic investments looking ten years into the future, will bring about many changes to AAAS. Dr. Alan Leshner, CEO of AAAS, then reported on AAAS 2013 financial results and the 2014 operating budget, and membership trends. As part of his comments to the Council, Dr. Leshner announced/commented on a variety of happenings at AAAS, such as the announcement of senior staff put into place this past year (Phil Blair, formerly CFO moved to COO; Colleen Struss, formerly CLO now including CFO as part of her assignment; Tim Appenzeller, formerly...
Strayer committee recommended that Riverside become the location for the fourth UC undergraduate campus. (It also recommended that the existing Agricultural College at Davis be expanded to serve undergraduates.) Governor Earl Warren signed the bill approving the establishment of the College of Letters and Science in Riverside in 1949.

That same year, UC President Robert G. Sproul requested Gordon S. Watkins, Dean of the College of Letters and Science at UCLA, to take on the task of overseeing the organization of the College of Letters and Science at Riverside. The onset of the Korean war, however, delayed construction. Anticipating an initial enrollment of 1000, Watkins ordered the initial campus built for a maximum capacity of 1500 students. Not anticipating the need for graduate work, Watkins focused on recruiting many young, new Ph.D.s rather than already established researchers into junior faculty positions. Watkins became provost of the Riverside campus and presided at its opening with 65 faculty and 131 students in February 1954.

The Regents at the time of the 1947 Strayer Report did not believe California could afford multiple high quality public universities, so they initially sought to respectively specialize the various new campuses. Riverside was designed to provide a high quality liberal arts education, but not graduate-level research. However, continually increasing enrollment demands at Berkeley and Los Angeles required continual expansion at all levels, so the liberal arts college model, implemented by the Regents as a way of saving money, was ultimately deemed too small and costly in light of the growing needs of California.

By the mid-1950s, the University had established a teaching-focused liberal arts curriculum, in the spirit of a small liberal arts college, but California’s rapidly growing population made it necessary for the Riverside campus to become a full-fledged general campus of the UC system.

By the time Clark Kerr became president of the UC system in 1958, UCR was in its fifth year of operation and included 1087 students. Kerr articulated a vision of the UC as “one university, many campuses” and by 1959 Riverside, Santa Barbara, Davis and San Diego were all designated general campuses of the UC system. The Regents tasked biologist Herman Theodore Spieth, provost after Watkins’ retirement in 1956, with increasing UCR’s enrollment capacity to 5000 students and administering UCR’s development towards full university status. As UCR’s first chancellor, Spieth was to combine the College of Letters and Science and the Citrus Research Center under a single academic and administrative entity, as well as oversee the planning and development of UCR’s graduate division, in accordance with the provisions of the developing California Master Plan for Higher Education. UCR started accepting graduate students in 1961.

It fell to Ivan Hinderaker, UCR’s second Chancellor, to complete the task of turning UCR into a full fledged research university. In doing this, he had to confront the early faculty Watkins had recruited on the premise that UCR Letters and Science would be a small liberal arts institution dedicated to teaching undergraduates. Many of UCR’s early L&S faculty had achieved tenured positions without having to do extensive research, and saw themselves primarily as teachers. All Hinderaker could do was wait for this early faculty to retire in order to appoint new faculty on a research basis.

Through the 1960s, UCR’s enrollment rose to a plateau of approximately 5000 students. In 1973, Riverside’s Mayor Lewis requested Governor Ronald Reagan to declare the South Coast Air Basin a disaster area. This caused Riverside to become famous for its air pollution and had disastrous effects on student enrollment and faculty recruitment at UCR, with a twenty-five percent reduction in students by 1978-79 and the loss of forty-two faculty positions during the early seventies. Rumors circulated that the campus would close; Gov. Jerry Brown proposed a merger with Cal State San Bernardino. But through the development of UCR’s Biomedical and Business Administration programs, Hinderaker was able to stave off the dire predictions. During his tenure, Hinderaker also established UCR’s graduate schools of education and administration, streamlined UCR’s departmental structure, and presided over the establishment of the UCR/California Museum of Photography during this period.

The 1980s were a turbulent time for the University, with a series of several short-term chancellors and trying to deal with budget problems brought on by the passage of California Proposition 13, which severely reduced the state’s ability to fund higher education. However, enrollment slowly picked up and by 1991 had more than doubled. Due to these enrollment gains, the University was able to bring on 200 new faculty members.

With the improvement of the economy in 1994, the UC campuses began receiving more applications than anticipated. This surge became known as “Tidal Wave II” (the first “tidal wave” of students having been the Baby Boom generation born in the post-World War II era). To help the UC system accommodate this growth, planners targeted UCR for an annual growth rate of 6.3%, the fastest in the UC system, and anticipated 19,900 students enrolled at UCR by 2010.

With UCR scheduled for dramatic population growth, efforts were made to increase its popular and academic recognition. The students voted to increase fees to move UCR athletics into NCAA Division I standing in 1998. Proposals to establish a law school, a medical school, and a school of public policy at UCR have been in development since the 90s. In June 2006, UCR received its largest gift, 15.5 million dollars from two local couples, in trust towards building its medical school, which opened fall term, 2013.

In fall 2012, UCR enrolled 18,539 undergraduate and 2,466 graduate students in a range of 107 bachelor’s programs, 56 master’s programs, 47 PhD programs, 10 California teaching and administrative credential programs. The UCR School of Medicine welcomed its inaugural class of students in August 2013.
with Nature, appointed News Editor for Science; Marcia McNutt appointed Editor-in-Chief of Science; Rob Covey, formerly with National Geographic, appointed Director of Technology; etc.; science diplomacy activities (volcanological project in N. Korea), the twentieth anniversary of the AAAS office in Cambridge, England; the fortieth anniversary for the AAAS COOS (Committee On Opportunities in Science) program; the On-Call Scientists program; and several other on-going programs at AAAS. Dr. Leshner then spent some time discussing the long-term strategy, “Envisioning the AAAS Future,” for AAAS, stating that 1) the AAAS mission and over-arching values will stay the same and 2) AAAS will remain an interdisciplinary society. However, big changes are underway in 1) AAAS becoming a multi-media, multi-platform scientific communications enterprise and 2) AAAS aspires to become more of a “true” membership organization where people join the association not for access to Science, but to belong to the society. With respect to this latter point, surveys have shown several things that people want from the society: content, advocacy, networking and community, and career advice. Watch for enhancements in these as well as other areas in the months ahead. Following Dr. Leshner’s comments was Marcia McNutt (Editor-in-Chief of Science), who reported on Science, and a congressional update by Joanne Carney (Director, Government Relations). Matt Hourihan (Director, R&D Budget and Policy Program) gave an update on the R&D budget, followed by a presentation on AAAS public engagement activities by Tiffany Lohwater (Director of Meetings and Public Engagement).

As the clock approached 11:30 a.m., Dr. Sharp presented the last items of the meeting, three action items forwarded to the Council by the Committee on Council Affairs as follows:

1. An affiliation request from the National Organization for Research Development Professionals (NORDP);
2. A proposal to stagger the terms of Council delegates in sections with more than one Council delegate; and
3. A proposal to implement #2.

see DIVISION ACTIVITIES, page12
**SOCIETIES AND PACIFIC DIVISION SECTIONS SPONSORING SESSIONS AT THE RIVERSIDE MEETING**

Sigma Xi, The Scientific Research Society  
Molecular Reproduction and Development  
Agriculture, Food and Renewable Resources  
Anthropology and Archaeology  
Atmospheric and Hydrospheric Sciences  
Cell and Molecular Biology  
Chemistry and Biochemistry  
Computer and Information Sciences  
Earth Sciences  
Ecology, Environmental Sciences and Sustainability  
Education (Science and Technology)  
Engineering, Technology and Applied Sciences  
Evolution, Organismal Biology and Biodiversity  
General and Interdisciplinary  
History and Philosophy of Science  
Mathematics  
Physics and Materials Science  
Psychology  
Science and the Arts and Humanities  
Social, Economic and Political Sciences

**REGISTRATION**

All persons planning to attend the meeting should use the Advance Registration Form on page 35 in this Newsletter to pre-register in order to receive the best registration rate. On-site registration will be available, but with higher fees. Advance registration fees (through 26 April) for the full meeting are $100.00 for professionals; $50.00 for retirees/emeritus, current post-docs, and students¹; and $35.00 for, spouses/family members of registrants and unemployed individuals. K–12 and community college teachers are encouraged to attend the meeting for a reduced professional registration fee of $50.00. One-day professional registration is available for $70.00. Presenters and program organizers registering in the professional category may purchase a full-meeting professional registration at the discounted rate of $70.00. To be eligible for this discount, the individual must have submitted an abstract for presentation at the meeting that has either been approved or is pending approval, be listed as an organizer or co-organizer of a program, or be leading a field trip. Be sure to include this information in the appropriate space on your registration form. After 26 April, higher registration fees will be charged, as indicated on the Advance Registration Form. Beyond 31 May, on-site registration fees will be charged for both pre-meeting and on-site registrations. On-site registration fees for the full meeting are: professional, $130.00; program planners/presenters, $90.00; K–12, community college teachers, post-docs, students, and retirees/emeritus, $65.00; participating spouses and/or family members, and unemployed individuals, $50.00. One-day on-site professional registration will be $90.00. Note that If you attend more than one day, you must pay the full registration fee.

The first ten K–12 and community college instructors that register in advance (by 31 May) for this meeting will receive, upon request, a $75.00 stipend to help defray their expenses to attend the meeting. The stipend is not available to teachers who register on-site. Note that to receive the stipend you must check the appropriate box on the Advance Registration Form.

Students have the opportunity to apply for travel awards to help defray their costs for the meeting. See page 4 of this Newsletter for additional information.

Field trips: Pre-registration for all field trips is required due to limited seating in the vehicles and the need to inform some destinations of the number of people arriving. If you are interested in one or more of the excursions, it is recommended that you register early. At least one member of a family group requesting field trip reservations must be a paid meeting registrant. Participants who are not registered for the meeting will be charged a one-time $10 field trip registration fee in addition to the fee for the field trip.

Please send your Advance Registration Form and accompanying payment to AAAS, Pacific Division, Southern Oregon University, 1250 Siskiyou Blvd., Ashland, OR 97520. Alternatively, and with a credit card, you may phone (541-552-6869) or fax the information (541-552-8457 – a dedicated fax line).

**PLEASE NOTE:** Requests for refunds must be in writing and received in the Pacific Division office no later

¹Students receive a one-year student membership in AAAS, which includes all member benefits including on-line access to Science magazine, with payment of their registration fee for this meeting. Current student members will receive a one-year extension to their membership. A filled out membership form must accompany the registration form to receive this membership.

See **ANNUAL MEETING, page 12**

Visit us at [http://pacific.aaas.org](http://pacific.aaas.org)
The request for affiliation was very straightforward and passed unanimously.

The proposal to stagger the terms of Council members was designed to retain institutional memory where possible by not having all Council representatives coming onto and going off of the Council at the same time. The only sections with more than one Council representative at the present time are Biological Sciences, Chemistry, Physics, Medical Sciences, and Engineering. The proposal passed unanimously.

The third proposal was to allow a one-time staggering of the terms of Council representatives from the affected sections in order to implement the proposal. The effect of this proposal was to create terms of one, two, and three years (depending on how many Council representatives an affected section had) for this one election cycle only in order to realize the staggered terms. The proposal passed unanimously.

By this point in time, as usual, everyone had downed so much coffee, and there being no new business to discuss, we all thought it best to call it quits for yet another year. So the meeting was adjourned and we all dispersed to our separate destinations.

ANNUAL MEETING, from page 11

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DIVISION ACTIVITIES, from page 10

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ON-CAMPUS MEETING HOUSING

A limited number of rooms in the Glen Mor Apartments campus housing are available for participants at this meeting. The Glen Mor Apartments are arranged in pods of four bedrooms, each pair of bedrooms sharing one bathroom. In the middle is a living room type seating area and a kitchen.

Each bedroom is designed to sleep one person, so there are a maximum of four persons in each apartment. Couples requesting a Glen Mor Apartment for their stay in Riverside will be assigned to two bedrooms on the same side and share the same bathroom. The package price of $200 per person includes overnight accommodations in a single room of a four bedroom apartment for three nights (Tuesday, Wednesday and Thursday), complimentary parking for one automobile, linen service that includes a pillow, pillow case, two flat sheets, a blanket, towel, hand towel, and wash cloth per person, and breakfast in the Aberdeen-Inverness (AI) Restaurant (for location, please refer to the map on page 39 of this Newsletter) the morning following each night’s stay.

An extra night stay in the Glen Mor Apartments is available Friday night for those purchasing the three-night package. The cost for this is an additional $67 per person and includes all of the above amenities. No other additional nights are available.

The University has these important housing regulations. If you are unable to honor these, please do not request campus housing.

- no pets
- no smoking in University buildings –smoking is allowed in designated smoking areas only
- no alcohol/substance abuse – use of these substances will result in removal from the housing unit and the University campus
- do not move or rearrange residence hall furniture or face the possibility of fines
- do not tamper with fire alarms or extinguishers – fines will be assessed for false alarms
- make sure all trash is placed in the proper receptacles and linen is stacked neatly for pick-up
- a $50 fee will be assessed for lost room keys or lost meal cards – report immediately if a loss occurs

To apply for housing in one of the Glen Mor Apartments, fill out the form on page 34 in this Newsletter. Please note that you will be required to agree to pay any additional fees that are assessed to the Pacific Division by UCR relating to your stay in the apartments, such as lost keys, lost meal cards, use of “additional charge” facilities, fines, etc. Should you incur any of these fees and you pay them directly to UCR, there should be no fee assessed to the Division.

Check-in for housing will be in the Pentland Hills Q building-Resident Services Office (directly west of the Glen Mor Apartments Building on Pentland Way--please refer to map on page 39 of this Newsletter). If driving, park in lot 21 while checking in and once you have your parking permit be sure to place it in your vehicle per the instructions you will receive at check-in.

OFF-CAMPUS MEETING HOUSING

The Division has contracted with the Mission Inn, one of the premier hotels in Southern California, to provide off-campus
housing for this meeting. The Mission Inn is truly “breathtaking” in its architecture, timeless beauty and old-world charm. Listed on the National Register of Historic Places, it is one of the must-see stops in Southern California. But one needn’t settle for a whirlwind tour through the facility, as The Mission Inn has provided attendees to this meeting with a spectacular price on room rentals. But don’t delay in making your reservation, because these rooms will sell out quickly.

**Mission Inn**

*Address:* 3649 Mission Inn Avenue, Riverside, CA 92501  
*Telephone:* 951-784-0300  
*Website:* www.missioninn.com

**Additional information:** http://www.missioninnmuseum.com/about/mission_inn.htm

**Rate:** $115 (1 or 2 persons in a Deluxe room) + 12% tax  
- each additional adult in room – $15  
- other rooms, if available, are the following prices--phone to reserve:  
  - Raincross – $125  
  - Glenwood – $135  
  - Mission – $155  
  - Junior Suite – $205  
  - Presidential Suite – $500  
  - Superior Presidential Suite – $700  
  - Keeper of the Inn Suite – $1000

**Reservations**

*by phone:* 800-843-7755 or 951-784-0300, ext 850  
Be sure to reference “95th annual meeting” when making reservations by phone.

