On April 1, 2015, Governor Jerry Brown ordered the California State Water Resources Control Board to reduce statewide water use by 25%. The California drought, now in its fourth year, is considered the worst in 1,200 years.

New drought maps show that groundwater levels across the U.S. Southwest are in the lowest 2 to 10 percent since 1949. The maps, developed at NASA’s Goddard Space Flight Center in Greenbelt, Maryland, combine GRACE data with other satellite observations.

“Integrating GRACE data with other satellite measurements provides a more holistic view of the impact of drought on water availability, including on groundwater resources, which are typically ignored in standard drought indices,” said Matt Rodell, chief of the Hydrological Sciences Laboratory at Goddard.

The scientists cautioned that while the winter California storms were helpful in replenishing water resources, they weren’t nearly enough to end the multi-year drought. “It takes years to get into a drought of this severity, and it will likely take many more big storms, and years, to crawl out of it.”

Climate change is not only projected to dry out the western U.S. but also drive temperatures higher, which would help reinforce drought. That pattern is currently on display in California, where heat is helping keep dry conditions locked in place. Technology and groundwater have helped insulate farmers from drought, but the California drought has still cost the state at least $2.2 billion and thousands of jobs. And groundwater, which has been used to reduce the impacts somewhat, isn’t a renewable resource, at least not at the current rates of use.

The Climate Hazards Group (CHG) is pleased to announce version 2.0 of their Climate Hazards Group InfraRed Precipitation with Stations (CHIRPS) dataset. CHIRPS, a blend of rainfall station observations, satellite temperature data, and climatology fields, first began several years ago as an internal CHG/USGS data product used to place droughts in a historical context. Beginning in May of 2014, the CHG began to release the CHIRPS dataset as an external data product. CHIRPS is now available from daily to 3-monthly time scales, from 1981 to near-present at 0.05 degree spatial resolution.

CHIRPS is helping decision makers and climate scientists around the world gain a better understanding of global climate shifts, mitigate the devastation of famines, identify food insecurity hot spots, and guide policy for agricultural development. CHIRPS is especially useful for those specializing in drought early warning and drought monitoring, as they can use the high resolution CHIRPS data to monitor rainfall in near-real time. The dataset covers nearly the entire globe, spanning from 50° South to 50° North at all longitudes, which makes it useful for people looking at the big picture of global climate change as well as for individuals who are more interested in tracking the trends of their local area.

CHIRPS enables climate scientists to more accurately assess regional variations in climate conditions. With the development of the GeoCLIM tool, even less experienced users can make use of the dataset to illustrate and review climate conditions and trends. In addition to the GeoCLIM, CHIRPS is also available via Early Warning eXplorer (EWX), a joint project with the USGS Earth Resources Observation and Science (EROS) Center.

CHIRPS version 2.0 is available via the CHG’s FTP site: ftp://chg-ftpout.geog.ucsb.edu/pub/org/chg/products/CHIRPS-2.0/. More details are available on the CHIRPS page of the CHG website. Information regarding newly developed/refined diagnostic tools to help analyze station data is available there. The CHIRPS development team is currently working on making CHIRPS version 2.0 available through Google Earth Engine (https://earthengine.google.org), as well as CHIRPS Snippets, a “snippet” of code that will allow users to dynamically embed CHIRPS data on their web server via EWX (http://ewx.geog.ucsb.edu/ewx-snippets/).

CHIRPS development has been funded by USGS, USAID, NOAA, and the NASA Applied Sciences Program. Pete Peterson and Marty Landsfeld curate the satellite and station datasets used to build the CHIRPS. If you know of or have access to a local Met Service or other source of historic precipitation station data, they would very much like to add it to their processing stream, as the quality of CHIRPS is improved by adding good station data to the process. Long term data sets are preferred, and anything near-real time is ideal.