*on-line:* go to www.missioninn.com; select RESERVATIONS, then GROUP CODE; enter AAAS6222014 and click UPDATE. This will bring up a calendar showing the nights rooms are available (14 – 23 June). Select the nights you desire, the number of adults in the room, and then click CONTINUE. Directions from this point are self-explanatory.

**Group Code:** AAAS6222014  
**Dates Available:** 14 June – 23 June (not all room types are available for all of these days)  
**Cut-off date for reservations:** 13 May 2014  
**Check-in time:** 3:00 p.m.  
**Check-out time:** noon  
**Complimentary amenities:**

- overnight self-parking  
- high speed internet in lobby ($9.95/day in room)  
- shuttle service to and from the Highlander Union Building (HUB) on the UCR campus  
- use of fitness center and steam room  
- swimming pool

**Food on Campus**

The UCR Student Union (the HUB) has a fairly extensive food court, which includes such establishments as The Coffee Bean & Tea Leaf, Habanero’s, La Fiamma Italian Cuisine, Panda Express, Sushi by Panda Express, The Grill, and Subway. Alternatively, you can take a short walk over to Hinderaker Hall (west of the HUB) to pick up a coffee, pastry, espresso drink, Java City smoothie, grab’n’go salad, wrap, sandwich or snack at Ivan’s @ Hinderaker. Another campus option is The Barn, southwest of the HUB and kitty-corner to Sproul Hall. The Barn serves a variety of burgers, sandwiches, salads, and pastas.

**Travel to UCR**

**From Los Angeles County**

*From the 91 Freeway:* Take CA-91 east to the CA-60 east. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.  
*From the 10 Freeway:* Take the I-10 east to the I-15 south and then to CA-60 east. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.  
*From the 60 Freeway:* Take the CA-60 east. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.

**From Ontario Airport**

*From the 10 Freeway:* Take the I-10 east, to the I-15 south and then to CA-60 east. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.  
*From the 60 Freeway:* Take the CA-60 east. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.

**From Orange County**

Take the CA-91 east to the CA-60 east. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.

**From Palm Springs**

Take the I-10 west to CA-60 west. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.

**From San Bernardino**

Take the I-215 south to the CA-60 east. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.
Avenue and turn left. At the second light, take a right onto West Campus Drive.

From San Diego County
Take the I-15 north to the I-215 north to the CA-60 west. Exit at University Avenue and turn left. At the second light, take a right onto West Campus Drive.

Parking
Thanks to the UCR Chancellor’s office, there is no charge for on-campus parking for meeting attendees. Parking for this meeting has been assigned to Lot P24. Entry to Lot P24 is from Canyon Crest Drive. To park on the UCR Campus, all guests must display in their automobiles a valid visitor temporary parking permit. Follow signs when coming onto campus to be directed to a kiosk or other location where you can pick up the visitor permit.

Registration Center
The Registration Center will be on the third floor of the Highlander Union Building (HUB). Hours of operation are expected to be as follows, though these may change. Be sure to check the Division’s website (pacific.aaas.org) for updated information.
Tuesday: 2:00 p.m. – 6:00 p.m.
Wednesday: 7:30 a.m. – 4:30 p.m.
Thursday: 7:30 a.m. – 4:00 p.m.
Friday: 7:30 a.m. – 3:00 p.m.

Meeting Rooms
Technical sessions will meet in rooms on the second and third levels of the Highlander Union Building (HUB) and also in rooms of adjacent buildings as needed. All meeting rooms will be equipped with computers running Windows and Microsoft PowerPoint, as well as computer projectors. Speakers requiring other specialized equipment such as slide or overhead projectors must make their requests known when they submit their abstracts. If available, specialized equipment will be provided. If rental costs are incurred, payment of these costs will be the responsibility of the requestor.

Times and Locations of Presentations
The meeting rooms and times of presentations for the program will be published in the “Program with Abstracts” issue of the Proceedings (Vol. 33, part 1), which will be given to everyone who registers for the meeting. Speakers may obtain final confirmation of the time and place of their presentation by visiting the Pacific Division website (pacific.aaas.org) starting no later than 1 June 2014. Symposium planners will provide this information to presenters in their programs in advance of this date.

Computers and PowerPoint Presentations
Meeting rooms will be outfitted with computers running Windows and PowerPoint, and will be connected to standard data projectors. If you are planning to use PowerPoint for your presentation, you must make sure that it will run on the Windows platform. Only CD-ROMs and thumb/USB/flash drives may be used to load presentations onto the computers. If you are preparing your presentation on a Macintosh computer, make sure it will load to a computer running Windows and that it looks on that platform the way you want it to appear.

Call for Abstracts
Members of AAAS and its affiliated societies, students, teachers, and other scientists are encouraged to participate in the annual meeting by presenting papers, either orally or as posters. One needn’t be a member of AAAS to attend or present at this meeting. Those wishing to submit an abstract for a presentation at one of the sessions must follow the instructions below and on page 32 of this Newsletter (Call for Abstracts).

1. All authors should be listed sequentially, starting with the person who contributed the most and ending with the person who contributed the least. If more than one address occurs among the authors, use a superscripted number to the right of each author’s last name, followed by the corresponding superscripted number at the start of each unique address. If more than one author is listed, place an asterisk (*) next to the last name of the presenter. Submissions not formatted in this manner may be returned for reformatting or may be rejected.

2. Indent the first line of each paragraph of the text of your abstract 0.25 inches by using the first line indent command of your word processor. DO NOT USE A TAB OR THE SPACEBAR! All text should be full justified.

3. Use 10 pt Times New Roman font and “NORMAL”
style. If you use a different font or style, your abstract will be reformatted to this font and style. If your abstract contains special characters, scan and email a printed copy of the abstract with the special characters clearly marked and notations indicating the font used to the Pacific Division office (at rchristi@sou.edu) along with your electronic submission of the abstract (see #4 below). Be aware that if you use an unusual character set for special characters there is a high likelihood that we will not be able to print it correctly, so please use common font sets such as Symbol or Wingdings for special characters.

4. All abstracts must be submitted via e-mail as Microsoft Word (.doc or .docx) or .rtf file attachments. DO NOT SUBMIT ABSTRACTS IN THE BODY OF AN E-MAIL OR AS A PDF FILE!

- Symposium abstracts should be e-mailed directly to the symposium organizer for review and approval.
- Persons submitting abstracts for contributed sessions (not part of a symposium; either for an oral report or a poster) must identify the appropriate section to which the abstract will be sent for review and acceptance into the program (see list on page 31 of this Newsletter) and e-mail their abstract to the program organizer for that section. Contributed abstracts must also be copied to the Pacific Division office (at rchristi@sou.edu) when e-mailing to the program organizer.
- The subject line of these e-mail submissions should include the word “abstract” and your last name (e.g.: Abstract Smith). Including this information in this manner in the subject line will ensure that you receive an e-mail reply from the Division office confirming receipt of your submission at the Division office. Section chairs will make every effort to review submitted abstracts and notify submitters of their acceptance into the program (or not) in a timely manner.

5. Abstract submission deadlines. Receipt of abstracts by symposium planners and program organizers have the following deadlines:

- abstracts for symposium presentations must be submitted to symposium planners no later than 1 April 2014.
- abstracts for contributed sessions (poster or oral) must be submitted to section program organizers and the Division office no later than 18 April 2014.

If you would like to discuss your submission with the program organizer of the section to which you are submitting it, please refer to page 31 of this Newsletter for contact information.

**STUDENT AWARDS FOR EXCELLENCE**

The AAAS, Pacific Division offers each affiliated society and section participating in the annual meeting the opportunity to recognize outstanding student participants through the presentation of Awards of Excellence and cash prizes of $150 for first place (minimum judging pool of 3 presentations), $100 for second place (minimum judging pool of 5 presentations), and $50 for third place (minimum judging pool of 7 presentations). Additionally, each winner receives a certificate of recognition. Societies often supplement these awards with their own cash prizes.

In 2014, seven division-wide awards may be available: Laurence M. Klauber Award for Excellence (unrestricted); Geraldine K. Lindsay Award for Excellence in the Natural Sciences; J. Thomas Dutro, Jr. Award for Excellence in the Geosciences; Presidents Award for Excellence (unrestricted); Rita W. Peterson Award for Excellence in Science Education Research; Best Poster Award (for posters only but otherwise unrestricted); and the AAAS–Robert I. Larus Travel Award, which will provide reimbursement for travel and other meeting related expenses up to $1,000 for the awardee to attend the national meeting of AAAS in San Jose, California, 12 – 16 February 2015 for the purpose of presenting his/her winning presentation as a poster. The Klauber, Lindsay, Dutro, Presidents, Peterson, Best Poster, and Larus awards are given to those students whose presentations are judged the most significant in the advancement or understanding of science.

To be eligible for a sectional award or one of the division-wide awards, a student must be registered for the meeting prior to the session in which his/her presentation is to be judged, be the primary presenter of the presentation, and be the principal research investigator. Student presentations, both oral and poster, are judged on their abstracts, content, style of delivery or presentation, and audiovisual aids and/or handouts (if used). The evaluation forms for both oral and poster presentations are posted on the Division’s meeting web page (http://associations.sou.edu/aaaspd/2014RIVERSIDE/index.html). Students who are competing for Awards of Excellence are invited to be guests of the Division at the annual banquet Thursday evening, 19 June 2014. Festivities that evening include the announcement of student awards. If you are one of these students, please be sure to fill in the appropriate boxes on the Advance Registration form to let us know you will be attending the dinner.

**IMPORTANT NOTE: All judging for student awards ends by 3:00 p.m. on Thursday, at which time the judges go into closed session to determine the winners. If you are a student wishing to compete for an Award of Excellence and your oral symposium presentation is scheduled to end later than 3:00 p.m. Tuesday, you must, in addition to presenting orally as part of the symposium, prepare a poster for presentation at a poster session earlier in the week. That way your presentation will be judged and you will be in the pool of potential prize winners. This may only occur if your presentation is part of a symposium. All poster sessions and oral contributed paper sessions are scheduled to ensure that student presenters are judged prior to the cut-off on Thursday afternoon.**

**BUSINESS MEETINGS**

**Monday Afternoon Business Meeting of the Pacific Division Executive Committee.** The Executive Committee
of the AAAS, Pacific Division will hold its semi-annual business meeting from noon to 6:00 p.m. at the Mission Inn. During that time, the Executive Committee will review nominations for President-elect of the Division as well as those for the Executive Committee and the Council. Details of the Riverside meeting will be discussed and there will be a report on progress of planning for the 2015 meeting in San Francisco. Additional business as is required in the Division’s By-Laws will also be discussed. This is an open meeting and members of the Pacific Division with an interest in the governance of the Division are welcome to attend.

**Tuesday Afternoon Business Meeting of the Pacific Division Council.** The Council of the AAAS, Pacific Division will hold its annual business meeting at 1:00 p.m. on Tuesday, 17 June in one of the rooms in the HUB. The Council will elect officers and Council members, discuss programs for the 2015 and 2016 annual meetings, and transact other such business as is required by the Division’s By-Laws. This is an open meeting and Pacific Division members with an interest in the governance of the Division are welcome to attend.

**Thursday Morning Business Meeting of the Molecular Reproduction and Development (MRD) group.** Prior to the beginning of their one and one half day program, the MRD organizers will meet for their annual business meeting in a room to be announced in the HUB.

### RECEPTIONS AND AWARDS BANQUET

**Tuesday Evening Reception.** Immediately following the conclusion of the public lecture (see next section), all registrants and their guests are invited to enjoy the conviviality of this event. Light refreshments will be available. Please wear your registration badge to this event.

**Wednesday Evening UCR Chancellor’s Reception.** Immediately following the public lecture (see next section), UCR Chancellor Kim A. Wilcox will host a reception for all meeting registrants and their guests. Non-registered guests are welcome, but must be accompanied by a registrant. Please wear your registration badge to this event.

**Thursday Evening Student Awards Banquet.** Thursday evening will be an exciting time for students as Division representatives will announce the names of student winners of sectional Awards of Excellence and also winners of the Division’s Laurence M. Klauber Award for Excellence (unrestricted), Geraldine K. Lindsay Award for Excellence in the Natural Sciences, J. Thomas Dutro, Jr. Award for Excellence in the Geosciences, Rita W. Peterson Award for Excellence in Science Education Research, the Presidents’ Award for Excellence (unrestricted), the Best Poster Award (for poster presentations only but otherwise unrestricted), and the AAAS Robert I. Larus Travel Award.

The evening is planned to begin at 6:00 p.m. with a reception. Dinner will be served buffet style, with service to begin about 6:45 p.m. After dinner will be the presentation of student awards, followed by a few words from our current president, Dr. Richard Cardullo. The evening should end by about 9:00 p.m.

Banquet attendees can choose between three entrées: Steak with Wild Mushrooms (pan-seared flat-iron steak, served with a creamy mushroom demi-glance sauce), Dill-Citrus Broiled Salmon (citrus and dill-marinated salmon filet, topped with a citrus beurre blanc), and Butternut Squash Ravioli (butternut squash-stuffed pasta pillows tossed with olive oil, garlic and fresh herbs and served with a flavorful marinara sauce). All entrées come with a signature citrus salad (organic mixed greens with jicama, julienne carrots, mandarin oranges, signature citrus vinaigrette) and a seasonal vegetable medley. The steak and salmon also come with roasted Yukon Gold potatoes and fresh rolls and butter. Dessert is a choice of New York Cheese Cake, Chocolate Ganache Cake, or Lemon Raspberry Cake. Water and iced tea will be available on the tables during dinner. Coffee, both 100% Columbian and decaffeinated, will be available with dessert. Please note that details may change as we approach the banquet date. If a substitution must be made, every effort will be made to insure that the replacement is comparable to or better than that which is listed above. A cash bar will be available during the reception and early part of the dinner for those wishing to purchase beer and/or wine. Banquet tickets are $40 each and must be purchased on the Advance Registration Form (see page 35 of this Newsletter). The deadline for ordering banquet tickets is the close of early registration for the meeting, 31 May.

Students in competition for Awards of Excellence are invited to be guests of the Division for this event. Be sure to check the appropriate box on the Advance Registration Form (see page 35 of this Newsletter) indicating your plans to attend and you will be provided a ticket at no cost. Note that if you request a complimentary ticket we expect you to attend the banquet. Please don’t dishonor the Division’s generosity in offering you this opportunity to fully participate in the meeting with minimal out-of-pocket expenses by asking for a ticket and then not showing up!

### PUBLIC LECTURES

The following public lectures are planned. Additional ones may be scheduled as time permits. All members of the public are invited to attend these lectures at no charge.