Editor’s note: If you would like to be added to the mailing list for CHIRPS releases and updates, please email chirps@geog.ucsb.edu. Feedback on the dataset is welcome and encouraged! Many thanks to Research Support Staffer Libby White for contributing this article (http://www.geog.ucsb.edu/events/department-news/1611/climate-hazard-group-releases-new-version-of-chirps/).
Rick Church Selected As President of the NARSC

Geography Professor Rick Church has been selected to be President of the North American Regional Science Council (NARSC) for 2015. NARSC is “an international scholarly organization that focuses on regional analysis, ranging from urban and spatial economic theories to applied problems and public policies in regional development, sustainability, environmental management, transportation, land use and many other contemporary issues of our societies. We are an interdisciplinary association representing members in fields as diverse as economics, agricultural economics, public policy, urban planning, civil engineering, geography, finance, and demography. NARSC represents Regional Science in North America, and our allied regional organizations provide opportunities for local participation” (source).

According to its Mission Statement, “The North American Regional Science Council (NARSC) promotes the scholarly exchange of ideas and knowledge that apply to urban and regional phenomena in North America and across the globe. The association fosters exchange across academic disciplines and builds on the understanding that urban and regional issues are best addressed by utilizing tools, methods, and theoretical frameworks specifically designed for regional analysis, as well as concepts, procedures, and analytical techniques of the various social and other sciences. The association organizes an annual national conference that provides a forum for interaction and discussion, and sponsors scholarly regional science journals for the dissemination of research and ideas. NARSC is an objective, scientific body without political, social, financial, or nationalistic bias.”

Rick will serve on the NARSC Executive Committee and the Honors Committee for this year, and he will present a presidential address at the North American Meetings in the fall.

Dr. Church specializes in the analysis of problems defined over space and time, including logistics and transportation, location theory, water resource systems, and urban and environmental systems, using and developing new techniques in Operations Research, GIS, Decision Theory, and Heuristics. He holds a Ph.D. in Environmental Systems Engineering from The Johns Hopkins University. Dr. Church has taught courses in Civil and Environmental Engineering, Industrial Engineering, Management Science, and Geography.

Professor Church joined UCSB Geography in 1980 and was the Department Chair from 1984-1988. In 2009, he was elected a Fellow of the Regional Science Association International and a Fellow of the American Association for the Advancement of Science. He was appointed Associate Dean of the UCSB Division of Mathematical, Life, and Physical Sciences in 2010 and was elected to the Board of Directors of the Western Regional Science Association in 2012. In 2012, Rick received the Lifetime Achievement Award, Section on Location Analysis of the Institute for Operations Research and the Management Sciences (INFORMS), he was awarded the UCSB 2012-2013 Outstanding Graduate Mentor Award in 2013, and in 2014, he was selected for the UCGIS Research Award for his highly-cited “Maximal Covering Location Problem” paper and relevant fundamental contribution to GIScience.
Dog Therapy Day, hosted by UCSB’s Health & Wellness Center, is a great way for students to de-stress at the end of the quarter. The hands-on, interactive therapy is provided by Love on a Leash, the Foundation for Pet-Provided Therapy, and “Linkin,” one of Geography Professor Tommy Dickey’s purebred Great Pyrenees, is the star on its poster.

According to UCSB Health & Wellness, 98% of dog owners report that they talk to their pets, and 75% felt their dogs were sensitive to their emotions. Taking care of pets provides people with a sense of purpose. Simply petting a dog has been shown to lower blood pressure. When people were asked to perform simple tasks with their best friend present and then again with their dog present, their blood pressure was lower with their dog. Researchers concluded that participants felt their pet was less judgmental. Pets provide moments of pleasure during difficult and stressful time by shifting attention outside people’s stresses and providing a focus on the larger world.

Linkin (4 1/2) and Teddy (8), two of Professor Dickey’s “Pyrs,” are both super award winners with several titles and over 750 Therapy visits to date. They continue to do a Library Reading for Children program, Special Olympics, demonstrations at Therapy Dog Booths, and visits with seniors ranging from 84 to 97 years old. On campus, besides class visits, they have done UCSB Meningitis Clinics, 3-min Spatial Lightning talks, and will be at the Geography Department Sustainability booth April 11.

Tommy often takes his Pyrs to his classes: “I have enjoyed using lots of ways of educating students. The most fun for me is to combine a variety of topics and interests with students who are having a lot of fun and unknowingly learning when they least expect it – thanks to big, fluffy Great Pyrenees - Assistant Professors of Geography!”

“The Tobler hyperelliptical projection is a family of equal-area pseudocylindrical map projections first described by Waldo R. Tobler in 1973. The imagery used for the map is derived from NASA’s Blue Marble summer months composite, with oceans lightened to enhance legibility and contrast” (Wikipedia).

“Like any pseudocylindrical projection, in the projection’s normal aspect the parallels of latitude are parallel, straight lines. Their spacing is calculated to provide the equal-area property. Except for the straight central meridian, the meridians of longitude are curves of the form \(a|x|^\gamma + b|y|^\gamma = 1\) (with a dependent on longitude and b constant for a given map), known as superellipses or Lamé curves. When \(\gamma=1\) the projection degenerates to the Collignon projection; when \(\gamma=2\) the projection becomes the Mollweide projection; the limiting case as \(\gamma\to\infty\) is the Cylindrical equal-area projection. Values of \(\gamma\) that are favored by Tobler and others are generally greater than 2” (Ibid.).
Long before the Europeans arrived on Easter Island in 1722, the native Polynesian culture known as Rapa Nui showed signs of demographic decline. However, the catalyst has long been debated in the scientific community. Was environmental degradation the cause, or could a political revolution or an epidemic of disease be to blame?

A new study by a group of international researchers, including UC Santa Barbara’s Oliver Chadwick, offers a different explanation and helps to clarify the chronological framework. The investigators expected to find that changes coincided with the arrival of the Europeans, but their work shows instead that the demise of the Rapa Nui culture began prior to that. Their findings are published in the Proceedings of the National Academy of Sciences.

“In the current Easter Island debate, one side says the Rapa Nui decimated their environment and killed themselves off,” said Chadwick, a professor in UC Santa Barbara’s Department of Geography and the Environmental Studies Program. “The other side says it had nothing to do with cultural behavior, that it was the Europeans who brought disease that killed the Rapa Nui. Our results show that there is some of both going on, but the important point is that we show evidence of some communities being abandoned prior to European contact.”

Chadwick joined archaeologists Christopher Stevenson of Virginia Commonwealth University, Cedric Puleston of UC Davis and Thegn Ladefoged of the University of Auckland in examining six agriculture sites used by the island’s statue-building inhabitants. Their research focused mainly on the three sites for which they had information on climate, soil chemistry and land use trends as determined by an analysis of obsidian spear points.

The team used flakes of obsidian, a natural glass, as a dating tool. Measuring the amount of water that had penetrated the obsidian’s surface allowed them to gauge how long it had been exposed and to determine its age.

The study sites reflected the environmental diversity of the 63-square-mile island situated nearly 2,300 miles off the west coast of Chile. The soil nutrient supply on Easter Island is less than that of the younger Hawaiian Islands, which were also settled by the Polynesians around the same time, 1200 A.D.

The first site the researchers analyzed was near the northwest coast. Lying in the rain shadow of a volcano, it had low rainfall and relatively high soil nutrient availability. The second study site, on the interior side of the volcanic mountain, experienced high rainfall but had a low nutrient supply; the third, another near-coastal area in the northeast, was characterized by intermediate amounts of rainfall and relatively high soil nutrients.

“When we evaluate the length of time that the land was used based on the age distribution of each site’s obsidian flakes, which we used as an index of human habitation, we find that the very dry area and the very wet area were abandoned before European contact,” Chadwick said. “The area that had relatively high nutrients and intermediate rainfall maintained a robust population well after European contact.”