**Tuesday Evening Plenary Lecture and Book Signing**

**Dr. Daphne J. Fairbairn** (Department of Biology, University of California, Riverside), author of the recent book **ODD COUPLES: The Extraordinary Differences between the Sexes in the Animal Kingdom**, will present this evening’s lecture on the same topic. Following the talk will be a book signing by the author.

**Wednesday Noon Public Lecture TBA**
Call for Symposium Proposals
Symposium proposals for the 2015 AAAS Annual Meeting are now being solicited. To submit a proposal, visit www.aaas.org/meetings. The deadline for submission is 25 April 2014.

Innovations, Information, and Imaging
Science and technology are being transformed by new ways to collect and use information. Progress in all fields is increasingly driven by the ability to organize, visualize, and analyze data. Advances in information and imaging technologies are generating novel applications in fields such as biochemistry, computer science, particle physics, genomics, and oceanography, and creating ways to interpret data across disciplines. This transformation makes scientific information more open, available, and accessible globally. The escalating amount of data, and advances in data analysis, are changing the ways we discover answers to scientific and societal problems. Thoughtful consideration of how information is used for societal benefit, evaluated for potential risks, and communicated beyond the scientific community will allow this revolution to reach its full potential.
**Wednesday Evening Plenary Lecture TBA**

**Thursday Noon Public Lecture (1)**

Dr. Robert Louis Chianese (emeritus, Department of English, California State University, Northridge), will present, *Ecological Restoration and Post Natural Aesthetics*, which focuses on the role of art in ecology and the artistry of eco-restoration.

**Thursday Noon Public Lecture (2)**

Mr. David Blackman (retired, Physics Department, University of California, Berkeley, California) will present *Currents Implicated in Cardiac Arrhythmia*, in which he will discuss mathematical derivations that identify the culprit in cardiac arrhythmia as decreased passive flow of potassium into ischemic heart muscle tissue.

**Friday Noon Public Lecture**

Dr. Joel D. Hamkins (City University of New York).

Please watch the Pacific Division website (pacific.aaas.org) for updates on these and other lectures as they are added.

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**WORKSHOPS AND PANELS**

**PULSE-ating with Vision and Change: Promoting the Role of Faculty as STEM Education Change Agents**, Organized by David J. Marcey (Biology Department, California Lutheran University, Thousand Oaks, California; marcey@callutheran.edu) and Rick Gonzalez, Biology Department, University of San Diego, San Diego, California; gonzalez@sandiego.edu). Currently scheduled for Wednesday afternoon.

This workshop is intended to advance faculty expertise in promoting department-level STEM education reform at their home institutions. Although the workshop staff are PULSE Vision and Change Leadership Fellows (PULSE = Partnership for Undergraduate Life Sciences Education), the topics covered will be relevant to all STEM fields. Workshop attendees will be active participants in developing skills and approaches that can be used to effect significant department-level educational change. Participants will employ self-assessment rubrics in order to determine their home department’s progress relative to the educational recommendations found in the AAAS/NSF Vision and Change (V&C) document. Attendee-led discussions of barriers to significant STEM education reform will be followed by activities designed to develop student-centered pedagogical “mindsets.” Participants will receive resources for Vision and Change implementation and each will develop a specific action plan to enhance their roles as change agents in their departments.

Although there is no fee for this workshop, participants are asked to sign up in advance to insure a space in the program. If you are planning to participate in this workshop, be sure to check the appropriate box on the Advance Registration Form (see page 35 of this Newsletter).

**DockoMatic Experiments for the Science Curriculum**, Organizers: Mark Maupin (Department of Chemical and Biological Engineering, Colorado School of Mines, Golden, Colorado; cmmaupin@mines.edu) and Owen McDougal (Department of Chemistry and Biochemistry, Boise State University, Boise, Idaho; owenmcdougal@boisestate.edu). Currently scheduled for Friday afternoon.

This workshop will focus on the use of the computer program, DockoMatic. This program, created at Boise State University, is a wrapper that links several different codes, including AutoDock4 and Modeller, into a single user friendly graphical user interface (GUI). During this workshop the participants will be guided through the use of DockoMatic to create a homology model of a macromolecule. After the successful creation of the 3D structure for the macromolecule, DockoMatic will then be used to automate docking calculations between the macromolecule and a ligand. The workshop will finish with an analysis of the calculations and a question and answer phase to help participants formulate ways in which to use DockoMatic for their own research or teaching needs.

Although there is no fee for this workshop, participants are asked to sign up in advance to insure a space in the program. If you are planning to participate in this workshop, be sure to check the appropriate box on the Advance Registration Form (see page 35 of this Newsletter).

**Open Source 3D Printing – How Does It Really Work?**

Organizer: Joan Horvath (Deezmaker 3D Printers, Pasadena, California; joan@deezmaker.com). Currently scheduled for Friday morning.

What is 3-D printing, and how can it be used in scientific visualization and to make one-off objects you might need around the lab? What tools are available open source, and what is the workflow like if you are a user that needs maximal flexibility? Use a 3-D printer “in person” to learn what is and what is not possible with one of these machines. Attendees will learn the state-of-the-art in low-cost open-source 3D printing, the workflow involved in this type of printing, capabilities and limitations of low-cost printers, and some suggested applications. As time permits, some objects will be developed and printed to show the end-to-end process. People who are already conversant with 3D modeling can prepare a model ahead of time and skip the second hour. One particular 3D printer will be used, but the open source software suite works on...
many printer brands with some variation on input parameters. Workshop agenda:

• First hour: Review of open source 3D printer technology, what it is good for and what it isn’t ready for yet, and how the consumer printers have evolved.

• Second hour: Introduce two free or open source 3D modeling programs (Tinkercad, if adequate wifi is available, and OpenSCAD) and let people make a simple object. For people who already are advanced 3D modelers, we will start printing out a file they have prepared ahead of time if it doesn’t require extensive fixes.

• Third hour: Introduce the open source slicing and hosting programs Slic3r/Repetier Host. Discuss the considerations for printing something on a printer and then actually print out as many objects as we have time for. (We can leave the printers we bring printing for the duration of the 3-D printing symposium, which follows this workshop in the afternoon.) Participants will be sent a list of software to download ahead of time (compatible with PC, Mac, Linux). The software is all open-source and free, except for Tinkercad which is a free cloud-based program that requires registration. Participants with extensive 3D modeling experience can prepare a .stl file for printing ahead of time if they wish, but should keep the item small – a few inches on a side at most – so that printing completes quickly.

Does Nature Photography Distort Environmental Realities? Organizer: Robert L. Chianese (Emeritus, California State University Northridge, Northridge, California; rlchianese@gmail.com).

This panel will discuss the impact of Nature Photography on public perceptions of the state of the environment. For instance, do stunning photos of the natural world serve to enhance appreciation and potential conservation of it, or do they provide a dishonest reassurance that the natural world continues to thrive in beauty and grandeur? Or, is photography an adequate medium to convey an objective view of the natural world?

The panelists come from such fields as Biology, Ethics, Photography, Ecology, Aesthetics, and the Humanities. Held in the California Museum of Photography as part of the annual Meeting of the AAASPD on the UCR campus, each panelist can present a short exploration of various kinds of Nature Photography and then the group will discuss and debate the topic, along with questions from the audience.

An essay by the organizer, “Is Nature Photography Too Beautiful?” published in the Jan/Feb American Scientist magazine, can serve as a catalyst for discussion. It can be found on line at: http://www.americanscientist.org/issues/pub/2014/1/is-nature-photography-too-beautiful.

CAMPUS TOURS

The UCR campus has a rich history dating back into the early 1900s. Because of this and its positioning in citrus and agricultural research, there are a number of locations on campus that are sure to be of interest to meeting attendees. The following campus tours will be available during the meeting.

(A) UCR Botanic Gardens

The UCR Botanic Gardens are nestled in the foothills of the Box Springs Mountains on the east side of the UCR campus and a short 8 to 10 minute uphill walk from the meeting location at the HUB. The Gardens cover 40 hilly acres and can be found in section G-H 6-7 of the campus map (see page 39 of this Newsletter).

Courses supported by the Botanic Gardens include anthropology, art, biology, botany, ecology, entomology, landscape plants, morphology, ornamental horticulture, plant pathology, photography, and taxonomy. The Gardens also provide plant materials for various research projects and serve to test and exhibit plant species introduced from all parts of the world. The variable terrain and Riverside’s subtropical climate create numerous “microclimates” which allow for the notable diversity of plantings. This wealth of vegetation creates a hospitable sanctuary for wildlife, where nearly 200 bird species have been officially observed.

This tour will be a research-based guided tour and briefing of the Botanic Gardens. Come enjoy the relaxing atmosphere of the Gardens! After the tour, explore over four miles of scenic trails or just relax on a bench and enjoy the beauty. Though maintained separately, the UCR campus grounds are also considered a part of the Botanic Gardens, and serve to demonstrate landscape plants that do well in Riverside’s climate.

Meet at the entry to the Botanic Gardens at one of the times below to take the tour. Please reserve your tour by marking the appropriate box on the Early Registration Form.

There are currently three opportunities to take this tour:

Wednesday 9:00 a.m. – 11:00 a.m.
Thursday 9:00 a.m. – 11:00 a.m.
Friday 9:00 a.m. – 11:00 a.m.

Note that this is a walking tour of the Botanic Gardens, so please come prepared wearing good quality walking shoes. It is also best to protect yourself from sun exposure by bringing a hat, sunglasses, and a good sunscreen. Bottles of water will be provided. The admission fee to the Gardens is a $4.00 donation, payable upon entry. This is the only cost for this tour.

(B) UCR Citrus Variety Collection

The Citrus Experiment Station and its Citrus Variety Collection were established in Riverside in the early 1900s to support the needs of the developing citrus industry in Southern California. Over the years, the world-renowned Citrus Experiment Station became the foundation of the Riverside campus of the University of California and has remained at the forefront of agricultural research, especially citrus research.

Today, UCR has expertise in many disciplines, yet the Citrus Variety Collection, consisting of four trees each of more than 1,000 different citrus types, remains one of the most
diverse collections of citrus and related genera in the world.

This is a research-based guided tour and briefing, and includes transportation. Come prepared to see and taste your way through a tour of citrus diversity. Cost: $10.00.

There are currently two opportunities to take this tour:

**Wednesday 9:00 a.m. – 11:00 a.m.**

**Thursday 9:00 a.m. – 11:00 a.m.**

Be sure to reserve your tour by marking the appropriate box on the Early Registration Form. Details will follow about where to meet for this tour. Maximum number for each tour is 18 participants.

**(C) UCR Entomology Research Museum, Insectary, and Quarantine Facility**

On March 30, 1994 a new building for UCR’s large collection of insects and related arthropods was dedicated and given an official name – the Entomology Research Museum. The lower of two floors in the building houses the collection and provides offices, space for curating and research for its Director, Dr. Serguei V. Triapitsyn, its senior museum scientist, Dr. Doug Yanega, and visiting scientists as well as students. There is a preparations room, a small library/lab room, and a large room for teaching, special seminars, and other events sponsored by the Department of Entomology.

The Insectary and Quarantine Facility provides a restrictive environment for potentially invasive species that are currently under scientific research. The building offers two receiving rooms, six research laboratories, 12 greenhouses, 64 rearing rooms and provides a three stage level of quarantine. Each room is equipped with state of the art temperature, humidity, and light controls providing the perfect artificial environment for studies. The Insectary and Quarantine Facility is one of only four insectaries west of the Rocky Mountains.

This will be a research-guided tour. There are two opportunities to take it:

**Wednesday 2:00 p.m. – 4:00 p.m.**

**Thursday 2:00 p.m. – 4:00 p.m.**

Be sure to reserve your tour by marking the appropriate box on the Early Registration Form. Meet at the entrance to the Entomology Research Museum for this tour. There is no charge for this tour. Maximum number of participants for each tour is 10.

**FIELD TRIPS**

All field trips are open to meeting registrants and their families. At least one member of a family group must be registered for the meeting. Unregistered family members will be charged an additional one-time-only $10 field trip registration fee. This fee is paid only once for this meeting, regardless of how many field trips a non-registrant participates in.

Due to limited space, advance registration is required for all field trips. Reservation and payment of field trip fee(s) are included on the Advance Registration Form (see page 35 of this Newsletter).

Please note that each field trip has a minimum and a maximum number of participants, which may or may not be listed in this Newsletter. A full refund will be granted if a trip is cancelled by the Division. If a registrant cancels via e-mail or written notification received in the Pacific Division office no later than 15 May 2014, the registrant will receive a refund of the fee(s) paid less a $15 processing fee. If paid by credit card, an additional 3.5% of the original charge will be deducted from the amount being refunded to help pay for fees charged to the Division by credit card companies. With the exception of the Division cancelling a field trip, no refunds will be granted after 15 May.

**TUESDAY, 17 JUNE**

**Santa Rosa Plateau Ecological Reserve (Field Trip #1)** This field trip has been cancelled.

**James San Jacinto Mountains Reserve (Field Trip #4), Tuesday, 8:00 a.m. – 5:00 p.m.** Note day and time change from earlier announcement.

The James San Jacinto Mountains Reserve is located on an alluvial bench situated at the lower end of Hall Canyon, a steep, western flank of Black Mountain. The reserve hosts a wide variety of plant communities: Sierra mixed conifer riparian forest, oak woodlands, montane chaparral, alder-willow-cedar riparian forest, and dry meadows. Habitats include mixed conifer and hardwood forest, montane chaparral, montane riparian forest, and a rapidly flowing mountain stream with man-made reservoir (Lake Fulmor) immediately downstream. The entire watershed is protected for research and study by the U.S. Forest Service. There are records of 259 species of vascular plants, 35 bryophytes, 6 amphibians, 18 reptiles, 125 birds (60 percent nesting), 35 mammals, and approximately 1,000 invertebrates.

Operating as a satellite to the James Reserve, the Oasis de los Osos Reserve is located at the west end of the Coachella Valley, north of Palm Springs, and encompasses 65 hectares (160 acres) situated on a steep elevational gradient near the base of the north-facing escarpment of Mount San Jacinto. A perennial stream, Lambs Creek, runs through the site, supporting one of the very few riparian woodlands in the Colorado Desert. Oasis de los Osos is protected by the Nature Conservancy.

There are numerous on-going research projects at the reserve covering long-horned beetles, lady beetles, southern mountain yellow-legged frogs, flying squirrels, phenology of the forest, carbon dioxide budgets from the atmosphere to deep into the soil, studies of the mycorrhizae and many others. In addition, extensive teaching use is made of the site by university-level courses in biology, botany, animal tracking, zoology, ecology, and others. The local community is also welcomed for science/ecologically focused tours, meetings and courses on site. K–12 students visit for day-long and overnight field trips and the Idyllwild community uses GIS for fire prevention and planning.
After an orientation to the reserve, participants in this trip will have the opportunity to either head out on an approximate- 

ly 3 mile hike on a trail that is a bit steep in portions and best 

for intermediate hikers, or go off in a different direction with 

a different leader on a hike of the reserve more suitable for 

beginners or those who aren’t able to navigate the longer hike.