These results suggest that the Rapa Nui reacted to regional variations and natural environmental barriers to producing sufficient crops rather than degrading the environment themselves. In the nutrient-rich center where they could produce food well, they were able to maintain a viable culture even under the threat of external factors, including European diseases such as smallpox, syphilis, and tuberculosis.

“The pullback from the marginal areas suggests that the Rapa Nui couldn’t continue to maintain the food resources necessary to keep the statue builders in business,” Chadwick concluded. “So we see the story as one of pushing against constraints and having to pull back rather than one of violent collapse.”
Maps & Web Mapping establishes an innovative, eText-only introduction to the history, principles, and current technologies used in mapping and cartography in a way that’s never been done before. Created to work with resources in Mygeoscienceplace.com, this solution engages students with interactive tools, including MapMaster™ interactive maps, Google Earth™ exercises, lecture videos, Map Projection animations, and more. This affordable online-only solution seamlessly integrates narrative text with a dynamic, interactive media experience, creating a rich learning environment and working together to help students develop spatial reasoning skills and practice observation, experimentation, and critical thinking (source).

Maps & Web Mapping and Mygeoscienceplace.com work together to provide dynamic media and learning tools to engage students in the study of maps and web mapping. Current tools, technologies, and applications of cartography are integrated throughout the book, covering both commercial and open source, including desktop and mobile applications.

Features:

• Integrated videos allow students to extend their learning through video overviews of key topics and applications of cartography. Videos linked directly from the book provide context and insight into critical topics, experiments, and applications of cartography.

• Learning Objectives presented on chapter-opening pages help students prioritize key knowledge and skills as they study.

• Checkpoint questions integrated throughout the chapters give students opportunities to check their understanding of the material as they read, for a more active learning approach.

• Coordinate Links to Online Maps are included with many images and locations in the book, enabling students to directly link to online digital maps connected to places presented in the book, for additional exploration and enrichment. This place-based learning enhances learning and recall.

Use this link to purchase access to the eText: http://www.geog.ucsb.edu/~kclarke/Videos/AccessingTheText.mp4.
THANK YOU, DONORS!

The UCSB Department of Geography would like to thank the following people and institutions for their generous support during the past 12 months:

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“You, as alumni and friends of the Department, have a lot to be proud of. We, in turn, are grateful for your continued involvement with our educational mission.”

Dar Roberts, Professor, UCSB Department of Geography
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☐ Geography Department Support: Unrestricted support.

☐ Landon Romano Textbook Scholarship: Landon Romano, 1999 alumnus, established textbook fund to give back to the department that made a positive difference in his career.

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☐ The Nicholas Bourdakis Memorial Fund: The Bourdakis Fund was established after the tragic death of Nicholas, who died in February 2001 when struck by a car in Isla Vista. He had just declared Geography his major.

☐ Jack and Laura Dangermond Fund: Jack Dangermond is the founder of ESRI (1969), a GIS and mapping software company. He is considered one of the most influential people in GIS worldwide.

☐ The Jack Estes Memorial Fund: Jack Estes was a Geography faculty member for over thirty years. He built a thriving remote sensing research unit and mentored many students.

☐ The Reginald G. Golledge Distinguished Lecture Fund: Twenty years ago, the Golledge Distinguished Lecture was instituted to bring highly respected speakers to campus to share their research.

☐ The David Simonett Memorial Fund: David Simonett was the first Chair of the Geography Department. He built what has become one of the nation’s finest Geography Departments.

☐ The Leal Anne Kerry Mertes Scholarship Fund: The Scholarship will support undergraduate and graduate UCSB students who are planning or are engaged in scientific field research.

☐ The Samantha C. Ying Gamma Theta Upsilon Scholarship: Named in honor of one of our distinguished alumna, this award supports undergraduate student(s), based on the criteria of academic achievement, compelling family/personal circumstances, and membership in the UCSB Geography Club.