Elevation of the James Reserve is 1,623–1,692 m (5,325– 

5,550 ft.). Summertime highs are generally in the mid–70s 

to low 80s but can get into the low 90s. Suggested clothing 

includes sturdy, closed-toe shoes, shorts or long pants, short 

sleeved shirt but with a jacket, just in case. Hats are good as 

well. Don’t forget sunscreen and your camera, etc.

Minimum participation: 10 people; maximum participation: 17 people. Includes transportation, lunch, snacks, and 

fees. Cost: $45 per person.

**Microbrewery Science and Pub Tour (Field Trip #2). Tuesday, 11:00 a.m. – 3:00 p.m.**

Since early times, beer has played an important role in 

our society, but have you ever considered the *SCIENCE* be- 

hind it? As technology has progressed, brewing techniques 

have been developed and refined, in no small part due to our 

increased knowledge in the fields of biotechnology, microbi- 

ology, and chemistry. Our friends at Ritual Brewing Co. in 

Redlands will be sharing their passion and knowledge with 

those interested in this field trip. Hosting this excursion will 

be Mr. Owen Williams, Certified Cicerone®, and lecturer on 

Beer and Culture at the Collins College of Hospitality Man- 

agement at California Polytechnic University, Pasadena.

We plan to leave Riverside at 11:00 a.m., and arrive in 

Redlands about 11:30 a.m. After eating our box lunches, we 

will join Mr. Williams for an approximately two hour tour of 

the microbrewery facility at Ritual Brewing Company, which 

will include background information on the processes and 

microorganisms involved in the brewing of beer. Following 

the tour will be a time to taste various microbrews. The cost 

for tasting, estimated at about $5 to $10, is not included in the 

cost for the excursion, and is on your own.

Includes transportation and box lunch. Cost of beer tast- 

ing is additional and on your own. Cost: $25 per person.

**Friday, 20 June – Saturday, 21 June**

**Channel Islands Adventure (Field Trip #3).**

The Channel Islands of California are a chain of eight islands 

located in the Pacific Ocean off the coast of Southern California 

along the Santa Barbara Channel. Five of the islands (Anacapa, 

Santa Cruz, Santa Rosa, San Miguel, and Santa Barbara) and 

their ocean environment are part of the Channel Islands National 

Park, administered by the U.S. Park Service. The Park, bridging 

two biogeographical provinces, serves to preserve and protect a 

wealth of natural and cultural resources. While encompassing a 

relatively small area, the Park harbors the biologic diversity of 

nearly 2,500 miles of the North American coastline. The Channel 

Islands are home to over 2,000 plant and animal species, of which 

145 are found nowhere else in the world. More than 60 species of 

seabirds can be sighted in and around the Channel Islands, includ- 

ing California Brown Pelicans, Pink-footed Shearwaters, Sooty 

Shearwater, Pigeon Guillemot, Common Murre, Scripp’s Murre- 

lets, Cassin’s Auklets, and Rhinoceros Auklets. In addition, dur- 

ing the 90 minute boat trip each way, we will be crossing through 

the waters of the Channel Islands National Marine Sanctuary, 

which hosts more than 35 species of marine mammals including 

Common Dolphins, Risso’s Dolphins, Dall’s Porpoises, and 

Humpback Whales. Harbor Seals and California Sea Lions are 

also commonly seen basking near the harbor breakwaters.

Like the Galapagos Islands of South America, isolation has al- 

lowed evolution to proceed independently on the islands. Marine 

life ranges from microscopic plankton to the blue whale, the lar- 
gest animal to live on Earth. Archaeological and cultural resources 

span a period of more than 13,000 years of human habitation.

Long-term ecological monitoring has allowed the collection 
of information on the current health of resources within the Park 

and the prediction of future conditions, providing park and natu- 

ral resource managers with useful products for recreation plan- 

nings, conservations, and restoration programs, along with early 

identification of critical issues.

We will visit the west side of Santa Cruz Island, exploring the 

parts of the island managed by The Nature Conservancy (TNC). 

Because we will be visiting both UC and TNC managed sites, 

all participants will have to sign release waivers for both the UC 

and TNC before embarking on this trip (see http://santacruz.nrs. 

ucsb.edu/sites/santacruz.nrs.ucsb.edu/files/docs/ Waiver_UCC_ 

new_2013.pdf). We will land at Prisoner’s Harbor (Mid Santa 

Cruz), which is the second stop on Santa Cruz Island.

At Prisoner’s Bay Harbor, we will climb aboard rugged open- 
topped field vehicles with bench seating to drive up the canyon to 

the Central Valley of the Island. Along the way, we will explore 

the wetland restoration, which has been the recent focus of 
invasive species removal efforts. *Sturdy shoes and good balance 

are a must.* Throughout the journey, visitors will observe all major 

top rocks: igneous, sedimentary and metamorphic. We will have 
a picnic lunch at the UC Natural Reserve System Field Station 

(http://santacruz.nrs.ucsb.edu/visiting/facilities-equipment-field- 

station), which is nestled between two mountain ranges. The 

station has water and restrooms. If lucky, we may get a look at 
some of the endemic island fauna, including the Island Scrub 

Jay and the charismatic Island Fox. After lunch we will explore 

parts of the historic ranch now used by TNC, visiting the historic 

chapel and small museum to learn about the past uses of the 

island. Returning to the Harbor, we will embark on a *moderate- 
to-strenuous hike* on the Pelican Bay trail. Along this trail, we 

will see ironwood trees, an indicator of a wetter climate in the past, 
climb through canyons, and observe the endemic flora.

Cautionary notes:

1) Participants should be prepared for the cool temperature 
during the boat trip, which is typically 15 degrees colder than the 

forecast for the coast. Windbreakers are recommended.

2) Participants must be physically agile, have good balance, 

etc. The terrain is unforgiving and we will be clamoring up and
down into and out of a truck. The hiking is moderate to strenuous,
The trip to Santa Cruz Island is planned to begin with a 2:30 p.m. departure from Riverside, followed by dinner on your own at a Hampton in Oxnard and a group meeting Friday at 7:00 p.m. at the Hampton Inn Channel Islands Harbor (3231 Peninsula Road, Oxnard, CA; 805-985-1100), where we will spend Friday night. Saturday morning we’ll arrive at Island Packers (www.islandpackers.com) in the Ventura Harbor no later than 8:00 a.m. for the approximately 90 minute ride to Santa Cruz Island aboard the 9:00 a.m. boat. At Santa Cruz Island we’ll put in at Prisoner’s Harbor, exiting the boat onto a ladder and climbing several rungs to reach the top of the pier. Once we’re all on the pier and we’ve off-loaded all of our equipment, we will board the vehicles and begin our journey.

The return trip to Ventura Harbor will occur later in the afternoon, getting us back to Ventura no later than about 6:00 p.m. After a stop for dinner (on your own), we should arrive in Riverside about 9:00 p.m. Saturday night, where we will spend the night in Deluxe Rooms at the Mission Inn. This actually completes the field trip, allowing you to depart Riverside at your leisure Sunday morning.

Trip includes round trip transportation from and to UCR, Friday night at the Hampton Inn and Suites in Oxnard, box lunch Saturday, boat fee, water, snacks, and Saturday night at the Mission Inn in Riverside. All food costs, except for breakfast Saturday morning at the Hampton Inn and lunch on the island, are on your own. Cost: $325 per person double; $540 per person single.

Minimum participation: 5 double/single hotel rooms (5 to 10 people); maximum 10 double/single hotel rooms of participants (10 to 20 people).

**Saturday, 21 June**

**Huntington Library, Art Collections and Botanical Gardens (Field Trip #5). Saturday, 9:30 a.m. - 5:30 p.m.**

This trip is organized and led by Robert L. Chianese (Emeritus, Department of English, California State University Northridge, Northridge, California; richianese@gmail.com).

For the most part, this is a self-guided, walking tour of the Huntington Library grounds, including the art collections and various botanical gardens. Prior to arrival at the “Huntington,” as it is called, participants will be given an overview of the art collection, which includes extensive collections of 18th and 19th century British works as well as American, French, and some Renaissance works. Once on the grounds, participants will be able to explore the 120 acres or so of facilities. It is recommended that participants in this field trip review the Huntington Library website, http://www.huntington.org/, to become oriented to the facility. A map showing the Huntington grounds and discussing accessibility may be downloaded at this link: http://www.huntington.org/WebAssets/Template/content.aspx?id=350. Please note that most of the grounds are accessible by wheelchair but a few trails are steep and/or have stairs. Refer to the Huntington map to distinguish between those types of trails.

Audio tours and other programs about the Huntington may be found by searching iTunesU for “The Huntington.”

No food is allowed on the premises. However, there are several places inside the Huntington grounds where food may be purchased, such as the Rose Garden Café, which offers a wide variety of sandwiches and grilled items such as hamburgers, hot dogs, grilled chicken sandwiches, fish tacos, and quesadillas, all made to order ($4.95-$8), entree salads with fruit or fresh mixed greens, homemade soups, chili, and freshly baked goods including muffins, scones, turnovers, brownies, and cookies. Another option is the Chinese Garden Tea Shop, as well as food carts. All food purchases are on your own, and may be purchased with cash or credit card.

Be sure to come prepared for our time at the Huntington with comfortable walking shoes, hat, sunscreen, and water. It can be hot, particularly in the Cactus Garden!

Includes transportation and fees. Food purchases are on your own. Cost: $50.00 per person.

**Technical Sessions**

**Symposia**

The following symposia are being planned for this meeting. Although symposia are typically organized around invited papers, organizers often will consider adding one or more contributed papers if they are relevant to their programs. Should you wish to participate in one of these symposia, contact the symposium organizer directly.

Instructions for abstract submission for symposium presentations appear on pages 14 and 32 of this Newsletter. Should you prefer to present a paper in one of the contributed paper sessions, you should also refer to pages 14 and 32 for instructions and page 31 for names of sections and program organizers in this Newsletter. Check the Division’s website, pacific.aaas.org, for the latest information on symposia and other program events.

Please remember that at this time the listings contained herein are tentative and subject to change. If you plan to attend the meeting largely for one symposium or technical session, check the Division’s website for updates to the program or contact the Division office at 541-552-6869 or aaaspd@sou.edu to confirm the status of the session(s) before committing travel funds. Additional symposia added to the program after issuance of this Newsletter will be posted on the Division’s website (pacific.aaas.org).

**Important notice for students presenting in symposia:** If you are a student who intends to be in the competition for an Award of Excellence and you are part of a symposium with your presentation scheduled Thursday afternoon (check with the planner of your symposium) or Friday, you must also present your work as a poster in order to be judged. Otherwise, you will not be eligible for student awards due to the conclusion of judging Thursday morning. Awards will be announced later that evening.

(1) Accelerating Chemical and Biomedical Discovery with Molecular Simulation. Organizers: Chia-en A. Chang (Department of Chemistry, University of California, Riverside, CA; chiaen@ucr.edu) and Dong Xu (Department of Biomedical and Pharmaceutical Sciences, College of Pharmacy, Idaho State University, Meridian...
This research symposium focuses on the advancements of state-of-the-art computational chemical and biological methods and their applications in addressing the most important and urgent biomedical questions. The objective of the symposium is to inform and engage elite computational scientists from around the globe in a discussion about the latest computational method development, the current applications in biomedical research, and the future outlook of the advanced simulation technologies.

(2) Mechanisms of Tumor Progression and Cancer Therapeutics. Organizer: Cheryl Jorcyk (Department of Biology, Boise State University, Boise, Idaho; cjorcyk@boisestate.edu). Currently scheduled for Thursday morning.

Cancer is a large group of different diseases, all involving uncontrolled growth of cells in the body. During tumor progression, cells proliferate, form malignant tumors, invade to nearby parts of the body and metastasize, or spread, to more distant parts of the body through the lymphatic system or bloodstream. This program will provide scientific presentations addressing different mechanisms of tumor progression and metastasis, as well as mechanistic discussions on established and emerging cancer therapeutics. This symposium is designed for all types of biomedical researchers, undergraduate and graduate students, physicians and oncologists, nurses, pharmacists, and others who research or manage patients with cancer.

(3) Computer-Aided Drug Discovery and Development. Organizers: Chia-en A. Chang (Department of Chemistry, University of California, Riverside, CA; chiaenc@ucr.edu) and Dong Xu (Department of Biomedical and Pharmaceutical Sciences, College of Pharmacy, Idaho State University, Meridian ID; dxu@pharmacy.isu.edu). Currently scheduled for Thursday afternoon.

This research symposium focuses on the most recent advancements of computer-aided drug discovery. It is generally recognized that drug discovery and development are very time and resources consuming. There is an ever growing effort to apply computational power to understand drug-protein binding in order to streamline drug discovery, design, development, and optimization. In medicinal chemistry and pharmaceutical industry, computer-aided or in silico design is being utilized to expedite and facilitate hit identification, hit-to-lead selection, and optimize the drug properties. The symposium will discuss a mix of cutting-edge work, including new methodology development and applications to various drug targets.

(4) Promoting Deeper Learning in Middle Adolescence: Critical Connections and Implications for STEM Education. Organizers: Carl Maida (University of California, Los Angeles; cmaida@ucla.edu) and Paul Heckman (University of California, Davis). Currently scheduled for all day Thursday.

Over the past few decades, research from the cognitive and learning sciences, education sciences, and developmental psychology has converged to yield a clear—and compelling—model of how high school-aged youth learn best. Research confirms observations that good learning involves direct experience, “deep immersion in a consequential activity,” according to psychologist Jerome Bruner. It confirms that learning works best when young people can focus in depth on a few things at a time, when they see a clear purpose in learning activities, and when they have an active role—co-constructing, interpreting, applying, making sense of, and making connections. Deeper learning involves, in addition to mastering core academic content, the ability to think critically and solve complex problems, to work collaboratively, to communicate effectively, and to learn how to learn. This session will combine didactic, experiential, and reflective activities to engage audience members, including K-14 teachers and informal science educators, and presenters in a professional learning community experience. The intent is to provide an opportunity for collaborative inquiry and the learning related to the promotion of deeper learning approaches in STEM (Science, Technology, Engineering and Mathematics) in the classroom and beyond. This workshop will consider ways to increase students’ scientific literacy through involvement in deeper learning activities, including project-based learning in the classroom, in after school programs, and in experiential, community-based learning activities, including mentored internships and apprenticeships. Panelists will discuss current issues and future trends in science education, including STEM after school programs, pre-college science enrichment and “pipeline” programs, STEM scientist mentoring activities, informal STEM education, and the role of the arts and design in STEM education initiatives.

(5) Challenges for Implementing Vision and Change in Science Classrooms. Organizers: Richard Cardullo (Department of Biology, University of California, Riverside, Riverside, CA; cardullo@ucr.edu) and William B. Davis (Associate Dean for Undergraduate Education, School of Molecular Biosciences, College of Veterinary Medicine, Washington State University, Pullman, WA; wbdavis@vetmed.wsu.edu). Currently scheduled for Friday morning.

Transformation in the life sciences on a large scale will only occur when institutions support change at the departmental level that is then shared with, and adopted by, other institutions. Over the past two decades, various initiatives have promoted changes in pedagogical strategies that focus on process over content while acknowledging the inherent power that diversity brings to science classrooms. A number of national efforts, including the AAAS-sponsored Vision and Change recommendations and the recent establishment of the National Academies Scientific Teaching Alliance (NASTA), seek to inform the scientific and science education communities about effective, evidence-based teaching practices that improve student learning. Significant challenges exist for transforming faculty members, departments, and institutions that reflect the growing need for delivering a relevant curriculum that serves all students in the sciences. This symposium will focus on these challenges and will present evidence of practices that improve student engagement and success using state-of-the-art assessments, technology, and strategies for empowering departments to fundamentally improve the quality of science education.

(6) The Importance of Citizen Science in Forming Scientific Communities from the Local to the National Level. Organizer:
Kimberly Hammond (Department of Biology, University of California at Riverside, Riverside, CA; kimberly.hammond@ucr.edu). Currently scheduled for Wednesday morning.

Involving the general public (Citizens) in the exploration of natural areas and the collection of scientific data results in more engaged and educated communities. In addition, the crowd-sourced data gathered in citizen science activities can be used to leverage scientific activities in a myriad of ways. In an age where federal dollars are limited, this is a valuable way to continue to collect much needed information about the world around us. Despite all of the benefits of careful incorporation of citizen science into mainstream scientific activities, citizen science remains relatively unorganized and often lacks a coordinated direction. To some extent, the lack of organization is a good thing because activities arise from the grassroots efforts that allow for ingenious and fresh strategies. However, the cooperation and collaboration of groups organizing, supporting, and collecting data from citizen science activities can also help to further strengthen and improve the activities themselves and the results of those activities.

In this symposium, individuals, public non-profit organizations, and university groups will be brought together to explore the victories and current needs in citizen science. Specifically, however, we are aiming to sharpen the focus from the national level (Smithsonian Institution), to the Pacific Region, to the state of California, to the Southern California area and finally to one city (the city of Riverside) in a quest for an understanding of how the process works and how the different levels fit together to answer important questions and to inform a large and dynamic citizenry.

(7) Libraries and Learning. Organizers: Crystal Goldman (Dr. Martin Luther King, Jr. Library, San Jose State University, San Jose, CA; crystal.goldman@sjsu.edu), Frank Jacobitz (Mechanical Engineering Department, University of San Diego, San Diego, CA;jacobitz@sandiego.edu), Amy Besnoy (Copley Library, University of San Diego, San Diego, CA;abesnoy@sandiego.edu), and Michele Potter (Orbach Science Library, University of California, Riverside, Riverside, CA; michele.potter@ucr.edu). Currently scheduled for all day Friday.

Libraries and librarians play a key role in student learning. This can happen in one-shot instruction sessions, embedded librarianship, credit-bearing courses, co-teaching, at the reference desk, and in extended reference consultations. During such interactions, librarians teach students about access to information, gauging and evaluating information sources, and information literacy, all of which depend upon and develop critical thinking skills. The development of critical thinking skills in students, which remains relevant far beyond the walls of academia, relies on locating information and determining its appropriateness and validity within the specific application.

In the university classroom—be it online or on the ground—librarians work with teaching faculty to embed research and critical thinking skills into classroom pedagogy, with consideration going toward suitable projects, methods, timing, and frequency and length of interactions. This symposium will feature an all-inclusive consideration of libraries in the learning environment, from instruction to reference, synchronous to asynchronous services, and in the digital and in-person environments.


The Panama Pacific International Exposition (PPIE) held in San Francisco, 1915, was first conceptualized in 1904 by San Francisco businessmen. Later, San Francisco leaders and businessmen wanted to use the fair as a vehicle to show the city’s recovery from the 1906 earthquake and fire and rid its reputation as an uncouth frontier town. With the completion of the Panama Canal in 1913, the fair was designed to commemorate that amazing engineering feat. In 1909, business leaders of the small city of San Diego announced their intentions to celebrate the opening of the Canal with their own fair (Panama-California Exposition, 1915-1916). With the completion of the Canal, San Diego would be the first American port north of the waterway on the Pacific Coast. The exposition would help bolster an economy shaken by the Wall Street panic of 1907. San Francisco’s leaders became very upset. Thus began a competition of cities (which later included New Orleans) between businessmen, community leaders, and politicians for federal recognition and support. San Francisco received the prize. Later, San Diego was also given recognition and received federal support. It became the smallest of any city, with a population a little over 39,000, to attempt to hold an international exposition. Open for only nine months, San Francisco attracted over 19 million visitors, while San Diego, open for one year, received over 3.5 million to its regional displays.

Behind the expositions, which were cities within cities, the beautiful buildings, exhibitions on science, art, and literature, and the midways (amusement and concession stands), called the “Joy Zone” in San Francisco, and the Isthmus in San Diego, lay the concept of natural selection, survival of the fittest, and the Darwinian struggle between the races. Eugenics was revealed, using science to improve the human stock, with discussions at PPJE congresses held on the prevention of the ill-fit and improper intermarriages. The Federal government supported these concepts. At PPJE, the United States Department of Labor had exhibitions on immigration statistics between 1820 and 1914 that described the races that arrived, their occupations, arrests, deportations and conclusions that the composition of the white ethnic population was changing for the worse. At the Panama-California Exposition, the president for the fair utilized the services of the anthropologists from the Smithsonian Institution to develop exhibitions showing the physical evolution of man, evolution of culture, and the Native races of America. Led by Ales Hrdlicka, anthropologists carried out research. Expeditions were undertaken to gather and photograph skeletal remains in Europe, Africa, the United States, Siberia, Mongolia, and Peru; studies were made of the Eskimo and Sioux Indians; and graves were desecrated in the Philippines for cranial and skeletal material. The collections were displayed so that the classification of mankind along racial lines was easily understood and demonstrated man’s progress towards future perfection. The
displays linked race to biology, even though anthropologist Franz Boas had earlier shown this linkage to be false, making racial attitudes untenable. Combined, the exhibitions helped to provide public support for the restrictive immigration laws of the 1920s, beginning with fixed racial quotas for European immigration and culminating in the exclusion of Asians altogether, in 1927.

The panelists at this session on the California expositions will discuss varied themes, demonstrating how the exhibitions represented reality to advance the aims of exposition organizers, and in some instances, how ethnic groups were able to participate at the fair under their own agency and agenda. Included are presentations regarding the ethnic communities around San Francisco, how Chinese American and Chinese American women participated at the fair, the exhibition of the Chinese Pagoda, how Native Americans were presented and the reality of their condition, mining exhibitions and the reality of mining conditions, and the creation of the Museum of Man.

(9) World War II Anthropology: Austrians and Germans in Poland; Japanese in Asia; Anthropological Research and the Search for Survivors. Organizer: Alan L. Bain (Research Collaborator, National Anthropological Archives, Smithsonian Institution; baina@si.edu). Currently scheduled for Thursday afternoon.

World War II began September 1, 1939, with the German invasion of Poland. On September 17, the Russian armies attacked from the East. By September 28, Poland had been conquered and was divided by Russia and Germany along the Bug and San Rivers. The Germans annexed northern and western Poland outright, and established a separate Government General for the remainder of the territory. Within the GG, an Institut für Deutsche Ostsee (IDO), the Institute for German Work in the East, was founded in 1940 and was headquartered at Jagiellonian University, Krakow.

IDO developed its organizational plan based on race and necropolitics. Systems of hierarchical classification placed categories of people and individuals into slots, so that no Polish citizen was destined for a future based on his or her own agency. It consisted of 11 sections, one of which was the Rasse – und Volkstumforschung (SRV), racial and national traditions research. This Section was of critical importance. Its staff consisted of German and Austrian anthropologists. SRV was to carry out research which would provide factual data for establishing racial hierarchies of the inhabitants of occupied Poland. Data sets were collected mostly from southern Poles, Huzuls or Polish Ruthenians, Ukrainians, and Jews. Sets included anthropometric data, hair samples, folk culture, cranial drawings, genealogies, sociological and medical information, and photographs of individuals, towns, architecture, and museum works of art. They were gathered in different localities, one of which went beyond GG to include workers in the building service. SRV continued to collect information until the summer of 1944, when IDO-SRV was evacuated in front of the advancing Russian armies, and moved to Bavaria. There, the IDO-SRV records were captured by the Allied armies. British and American staff went through the documents looking for information to assist in prosecuting war criminals or containing Nazi racial theory propaganda. Deemed of no value by the Medical Intelligence Section, Surgeon General’s Office, it was offered by Military Intelligence to the United States National Museum as a permanent loan instead of a transfer (because of British cooperation in securing the material). Along with anthropological instruments used by the IDO staff to carry out its work during the War, the records were received by the Museum and accessioned in 1947 by the Division of Anthropology. Seven boxes of German personnel files were returned to the U. S. Army. Except for the instruments retained by the Division, the records were transferred to the National Anthropological Archives in 1989. In 2007, the records were transferred to the Polish Government after they were digitized and microfilmed, and housed in the archives of Jagiellonian University.

On the other side of the world, the Japanese colonized Taiwan in 1895 and began its colonization of Korea in 1905, annexing the country in 1910. By 1942, Japan controlled a vast Asian-Pacific area from Indonesia to the Aleutian Islands. Japanese ethnologists were sent out to conduct research throughout the region, even on the most remote islands. Under Japanese rule, Keijo (now Seoul) became the capital city of Korea. In 1926, Keijo Imperial University (now Seoul National University) was established and an anatomy department was created by physical anthropologist Imamura Yutaka. Yutaka had graduated from Kyoto Imperial University and studied under Edwin Fisher in Germany. Between 1927 and 1943, he attempted to bring together the world’s best bone collection. Approximately 670 full-size skeletons from the Pacific Islands, Korea, Manchuria, and China were housed in the medical school at the University. At the end of the War, the United States military prevented the collection from being transferred back to the mainland, but when the University was turned over to the Korean government the collection was not there. To break with its past, the Executive Committee of the Japanese Society of Ethnology, in 1995, proposed that the name of the Society be changed to cultural anthropology. One of the reasons was to separate what ethnologists had done during wartime and the new discipline that was being taught at the universities. One of the individuals who voiced opposition to the name change was Nakao Katsumi (one of the panelists on this session). Changing the name, he said, would be to effectively erase the colonial history of Japanese ethnology before the history of the colonial period had been described in sufficient detail. He felt it was important for Japanese anthropologists to remain conscious of the continuities of the discipline with Japan’s imperial past, when ethnological studies were carried out in conjunction with Japanese colonial needs. Later, the needs changed as Japanese military began its conquest throughout Asia and Japanese anthropologists came under its control.

In this session, American and Polish historians and anthropologists look at the records created by the IDO-SRV. In particular, the IDO records are viewed in the context of their scientific research. After the SRV records arrived back in Poland, Polish anthropologists reviewed them and, using the records, attempted to find survivors who had undergone SRV research. Their discussion is about finding survivors and what they found out during oral and video histories. In the United States, a physical anthropologist used the anthropometric
data from the sets and discusses her work regarding the writing of her PhD thesis regarding Polish migration patterns. On the Pacific side, presenters will discuss the history of Japanese anthropology, its development and its relationship to American, English, and Germanic studies and beliefs. The Japanese biological and chemical warfare group, Unit 731 which operated in Manchuria, will also be discussed, along with the work of Yutaka and other anthropologists at Keijo Imperial University, relating to finding survivors in New Guinea and raising the question of what happened to the missing skeletons.

(10) Advances in Fluid Mechanics and Turbulence: Analysis and Applications. Organizers: Marko Princevac (Department of Mechanical Engineering, Bourns College of Engineering, University of California, Riverside, Riverside, CA; marko@engr.ucr.edu) and Frank Jacobitz (Department of Mechanical Engineering, Shiley-Marcos School of Engineering, University of San Diego, San Diego, CA; jacobitz@sandiego.edu). Currently scheduled for all day Thursday.

This symposium aims to bring together researchers advancing our understanding of processes in turbulence and their applications in diverse fields, including modeling of atmospheric or oceanic turbulence, or air pollution problems. Application topics will include urban dispersion, vehicular emissions, fire spread, multiphase flow, air lubrication, as well as smoke and visibility issues. Basic processes to be discussed include helical properties and acceleration statistics at multiple scales of turbulent motion.

(11) Two-Dimensional Materials for Next Generation Devices. Organizers: Jory Yarmoff (Department of Physics and Astronomy, University of California, Riverside, Riverside, CA; yarmoff@ucr.edu) and Jeanie Lau (Department of Physics and Astronomy, University of California, Riverside, Riverside, CA; jeanie.lau@ucr.edu). Currently scheduled for all day Thursday.

The global challenge in electronic materials, driven by the impending end of Moore’s law, is to find effective materials that can replace silicon in device applications. Recently discovered two-dimensional materials, such as graphene and topological insulators, are the leading candidates. These materials are composed of layers that are weakly coupled to each other by van der Waals forces. They have been found to exhibit novel conductivity properties within the two-dimensional plane that is leading to an abundance of new physics and materials properties. This symposium will highlight recent advances in the science that underlies the fabrication, understanding and applications of two-dimensional materials.

(12) Biotic Invasions: Impacts on Natural and Urban Communities and Ecosystems. Organizers: Erin Wilson (Department of Entomology, University of California, Riverside, CA; erin.wilson@ucr.edu) and Richard Redak (Department of Entomology, University of California, Riverside, CA; richard.redak@ucr.edu). Currently scheduled for Friday morning.

Biological invasions, one of the main drivers of global environmental change, disrupt species interactions and can contribute to the collapse of trophic systems. Consequently, there is growing interest in how invaders alter community and ecosystem processes. We will present six different contexts in which non-native taxa change their invaded communities that include agricultural, urban and natural systems. This symposium will include experimental studies examining how invaders of large effect can alter local trophic interactions and how invasions may lead to the decoupling of ecosystem services. Two presentations will focus on invasion at several levels of disease transmission and describe efforts to minimize the threats posed by invasive pathogens and disease vectors. Using a combination of ecological and ever-evolving molecular genetic techniques, these studies delve into the mechanisms underlying the ecological impacts of invasion and provide insight into the best strategies to maintain ecosystem health and function.

(13) Climate Change Through the 20th and 21st Centuries. Organizer: Robert J. Allen (Department of Earth Sciences, University of California, Riverside, CA; rjallen@ucr.edu). Currently scheduled for Friday afternoon.