Descriptions of the above gift options & other gift opportunities are found at: http://www.geog.ucsb.edu/giving/

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The following article is by Geography graduate student Susan Meerdink:

“According to the National Girls Collaborative Project, elementary and secondary school girls are enrolling in math and science courses in increasing numbers. At the college level, however, gender disparities continue among female undergraduates. What’s more, the gap continues on the job front, with the National Science Foundation’s 2014 Science & Engineering Indicators suggesting that females remain underrepresented in careers in science, technology, engineering, and math (STEM). A daylong conference at UC Santa Barbara sought to change that by giving girls in grades six through nine an opportunity to explore STEM education and related careers. Tech Savvy brings them together with female role models who are succeeding in these educational and professional fields. The conference consisted of hands-on workshops, including several focused on “savvy skills” — critical thinking, opinion sharing, public speaking, and knowledge about financial literacy, negotiation, and interviewing — that girls can use throughout their lives” (excerpt from the article about it in The UCSB Current).

One of these workshops was created by Geography graduate students Alana Ayasse, Kitty Currier, Heather Berry, Bonnie Bounds, Erica Goto, and Susan Meerdink who represented the UCSB Department of Geography’s Visibility and Outreach committee. Geography students Mingquan Chen, Raul Garcia, and Javier Rubio from the UCSB American Society for Photogrammetry and Remote Sensing (ASPRS) Chapter provided additional help in running the workshop. The workshop titled “Satellite Imagery: Understanding the Earth through Time and Space” featured two stations. At the first station the participants used imagery to understand the Earth by piecing together aerial imagery from a kite and plane. The second station explored change through time using Landsat imagery which allowed them to witness the growth of urban Las Vegas, the shrinkage and growth of glaciers, and deforestation in the Amazon. The workshop emphasized the various areas of science that use satellite and aerial imagery and future careers that the participants could pursue. “It’s a lot of fun to see all these students excited about science, specifically about remote sensing”, said Susan, who helped lead and design the project. “Volunteers, parents, and young girls all enjoyed looking at the imagery, and many were excited to try these activities at home. This was a great way to introduce young girls to careers in geography.”

The UCSB Current also notes: “Supported at UCSB by the Women’s Center and Women in Science and Engineering, Tech Savvy is a program of the American Association of University Women (AAUW). It began in 2006 at the University of Buffalo under the leadership of then-branch president Tamara Brown. Other supporters include local chapters of AAUW and Praxair. This year’s Tech Savvy is the second to take place at UCSB. It is among 15 such conferences in 2015 and is the only such event on the West Coast” (Ibid.).
GEOGRAPHY GRADS STAR AT THE AGU FALL MEETING

Geography graduate students Mike Alonzo, Forest Cannon, and Susan Meerdink received Outstanding Student Paper Awards (OSPA) at the American Geophysical Union’s Fall Meeting which was held in San Francisco, 15-19 December, 2014. Typically, only the top 3-5% of presenters in each section/focus group are awarded an OSPA. With nearly 24,000 attendees and more than 1,700 sessions, the AGU Fall Meeting is the largest and most prestigious earth and space science meeting in the world.

Over 15,000 posters were presented (all categories), including 3,200 by students this year. Considering that only about 130 OSPAs were given, the fact that UCSB Geography students garnered 3 of them is impressive. Mike and Susan scored gold in the Biogeoscience sector, and Forest won in the Atmospheric Science category.

Mike’s poster was titled “Mapping Urban Forest Leaf Area Index Using Airborne Lidar” (co-authored by Bodo Bookhagen, Joe McFadden, Alex Sun, and Dar Roberts). “Many urban forest ecosystem services (e.g., air pollution reduction, stormwater runoff dampening, and delay) are governed by canopy leaf area. In this research, we attempted to quantify leaf area in a complex urban environment at fine spatial resolution using airborne lidar. The product of this effort is a citywide map of leaf area that can be used to create spatially explicit estimates of ecosystem structure and function.” Mike has a BA in Geography from Middlebury College and an MA in Geography from the University of Denver.