Since 1900, global average temperature has significantly increased by 0.75 ± 0.18°C, likely making our planet the warmest it has been in the last millennium. This, combined with many overlapping pieces of evidence, has led the leading body for the assessment of climate change—the Intergovernmental Panel on Climate Change—to conclude that warming of our planet is unequivocal. Most of this warming is very likely due to the observed increase in anthropogenic greenhouse gases, which are now at their highest values in the last 650,000 years. Future climate projections show additional warming by the end of this century, ranging from 1.1 – 6.4°C. This rate of warming is orders of magnitude more rapid than any in the past 65 million years. This session will explore several consequences of recent and future climate change, including diminished snow and ice—important reservoirs of fresh water—and increased frequency of occurrence of heat waves and extreme precipitation (droughts/floods). This session also addresses several of the feedbacks that operate within the climate system, including those related to the hydrological and carbon cycles.

(14) Genetics of Adaptation – From Spiders’ Silk to Marathon Mice. Organizer: David Reznick (Department of Biology, University of California, Riverside, CA; David.Reznick@ucr.edu). Currently scheduled for Thursday afternoon.

Empirical studies of evolution and adaptation have long since defined how and why organisms evolve from a phenomenological perspective. Advances in molecular genetics now make it possible to extend these endeavors to a consideration of specific genes associated with evolution and a characterization of their action. We will present six study systems in which the link between adaptation and the action of specific genes is being established. These presentations will include three experimental studies of evolution - one on laboratory populations of fruit flies, one on laboratory populations of mice and one on natural populations of guppies - in which we are identifying and characterizing candidate genes or scanning whole genomes for signatures of the role of genes in shaping complex adaptations. One presentation will focus on the remarkably diverse array of silks and the genetics of silk synthesis in spiders, revealing the evolutionary dynamics that have shaped these high-performance proteins. One
presentation will consider the genetic basis of floral evolution and speciation in a genus of flowering plants. Finally, one presentation will characterize de-evolution, or what happens in the long term when a gene is no longer used. The resulting degradation represents the mirror image of the negative Darwinian selection that persists unseen in any study of positive Darwinian selection associated with adaptation. Collectively, these studies illustrate some of the diversity of technology that now makes it possible to associate genes with adaptations, but also illustrates the contribution of such endeavors to basic and applied science.

(15) Ecology and Conservation in River Networks. Organizer: Kurt E. Anderson (Department of Biology, University of California, Riverside, CA; kurt.anderson@ucr.edu). Currently scheduled for Thursday morning.

Freshwater scientists are increasingly demonstrating that the branching structure of river networks has substantial ecological consequences. Local dynamics in rivers have been profitably studied over small spatial scales, and modeled by idealizing rivers as a one-dimensional line. Yet river stretches belong to branching, tree-like networks, which adds complexity in several ways. For example, restriction of movement along branches may influence population dynamics, while fluxes of materials and organisms at river confluences can alter habitat and species diversity. Superimposed on this river geometry is a large degree of temporal and spatial variation in ecological processes that is often arranged hierarchically. We still lack a coherent understanding of how river network structure constrains ecological processes, which hinders our ability to predict how other types of environmental variability, including human alterations, will affect freshwater ecosystems. However, there have recently been great strides made in our understanding of ecological dynamics in river networks, and this symposium will highlight recent exemplary research in the area. Each speaker has been suggested based on a broad expertise in river ecology, and will speak on one or more particular subthemes. These include: 1) how life history strategies and population dynamics reflect river network geometry, 2) patterns of abiotic and biotic diversity at different levels of hierarchical network organization, and 3) novel mathematical and statistical tools for studying the influence of network geometry on ecological processes.

(16) Forensic and Clinical Service Challenges in a Juvenile Arson Explosives & Research Center (JAERIC). Organizer: Ronn Johnson (School of Leadership and Education Sciences, University of San Diego, San Diego, CA; ronjohncts@gmail.com). Currently scheduled for Wednesday morning.

Juvenile Fire Setting and Bomb Making (JFSB) is a growing public safety concern. In an effort to secure a more accurate forensic and clinical snapshot of the prevalence of JFSB, a national data base for JFSB is being crafted. This effort is being coordinated through the International Association of Fire Fighters (IAFF). Still, the comprehensive risk assessment factors for JFSB may not be completely captured by the anticipated national data set. A Juvenile Arson, Explosives and Research Center has coded 14 years of research data that includes roughly 1,600 cases of JFSBs. It is also very important to identify bomb-making and/or other explosive-making in forensic evaluation and treatment programming related to arson. Current peer reviewed research underrepresents the link between juvenile arson and juvenile bomb-making. Use of explosives was documented in 14.9% of the cases referred to a community juvenile arson intervention program in San Diego County. Of the 205 cases reported on in which use of explosives was documented, 37.1% of the juveniles had also committed arson apart from their use of explosives. Data from the JAERIC research project of the Burn Institute of San Diego County will be presented.

Some of the projected symposium paper presentation titles include:

• Geopsychological Profiling of juvenile fire setters and bomb makers in San Diego County
• Geopsychological Profiling of juvenile fire setters and bomb makers in San Diego County for schools
• Use of a DSM-5 Quadrant with juvenile fire setters and bomb makers
• Clinical decision making in the treatment of juvenile fire setters during the treatment termination phase: A second risk assessment
• The forensic psychological patterns of “No Shows” in juvenile fire setters and bomb makers

(17) Forensic and Clinical Psychological Research in Uganda: Challenges for Trauma on Top of Trauma Service Delivery. Organizer: Ronn Johnson (School of Leadership and Education Sciences, University of San Diego, San Diego, CA; ronjohncts@gmail.com). Currently scheduled for Wednesday afternoon.

Acts of terrorism and civil wars have resulted in multigenerational experiences with traumatic (PTSD) incidents that have no international border restrictions in Africa. The Republic of Uganda is a landlocked country in East Africa. Its size is comparable to the state of Oregon. Uganda has a high HIV prevalence in persons with severe mental illness (SMI) compared to the general population. The health problems stemming from HIV also coincide with disabling cognitive, behavioral, and motor dysfunction. The availability of competent and reliable mental health services is inadequate given the needs found in the remote regions of the country. Alternate approaches to mental health service delivery through collaborative partnerships as well as technology have garnered increasing interest, though there remains relatively limited research evaluating these forensic or clinical mental health approaches. In fact, there is some evidence that clinical mental health services have resulted in positive outcomes for many psychological disorders. This symposium examines issues that complicate and compliment mental health services research in Uganda.

The objective of this symposium is to review the efficacy of research-based clinical mental health interventions involved while delivering culturally responsive services in Uganda. Some of the projected symposium paper presentation titles include:

• An overview of East African Research & Trauma Help (EARTH)
• Organization and Delivery of Clinical Mental Health Services in Uganda
• Culturally-responsive Approaches for Addressing the Perceptions and Acceptability of Trauma Interventions in Uganda
• Group Counseling Training and Supervision for Trauma Issues Faced in Uganda: Why a Counseling Theory is Important
• Culturally-responsive approaches for addressing severe mental health issues associated with HIV and AIDS

(18) Small RNA-mediated Gene Regulation. Organized by: Hailing Jin (Department of Plant Pathology and Microbiology, University of California, Riverside, CA; hailingj@ucr.edu) and Katherine Borkovich (Department of Plant Pathology and Microbiology, University of California, Riverside, CA; Katherine.borkovich@ucr.edu). Currently scheduled for Thursday afternoon.

Small non-coding RNAs have emerged as important gene expression regulators in eukaryotic organisms. They are involved in regulating almost multiple cellular processes, including development and growth, stress responses, immunity and genome integrity. Our symposium will invite experts in the small RNA field from both animal and plant systems to present their recent findings on the function and regulation of small RNAs in various organisms. This symposium will include experimental studies on how small RNAs regulate gene expression, as well as computational modeling and practical applications.

(19) Boise Extravaganza in Set Theory (BEST). Organizers: Liljana Babinkostova, Andres Caicedo, Samuel Coskey, and Marion Scheepers (Department of Mathematics, Boise State University, Boise, ID; liljanaababinkostova@boisestate.edu). Currently scheduled for all day Wednesday and Thursday and a half day Friday.

This program is a continuation of the well-known conference BEST (Boise Extravaganza in Set Theory). BEST was for its first nineteen years hosted in Idaho at Boise State University. Since 2013 BEST is being hosted as a symposium of the AAAS-APD.

BEST focuses on the mathematical discipline Set Theory, and its applications. Set theory is the foundation for mathematics and studies infinitary objects that routinely arise in mathematics and its applications, and in the mathematical sciences. Contemporary research addresses basic questions about provability, consistency and independence, and the relative strength of postulates or hypotheses in scientific theories. Methods developed by set theory serve as powerful tools for applications in theory building. The invited speakers for this program are successful set theorists from different career stages. They will present high level scientific talks in areas of set theory and its applications. The BEST symposium will also host contributed talks in Set Theory and its applications by participants. Post-docs, undergraduate and graduate students, early career faculty, women and underrepresented groups are encouraged to present their research. A limited number of NSF supported travel grants are available for presenters in the BEST symposium. NSF support through grant DMS 1440263 is gratefully acknowledged. For details visit the BEST website at http://diamond.boisestate.edu/~best/.

(20) Should Science Reform the Humanities? Pinker vs. Weiseltier On Who Should Be In Charge. Organizer: Jesse J. Thomas (Department of Religious Studies, San Diego State University, San Diego CA; jthomas@mail.sdsu.edu) and Mark Wheeler (Department of Philosophy, San Diego State University, San Diego, CA; Wheeler1@mail.sdsu.edu). Currently scheduled for Wednesday afternoon.

In a New Republic 8/6/2013 article titled “Science is not your enemy,” Steven Pinker argues that if the humanities were more scientific they could reverse the recent decline in the status of the humanities. Simon Weiseltier responds on 9/4/13 with “Crimes against the Humanities” in which he argues that the authority of the sciences belongs properly in the province of fact rather than value, which is the province of the humanities. Little discussion has followed these two articles. This symposium hopes to do that.

Professor Thomas will open the symposium with a brief summary of the two articles referenced above, as well as his own answer to the question. He will then invite the presenters to provide and elaborate briefly on their own answers to the basic question.

(21) Theory, Experiment, and Computations: A Synergistic Approach to Research. Organizer: C. Mark Maupin (Chemical and Biological Engineering Department, Colorado School of Mines, Golden, CO; cmmaupin@mines.edu). Currently scheduled for Thursday morning.

The utilization of theory and computations to complement and sometimes lead (i.e. theory driven research) experimental efforts is becoming increasingly common. The synergistic combination of experiment, theory, and computations has allowed for a greater understanding of many physical phenomena. The structural information obtained from various techniques such as X-ray and NMR is often critical to the creation of realistic models for computations, while theory and computations often reveal molecular level insights into catalytic mechanisms, binding phenomena, and system dynamics. This symposium is focused on the combination of experiment and theory/computations to expand our understanding of diverse systems ranging from gas phase reactions to complex condensed phase systems.

(22) Molecular Reproduction and Development. Organizers: Gary M. Wessel (Department of Molecular Biology, Cell Biology, and Biochemistry, Brown University, Providence, RI; rhet@brown.edu), Julian Wong (Managing editor, Molecular Reproduction and Development and Department of Molecular and Cellular Neuroscience, The Scripps Research Institute, La Jolla, CA), Mark Paalman (Senior Editor, Life Science Journals, Wiley-Blackwell), and Richard A. Cardullo (College of Natural and Agricultural Sciences, University of California, Riverside, California; richard.cardullo@ucr.edu). Currently scheduled for Thursday afternoon and all day Friday.

Reproduction is arguably the singular life goal of most organisms. Its study depends upon and impacts a broad cross-section of the sciences, is heavily influenced by evolutionary selection, and the application of research successes in the field are limited only by ethical considerations. It is therefore a lively centerpiece of intersecting scientific interests.

This program will explore the biological mechanisms of reproduction in plants and animals. The topics will range from sperm and egg functions and fertilization, development of reproductive organs, environmental impact on reproductive success and selection, the clinical impacts of research progress in reproduction, and the stem cell technologies that influence our understanding of germ cell formation. The approaches used in this field are broad – cellular,
molecular, biochemical, computational, synthetic, and includes cells studied in vitro as well as whole organismal examination. The series of talks will be diverse and the discussions synthetic in nature. Members of the broader scientific community are urged to participate in this session to learn for the first time the rapidly moving field of reproduction and by contributing to the advancements made in the research and their interpretations.

(23) Advances and Challenges in Marine Cell Biology. Organizers: Amro Hamdoun (Scripps Institution of Oceanography, University of California San Diego, La Jolla, California; Hamdoun@ucsd.edu) and Anthony DeTomaso (Department of Molecular Cellular and Developmental Biology, University of California Santa Barbara, Santa Barbara, California; anthony.detomaso@ lifesci.ucsb.edu). Currently scheduled for all day Wednesday.

Marine model systems have long played central roles in understanding conserved features of cell function and organization, ranging from the mechanisms underlying generation of membrane potentials to the identification of molecules necessary for interaction of sperm and egg. Recent advances in genomics, microscopy and molecular biology have now greatly expanded the range of marine cell biological models accessible to researchers, and expanded the suite of questions accessible using established models. In this symposium we will present 8 examples of how marine cell biological models are being used to address modern problems in biology, and how unique aspects of the biology of marine organisms can potentially offer insights not available using classic laboratory organisms. One presentation will focus on the use of echinoderms to understand membrane transport systems involved in cellular signaling and efflux of xenobiotics. Another presentation will highlight the use of urochordates to understand mechanisms of allorcognition and tissue regeneration. Other examples of proposed presentations include one on the use of hemichordates to study evolution of developmental circuits necessary for formation of the nervous system, and one on the use of marine cells to understand function of acid/base sensing mechanisms. The presentations will provide insight into the utility of marine model organisms to address broad biological problems. These include problems in basic science, such as the understanding of animal developmental mechanisms, and those of relevance to applied science, as in the example of studying acid base sensing mechanisms to understand consequences of ocean acidification. The symposium is also likely to define novel questions that could be addressed by collaboration across these disparate models.

(24) Multi-Scale Bioengineering. Organizers: Dimitrio Morikis and Valentine Vullev (Department of Bioengineering, University of California, Riverside, California; dmorikis@ucr.edu and vullev@ucr.edu). Currently scheduled for all day Wednesday.

This symposium will bring together experimental and theoretical bioengineering and biotechnology researchers, educators, students, and professionals with diverse research interests to promote intellectual exchanges across bioengineering research areas and scales. The symposium has the general theme of “Multi-Scale Bioengineering” and will cover selected topics of cutting edge research, spanning the bioengineering scales from molecular, cellular, tissue, organ, organismal, to human bioengineering, and including the development of innovative systems biology approaches, bioinformatics methods, biologicals, biomaterials, bioprocesses, implants, prosthetics, biomedical devices, and bioinstrumentation. The objective of the symposium is to bring together scientists with bioengineering and biotechnology interests in a setting that will provoke novel questions on how to cut across these diverse bioengineering topics and scales, and to develop new collaborations to address the common goals of understanding basic sciences and improving health.

(25) Applications of 3D Printing. Organizer: Joan Horvath (Deezmaker 3D Printers, Pasadena, California; joan@deezmaker.com). Currently scheduled for Friday afternoon.

This symposium will look at practical uses of open-source 3D printing for scientists and educators, with case studies of actual use. Uses include replacing parts on broken or obsolete lab equipment, development of simple one-off devices, and visualization.

(26) Future Trends in the Past History of Life. Organizer: Bahram Mobasher (Department of Physics and Astronomy, University of California, Riverside, California; mobasher@ucr.edu). Currently scheduled for Thursday morning.

The field of astrobiology is a growing area for research, aiming to address fundamental problems, including the origin and evolution of life, search for life beyond the Earth and the future of life on the Earth and in the Universe. The aim of this session is to bring together researchers from disciplines such as astronomy and astrophysics, Earth and planetary sciences, biology, cosmochemistry and relevant fields to exchange the latest discoveries in this field and to discuss future plans. The advancement in new technology and construction and commissioning of larger and more powerful ground-based and space-bourn telescopes (including the 30m class telescopes and the James Webb Space Telescope) promises rapid advances in this field in future years. This symposium will address the future trends in this field.

Contributed Oral Talks and Posters

Those wishing to submit an abstract for an oral presentation or poster at a contributed session (oral or poster) should refer to the “Call for Abstracts” on pages 14 and 32 of this Newsletter for instructions on abstract preparation, formatting, and submission.

The deadline for submitting abstracts for contributed talks and posters (non-symposium) is 18 April 2014. If an abstract comes in after this date, it may not be listed in the program. Also, be aware that the abstract you submit will be published as written. It will not be edited. If it contains errors, they will appear as submitted. Be sure to keep the length of your abstract to no more than 250 words and use 10-point Times New Roman font (no exotic fonts, please!). Don’t forget to state clearly if yours is a student presentation so that it will be included in the judging competition. Please remember that if you are a student who intends to be in the competition for an Award of Excellence and you are part of a symposium with your presentation scheduled on Thursday afternoon or Friday (check with the planner of your symposium), you must also present your work as a poster in order to be judged. Otherwise, you will not be eligible for student awards.
awards due to the conclusion of judging early Thursday afternoon. Awards will be announced later that evening at the Division Banquet.

**POSTER SESSIONS**

Posters will be assigned a display space of 40” tall x 60” wide (1 m x 1.5 m) and will be grouped by discipline and subject matter. Posters will be mounted using map pins on foam core backings (supplied). In order to assure fairness, the Pacific Division Council took action stating that all student posters must fit within the assigned display space to be eligible for student Awards of Excellence. A request for extra space or an over-sized poster will disqualify a student from the awards competition.

Student posters will be judged for Awards of Excellence. Students must be present during the entire judging period to allow judges the opportunity to discuss their work and to evaluate their posters.

If you need a bit of help organizing the content of your poster, a website containing excellent information on poster preparation is http://www.ncsu.edu/project/posters.

**SOCIETIES AND PACIFIC DIVISION SECTIONS ACCEPTING CONTRIBUTED PAPERS FOR PRESENTATION AT THE MEETINGS**

**Sigma Xi, The Scientific Research Society.** Please submit your abstract to the appropriate section from this list.

**Molecular Reproduction and Development.** Program organizer: Gary M. Wessel, Department of Molecular Biology, Cell Biology, and Biochemistry, Brown University, Providence, RI 02912. Contact: (401) 863-1051; rhet@brown.edu.

**Agriculture, Food, and Renewable Resources.** Section chair and program organizer: Please contact the Pacific Division office, rchristi@sou.edu, for information on this section.

**Anthropology and Archaeology.** Section chair and program organizer: Dr. Herbert D. G. Maschner, Idaho Museum of Natural History and Idaho State University, 921 S. 8th Avenue, Stop 8096, Pocatello, ID 83209-8096. Contact: 208-282-5417 (office) or 208-244-1421 (cell); maschner@isu.edu.

**Atmospheric and Hydropheric Sciences.** Section chair and program organizer: Dr. Clive E. Dorman, Research Oceanographer, Integrative Oceanography Division, Scripps Institution of Oceanography Dept 0209, University of California, San Diego, La Jolla, CA 92093-0209. Contact: cdomran@ucsd.edu.

**Cell and Molecular Biology (including Medical and Dental research in these areas).** Section chair and program organizer: Dr. Kristen Mitchell, Department of Biology, Boise State University, Boise, ID 83725. Contact: 208-426-4620; kristen-mitchell@boisestate.edu.

**Chemistry and Biochemistry.** Section chair and program organizer: Dr. Owen M. McDougal, Department of Chemistry and Biochemistry, Boise State University, Boise, ID 83725. Contact: 208-426-3964; owenmcdougal@boisestate.edu.

**Computer and Information Sciences.** Section chair and program organizer: Dr. C. Mark Maupin, Department of Chemical and Biological Engineering, Colorado School of Mines, Golden, CO 80401. Contact: 303-273-3720; cmmaupin@mines.edu.

**Earth Sciences.** Section chair and program organizer: Dr. Jad D’Allura, Department of Geology (emeritus), Southern Oregon University, Ashland, OR 97520. Contact: 541-899-7010 or 541-690-7739; dallura@sou.edu and rockit526@gmail.com (copy e-mail to both accounts).

**Ecology, Environmental Sciences, and Sustainability.** Section chair and program organizer: Dr. Richard Van Buskirk, Environmental Studies, Pacific University, 2043 College Way, Forest Grove, OR 97116. Contact: 503-352-2251; vanbuskirk@pacificu.edu.

**Education.** Section chair and program organizer: Dr. Kimberly D. Tanner, Department of Biology, San Francisco State University, 1600 Holloway Avenue, San Francisco, CA 94132. Contact: 415-405-3438; kdtanner@sfsu.edu.

**Engineering, Technology and Applied Sciences.** Section chair and program organizer: Dr. Frank Jacobitz, Department of Engineering, University of San Diego, 5998 Alcalá Park, San Diego, CA 92110. Contact: 619-260-7820; jacobitz@sandiego.edu.

**Evolution, Organismal Biology, and Biodiversity.** Section chair and program organizer: Please contact the Pacific Division office, rchristi@sou.edu, for information on this section.

**General and Interdisciplinary.** Section chair and program organizer: Ms. Crystal Goldman, Martin Luther King, Jr. Library, San Jose State University, One Washington Square, San Jose, CA 95192. Contact: 408-808-2015; crystal.goldman@sjsu.edu.

**History and Philosophy of Science.** Section chair and program organizer: Dr. Donald McGraw, P.O. Box 515, Ephraim, UT 84627. Contact: 619-947-5108; donaldjmcmgraw@icloud.com.

**Mathematics.** Section chair and program organizer: Dr. Lijana Babinkostova, Department of Mathematics, Boise State University, 1910 University Drive, Boise, ID 83725. Contact: 208-426-1172; lijanaababinkostova@boisestate.edu.

**Physics and Materials Science.** Section chair and program organizer: Dr. George Quainoo, Department of Physics and Engineering, Southern Oregon University, 1250 Siskiyou Blvd, Ashland, OR 97520. Contact: 541-552-6404; quainoo@so.edu.

**Psychology.** Section chair and program organizer: Dr. Veronica Galván, Department of Psychology, University of San Diego, San Diego, CA 92110. Contact: 619-260-7739; vgalvan@ucsd.edu.

**Science and the Arts and Humanities.** Section chair and program organizer: Dr. Robert L. Chiñone, Department of English, California State University, Northridge, Northridge, CA 91330; Current Contact Information: 2465 Hall Canyon Road, Ventura, CA 93001, 805-643-5034; rlchianese@gmail.com.

**Social, Economic and Political Sciences (including Health Services).** Section chair and program organizer: Dr. Carl A. Maida, UCLA Schools of Dentistry and Medicine, University of California, PO Box 951668 CHS, Los Angeles, CA 90095. Contact: 805-492-5613; cmaid@ucla.edu. 

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Call for and Preparation of Abstracts

Members of AAAS and its affiliated societies, students, teachers and other scientists are encouraged to participate in the annual meeting of the Pacific Division of AAAS by presenting oral reports or posters. Procedures for submitting abstracts for inclusion in the technical sessions of this meeting are below and also on page 14 of this Newsletter. Read both carefully before submitting an abstract!

The deadline for submission of ABSTRACTS for SYMPOSIUM PRESENTATIONS is 1 April 2014. Presenters in symposia should follow the same instructions as for contributed reports, but submit their abstracts directly to the symposium planner. Symposium presentations are ordinarily scheduled every 20 minutes, allowing about 14 minutes for the presentation, about five minutes for questions, and a minute or so for change-over to the next presenter. Please contact the symposium organizer for presentation details specific to your symposium.

The deadline for submission of ABSTRACTS for CONTRIBUTED ORAL REPORTS or POSTERS is 18 April 2014. Students wanting to compete for an Award of Excellence must identify themselves as such on Line 7 of their abstract submissions so that judges will know to evaluate their presentations. E-mail the title, abstract and other required information (see instructions below and also on page 14 of this Newsletter) as a Microsoft Word (.doc or .docx) or .rtf attachment to the chair of the appropriate society or section (see page 31 of this Newsletter) and also the Pacific Division office (at rchristi@sou.edu). If your abstract contains special characters, include in your email to the Pacific Division office a scanned copy of it on which you have marked the special characters and identified the name of the typeface used. Contributed oral reports are scheduled every 20 minutes, allowing about 14 minutes for the talk, about five minutes for questions at the end, and a minute or so for PowerPoint change-over.

Format your submission as follows:
Line 1: Submitter’s name  
Line 2: Submitter’s affiliation, address, telephone number and e-mail address  
Line 3: Presenter’s name (if different from above) or “SAME” (if same as line 1)  
Line 4: Presenter’s affiliation, address, telephone number and e-mail address (if different from line 2)  
Line 5: Society, section or symposium to which you are submitting your presentation for review (see page 31 of this Newsletter).  
Note: For contributed oral reports/posters, you must identify the section and program chair and send your abstract to that person as well as the AAASPD office (see above). If you are presenting in a symposium, you needn’t do this and must send your abstract directly to the symposium planner.
Line 6: Type of presentation (ORAL or POSTER)  
Line 7: Is the presenter a student? (STUDENT or NOT A STUDENT)  
Line 8: Special equipment needs (in addition to standard computer, computer projector, and PowerPoint)  
Line 9 ff: Paper Title Italicized and in Title Case, AUTHOR’S NAME(S) (Full address(es), including institution, mailing address, city, state, zip code, and e-mail address(es)). Refer to the example below for additional information.

Example of a properly formatted abstract submission (lines 9 ff and 10 ff), plus additional information

Formatting an Abstract for Submission to a Pacific Division Section Chair and the AAASPD Meetings Office, SAMUEL P KRAFT-ER*, YESIMAN AUTHOR1, and IDIDA DeREADING2 (1Department of Biology, Southern Oregon University, 1250 Siskiyou Boulevard, Ashland, OR 97520; 2Department of Academic Speech, Bureau of Speech Employment, 12 Back Street, Medford, OR 97504; spkraf@biology.sou.edu).

All authors should be listed sequentially, starting with the person who contributed the most and ending with the person who contributed the least. If more than one address occurs among the authors, use a superscripted number on the right of each author’s last name, followed by the corresponding superscripted number at the start of each unique address. Place an asterisk (*) next to the last name of the presenter. Submissions not formatted in this manner may be returned for reformatting or rejected.

Indent the first line of each paragraph of your abstract (Line 10 ff) 0.25 inches by using the first line indent command of your word processor. Do not use a tab or the spacebar! All text should be full justified.

Use 10 pt Times New Roman font and “NORMAL” style. If you use a different font, your abstract will be reformatted to this font. If your text contains special characters, they probably won’t accurately survive e-mailing and/or any required reformattting. Thus, in addition to an e-mail submission, abstracts that contain special characters should be scanned and set to the Pacific Division office along with your abstract. Be sure to point out special characters in your scanned abstract and identify the font set that contains them. If exotic fonts are used, we probably won’t have them available, so use common font sets (e.g. Symbol, Wingdings, etc.) for your special characters!

Send your abstract as a Word (.doc or .docx) or rich text format (.rtf) file attached to an e-mail addressed to the appropriate section chair (see Line 5 above) and also the AAASPD office at (rchristi@sou.edu). Do not send your abstract in the body of an e-mail or as a PDF file as these will be rejected!

E-mail us at aaaspd@sou.edu
Members of AAAS and its affiliated societies, students, teachers and other scientists are encouraged to participate in the 2015 annual meeting by developing symposia and/or workshops. Persons wishing to develop a program for the San Francisco meeting should e-mail the title, description and other information (see instructions below) to the Pacific Division office at rchristi@sou.edu.

**Symposia** may be 1/2-day, full-day or longer. Individual symposium presentations are usually scheduled at 30 minute intervals, but the actual scheduling depends on the needs of the symposium and may be longer or shorter, even a combination of the two. Please contact Dr. Roger Christianson, Pacific Division Executive Director, to discuss your specific needs. When preparing your submission, please indicate which presenters are confirmed or not (see Line 10 below). If you do not yet have a list of presenters, you may submit a list of potential presentation topics. Please keep in mind that we need as much information as early as possible in order to adequately evaluate and publicize the symposium.

**Workshops** generally are 1/2-day or full-day and may or may not accompany a symposium. If special facilities and/or equipment are required, be sure to identify what you need as completely as possible in your submission (see Line 10 below). If a cost is incurred, it will be passed along to participants as a workshop fee in addition to the ordinary meeting registration fee.

Questions? Contact Dr. Roger Christianson, AAAS, Pacific Division, Southern Oregon University, Ashland, OR 97520. Phone: 541-552-6747; e-mail: rchristi@sou.edu.

Please format your submission as follows:

1: Organizer’s name
2: Organizer’s full mailing address, including academic/professional affiliation, telephone number and e-mail address
3: Co-organizer’s name(s) (if any)
4: Co-organizer’s full mailing address, including academic/professional affiliation, telephone number and e-mail address
5: Is this a Workshop or a Symposium?
6: Number of 1/2-day sessions requested (a session is roughly three to three and a half hours, depending on the needs of the program)
7: Pacific Division section(s) and/or affiliated society requested to sponsor this program (see page 31 of this Newsletter). Note: You must identify at least one section or society to sponsor your program.
8: Title of proposed program
9: Brief description of proposed program (please limit to 250 words)
10: If a symposium, list the names of proposed (confirmed?) speakers, including academic/professional affiliation, and e-mail address for each. Presentation titles are optional at this time and will be requested later, along with an abstract for each presentation.
   If a workshop, indicate facilities and/or special equipment required and number of participants that can be accommodated.
RESIDENCE APARTMENT APPLICATION

One form must be filled out for each individual requesting campus housing.

Type or print this form legibly! If faxing, use black ink. All blanks must be filled in.

Name ___________________________________________________________  □ Male  □ Female

Address ____________________________________________________________

City, State, Zip _______________________________________________________

Phone (day): __________________   Phone (evening): _____________________  E-mail: ____________________________

If requesting a suitemate, name of that person: ________________________________________________________________

Signature  _______________________________________________________________

Refer to page 12 of this Newsletter for a description of the accommodations and options listed below.

No refunds will be given for unused nights of stay.

RATES:
Three night basic housing package –  
Check in Tuesday, 17 June, check out Friday, 20 June  
Includes breakfast Wednesday, Thursday, and Friday  
Per person $200.00

Additional night (Friday) in conjunction with three night basic package; includes breakfast Saturday –  
Per person $67.00

HOUSING REQUEST:
☐ Three night housing package $ 200.00
☐ Additional night Friday, 20 June $ 67.00  
(must be in conjunction with three night basic package)

Total Amount $ __________

By my signature above, I agree to reimburse the AAAS, Pacific Division for any additional fees charged to the Division by UCR resulting from my use of this housing. Fees may include, but are not limited to, lost keys, lost meal cards, use of “additional charge” facilities, etc.

Deadline for Application
The completed application for housing must be received in the Pacific Division office no later than 9 May 2014. Space is on an “as available” basis.

Three Ways to Apply for Housing
1. Complete this form and send it to the Pacific Division office, either with a check in the full amount payable to AAAS, Pacific Division, or with credit card information completed below.
2. Call the Pacific Division office, 541-552-6869, between approximately 12:00 p.m. and 4:00 p.m. Pacific Time. Your information will be taken, along with the appropriate credit card information.
3. Fax your housing request, including credit card information. The 24-hour fax number is 541-552-8457. It is a dedicated line into the Pacific Division office.

Cancellation/refund Policy
All cancellation/refund requests for housing on this form must be made in writing to the Pacific Division office via USPS or e-mail. Requests must be received no later than 15 May 2014. Refunds are subject to a $15 processing charge and an additional 3.5% of the total if payment was by credit card.

Payment by Credit Card

Type of Card  □ Visa  □ Master Card  □ Discover  □ Am Ex

Card Number ____________________________________________  Expiration Date ________  Today’s Date ________

Name on Card (print) ____________________________________________

Complete Card Billing

Address _______________________________________________________

Cardholder Signature ____________________________________________  City ____________________  State ____ Zip ______

By my signature above, I agree to reimburse the AAAS, Pacific Division for any additional fees charged to the Division by UCR resulting from my use of this housing. Fees may include, but are not limited to, lost keys, lost meal cards, use of “additional charge” facilities, etc.
ADVANCE REGISTRATION FORM
FOR EARLY REGISTRATION, FIELD TRIPS, and OTHER SPECIAL EVENTS

Send this form directly to
AAAS, Pacific Division • Southern Oregon University • 1250 Siskiyou Blvd • Ashland, OR  97520
or call with information: 541-552-6869 or FAX to our dedicated line: 541-552-8457
PRINT CLEARLY or TYPE this form. If faxing, use black ink!

Name: ____________________________________________________________ Date: ______________
Mailing Address: __________________________________________________________________________________
City, State, Zip: _____________________________________________________________________________________
E-mail: ___________________________________________ Day Phone: ____________________________
Institution/Company (for your name tag – if blank, city & state will be used): ______________________________
Memberships:     AAAS □ Yes □ No                    Sigma Xi □ Yes □ No                    MRD □ Yes □ No
Other Affiliated Society Membership: _________________________________________________________________

How did you first hear about this meeting? _____________________________________________________________

Would you be willing to help judge student presentations at this meeting? □ Yes □ No
Please see page 5 of this Newsletter for information about judging. If you check the “yes” box, you will be contacted for additional information.

Check all that apply: □ presenter    □ program planner    □ field trip planner
If box checked above, identify the program you are presenting in and/or planning: _____________________________

A. MEETING REGISTRATION FEES:

<table>
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<tr>
<th></th>
<th>Full Meeting</th>
<th>Received by</th>
<th>Professional</th>
<th>$100.00</th>
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<td></td>
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<td>□ $65.00</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Post-Doc</td>
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<td>□ $57.50</td>
<td>□ $65.00</td>
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<td></td>
<td></td>
<td></td>
<td>Spouse/Family</td>
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<td>□ $42.50</td>
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<td>Emeritus/Retired</td>
<td>$50.00</td>
<td>□ $57.50</td>
<td>□ $65.00</td>
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Request teacher K-14 stipend? □ Yes □ No

Teacher K-14 registrations include a one year student membership with AAAS, with all membership benefits, including on-line access to Science. Be sure to fill out and include the membership form on page 37 of this Newsletter when you register for the meeting.

B. DIVISION BANQUET: The Division banquet will be held on the evening of Thursday, 19 June and will include announcements of the student award winners. Students who are registered for the meeting and who present either orally or a poster are invited to be guests of the Division at the banquet and do not have to pay to attend but must check the appropriate box below. Refer to page 16 in this Newsletter for descriptions of the entrees.

Student presenter ticket @ no charge (choose one): □ Salmon □ Flat Iron Steak □ Butternut Squash Ravioli
Tickets @ $40.00 ea. Indicate quantity by each choice: ___ Salmon ___ Flat Iron Steak ___ Butternut Squash Ravioli

C. CAMPUS TOURS: Indicate below the number of persons for each tour desired. Refer to page 19 in this Newsletter for details.

Botanical Gardens ($4 donation on-site) ___ Wednesday 9:00 a.m. ___ Thursday 9:00 a.m. ___ Friday 9:00 a.m.
Citrus Variety Collection ($7.50 per person) ___ Wednesday 9:00 a.m. ___ Thursday 9:00 a.m.
Entomology Research Museum (no fee) ___ Wednesday 2:00 p.m. ___ Thursday 2:00 p.m.

Complete reverse side before sending, calling, or faxing form.
**D. FIELD TRIPS: ALL TRIPS ARE PRICED PER PERSON (PP). SEE PAGE 20 OF THIS NEWSLETTER FOR DETAILS.**

Field trip registration fee for non-registrants (once per person)  ___ regs. @  $10  $ ____________

Name(s) of people registered for field trips only:  ________________________________________________________

For field trips that include a box lunch:   ☐ meat sandwich   ☐ vegetarian sandwich

**Tuesday, 17 June**

Field Trip #4  James San Jacinto Mountains Reserve  ___ tickets @ $45 pp  $ ____________

Field Trip #2  Microbrewery Science and Pub Tour  ___ tickets @ $25 pp  $ ____________

**Friday – Saturday, 20 – 21 June**

Field Trip #3  Channel Islands Adventure*  ___ tickets DOUBLE @ $325 pp  $ ____________

___ tickets SINGLE @ $540 pp  $ ____________

*deadline for signing up for the Channel Islands field trip is Thursday, 15 May 2014

**Saturday, 21 June**

Field Trip #4    moved to Tuesday

Field Trip #5  Huntington Library  ___ tickets @ $50 pp  $ ____________

**PLEASE NOTE:** Requests for refunds must be in writing and be received in the Pacific Division office no later than 15 May 2014. A $15 handling fee will be applied. An additional 3.5% deduction will be applied to the total amount for credit card refunds.

**A. REGISTRATION TOTAL  $ ____________

B. BANQUET TOTAL  $ ____________

C. CAMPUS TOUR TOTAL  $ ____________

D. FIELD TRIPS TOTAL  $ ____________

TOTAL DUE  $ ____________

(Make checks payable to AAAS, Pacific Division or use your credit card – see below.)

**E. WORKSHOPS/PANELS: SEE PAGE 18 OF THIS NEWSLETTER FOR WORKSHOP DETAILS.**

Please check each workshop/panel you are planning to attend:

☐ PULSE   ☐ DockoMatic   ☐ Gas Diffusion   ☐ 3D Printing   ☐ Nature Photography

**F. RECEPTIONS:** To help estimate the number of people planning to participate in the events listed below, please indicate the number of people in your party that plan to attend each.

___  **Tuesday Evening Reception**  (no charge to registrants and family members)

___  **Wednesday Evening Reception**  (no charge to registrants and family members)

**CREDIT CARDS**

To pay for your advance registration by credit card, you may

• mail this completed form to the address below, or

• phone the information to 541-552-6869 between about 12:00 p.m. and 4:00 p.m. Pacific Time, or

• fax this completed form to 541-552-8457 (dedicated fax line into the Pacific Division office).

Type of Card:  ☐ Visa  ☐ Master Card  ☐ Discover  ☐ AmEx

Credit Card Number  ______________________________________  Expiration Date  ______________________

Name on Card  _______________________________________________________________________________________________

Complete Billing Address for Card  _______________________________________________________________________________

Signature of Cardholder  __________________________________________________________  Date  ______________________

AAAS, Pacific Division • Southern Oregon University • 1250 Siskiyou Blvd • Ashland, OR 97520
Should you have questions, e-mail us at aaaspd@sou.edu or call 541-552-6869 M – F 12:00 p.m. to 4:00 p.m., Pacific Time.
STUDENTS!

You must fill out this form and return it along with your Advance Registration Form in order to receive your one-year membership in AAAS! This form is for use only by students who are registering for the 2014 Annual Meeting of the AAAS, Pacific Division in Riverside, California.
**Agroecosystems and the Environment: Source, Control, and Remediation of Potentially Toxic, Trace Element Oxyanions** (1998; cloth, 213 pp. – ISBN 0-934394-12-1); regular price: **$20.00**

**Art Inspired by Science** (2012; paper, 50 pp., 38 color plates – ISBN 978-0-9849810-0-7); regular price: **$15.00**

**Biodiversity and Taxonomy** (2005; paper, 236 pp. – ISBN 0940228-62-9); **$35.00**


**Crater Lake: An Ecosystem Study** (1990; cloth 224 pp. – ISBN 0-934394-07-5); regular price: **$26.95**

**Dietary Factors and Birth Defects** (1993; paper, 410 pp. – ISBN 0-934394-08-0); regular price: **$28.50**

**Diversity and Evolution** (1995; cloth, 275 pp. – ISBN 0-934394-04-0); regular price: **$29.50**

**Genecology and Ecogeographic Races** (1995; cloth, 275 pp. – ISBN 0-934394-05-9); regular price: **$32.50**

**Late Cenozoic History of the Pacific Northwest** (1985; cloth, 417 pp. – ISBN 0-934394-06-7); regular price: **$28.95**

**Patterns of Evolution in Galapagos Organisms** (1983; cloth, 568 pp. – ISBN 0-934394-07-5); regular price: **$31.95**

**San Francisco Bay: The Ecosystem** (1996; cloth, 542 pp., color plates – ISBN 0-934394-11-3); regular price: **$45.00**

**San Francisco Bay: Use and Protection** (1982; paper, 310 pp. – ISBN 0-934394-04-0); regular price: **$17.95**

**Proceedings Series**

**Meeting Program with Abstracts** (Proceedings Vol. 1, Part 1, 1982 through Vol. 32, Part 1, 2013); regular price: **$12.00 each**

**Evolutionists Confront Creationists** (Proceedings Vol. 1, Part 3, 1984; paper, 213 p.); regular price: **$12.00**

**Scientific Research and New Religions** (Proceedings Vol 2, Part 2, 1985, paper, 180 pp.); regular price: **$12.00**

**California’s Master Plan for Higher Education in the Twenty-first Century** (Proceedings, Vol 13, Part 2, 1996; paper, 118 pp.); regular price: **$12.00**

Address orders to: AAAS, Pacific Division • Southern Oregon University • 1250 Siskiyou Blvd. • Ashland, OR 97520
Phone orders: 541-552-6869 • dedicated FAX orders: 541-552-8457 • E-mail orders: aaaspd@sou.edu

**ALL SALES FINAL — NO RETURNS**

Payment must accompany all orders. Make checks payable to AAAS, Pacific Division.

<table>
<thead>
<tr>
<th>Quantity*</th>
<th>Title</th>
<th>Price Each</th>
<th>Total</th>
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Attach extra sheet if necessary.
*Maximum 3 of any sale title.

Contact us for quantity order prices.

Postage/handling fees:
Domestic, $4.00 first book; $1.50 each add’l.
Non-U.S. addresses, contact us for cost.

TOTAL

SHIPPING (see note to left)

TOTAL DUE WITH ORDER

Ship To: ___________________________ Date ______________________
Address __________________________________________________________________________________________
City __________________________ State ___________ Zip __________________
Daytime Phone ___________________ e-mail __________________

**CREDIT CARD**

☐ Visa ☐ Master Card ☐ Discover ☐ American Express

Credit Card # ___________________________ Expiration Date _____________
Name on Card ___________________________ Signature of Cardholder ___________

Complete Billing Address for Card ___________________________________________________________________

Page 38
E-mail us at aaaspd@sou.edu
Map of UCR campus. Likely meeting buildings are in RED. The Botanic Garden location is indicated by a RED box. Glen Mor Apartments are in BLUE. Our assigned parking lot is in GREEN. Persons parking on campus must pick up a parking permit prior to leaving their car in this lot. Persons with cars who are staying in the Glen Mor Apartments will be assigned parking in a different parking lot.
AAAS, Pacific Division
95th Annual Meeting
University of California, Riverside
Riverside, California
17 – 20 June 2014
PRELIMINARY ANNOUNCEMENT of SYMPOSIA,
FIELD TRIPS and OTHER EVENTS

SYMPOSIAS
(a sampling; complete list starts on page 22)
• Mechanisms of Tumor Progression and Cancer Therapeutics
• Computer Aided Drug Discovery and Development
• Promoting Deeper Learning in Middle Adolescence: Critical Connections and Implications for STEM
• Challenges for Implementing Vision and Change in Science Classrooms
• World War II Anthropology: Austrians and Germans in Poland, Japanese in Asia, and the Search for Survivors
• Two-Dimension Materials for Next Generation Devices
• Climate Change Through the 20th and 21st Centuries
• Genetics of Adaptations: From Spider’s Silk to Marathon Mice
• Ecology and Conservation in River Networks
• Forensic and Clinical Psychological Research in Uganda: Challenges for Trauma on Top of Trauma
• Small-RNA Mediated Gene Regulation
• Boise Extravaganza in Set Theory (BEST)
• Should Science Reform the Humanities?
• Libraries and Learning
• Advances in Fluid Mechanics and Turbulence: Analysis and Applications

WORKSHOPS and PANELS
(see page 18)
• PULSE-ating with Vision and Change: Promoting the Role of Faculty as STEM Education Change Agents
• DockoMatic Experiments for the Science Curriculum
• Gas Diffusion Simulations for Chemical Engineering Curriculum
• Open Source 3D Printing – How Does It Really Work?
• Does Nature Photography Distort Environmental Realities?

FIELD TRIPS
(starting on page 20)
• Microbrewery Science and Pub Tour
• James San Jacinto Mountains Reserve
• Channel Islands Adventure
• Huntington Library, Art Collections and Botanical Gardens

CAMPUS TOURS
(starting on page 19)
• UCR Botanic Gardens
• UCR Citrus Variety Collection
• UCR Entomology Research Museum, Insectary, Quarantine Facility

NOTE: Programs listed in this Newsletter are being planned as of 1 April 2014. However, changes in offerings sometimes occur.
For up-to-date information, please visit the Pacific Division website, pacific.aaas.org