Forest’s presentation (in Atmospheric Sciences) was titled “Winter Westerly Disturbance Activity in High Mountain Asia: A Wave Tracking Approach” (co-authored by Leila Carvalho, Charles Jones and Jesse Norris). “In this work, we present a novel extratropical cyclone tracking methodology, which provides an inventory of location, timing, intensity and duration of events. This approach enables a comprehensive study of the factors that relate westerly disturbances to orographic precipitation in High Mountain Asia, on an individual event basis and in the aggregate.” Forest goes on to state: “Most of the credit should go to the coauthors, especially Leila. I would also like to thank the Dangermond Family and the Earth Research Institute for providing the necessary funding to attend AGU.” Forest received his BA in Geography from UCSB.

Susan’s oral presentation was titled “Linking Seasonal Foliar Chemistry to VSWIR-TIR Spectroscopy Across California Ecosystems” in Biogeosciences. Her coauthors were Dar Roberts, Jennifer King, Keely Roth, Cibele Amaral, and Simon Hook. “In this research we evaluate the potential of using the Visible Near Infrared/ Short Wave Infrared (VSWIR) and Thermal Infrared (TIR) to identify seasonal plant species foliar traits. The results of this research demonstrate the potential for the proposed NASA Hyperspectral Thermal Imager (HyspIIRI) satellite mission to have increased accuracies for prediction of plant traits across all seasons and California ecosystems.” Susan has a BA in Biology and a BS in GIS from the University of Northern Iowa.
“UC Santa Barbara takes outreach to a new level, with a variety of programs that extend the campus’s impact to a host of communities — and countries.” George Foulsham, writing for The UCSB Current, December 22, 2014, goes on to laud UCSB’s outreach efforts in an article titled “Shaping the Future.” One of 2014’s many UCSB outreach programs and events that Foulsham highlights is the Department of Geography’s celebration of Geography Awareness Week (GAW):

“GeoWeek, the Department of Geography’s annual outreach program, features 28 faculty, staff, and student volunteers giving 46 presentations in 14 local schools, from kindergarten to high schools. Presentations cover a range of topics, including remote sensing of the urban environment, mapping coral reefs with kite aerial photography and using the sun to tell time and seasons and where you are on planet Earth. The variety of classes receiving presentations was just as broad, ranging from Advanced Placement history classes learning about transportation and development in various American cities to special education classes discovering Australia. ‘GeoWeek is an amazing opportunity to share something I’m really excited about with kids,’ said Ann Tan, a UCSB graduate student in geography. “This is the third year I’ve volunteered, and it has been a really rewarding experience.”

While Foulsham is fudging by using 2013 examples of Geography’s outreach efforts during GAW, he’s spot on regarding the Department’s commitment to the cause. The actual figures for 2014 were 26 faculty, staff, and student volunteers who gave 26 presentations at 14 schools, ranging from kindergarten to high school.

Presenter comments about the experience:
• “It’s a lot of fun to get young students excited about geography.” - Geog grad student
• “At the end of one of my presentations the students sang me a thank you song. I had never had that happen before and it was absolutely wonderful.” - Geog grad student
• “At the end of my presentation, one of the kids missed part of his lunch in order to draw a picture of an occluded front.” - Geog undergrad
• “Seeing the reactions of young people and feeling like I made an impression.” - Geog grad student
• “I really enjoyed seeing the kids get excited over Landsat images.” - Geog grad student
• “Teaching to and learning from students about to enter university was incredibly rewarding. Their excitement toward a somewhat mundane topic, at least at the introductory levels, was inspiring. I hope to continue participation in Geography Awareness Week in future years.” - Geog grad student
• “Being in an elementary school classroom, remembering what it was like, and rediscovering that children are a lot more thoughtful than we give them credit for.” - Geog grad student
• “Getting lots of questions.” - Geog faculty

Teacher responses:
• “My students loved the hands on lessons and getting their hands dirty” - elementary school teacher
• “Very exciting hearing about all of the opportunities for study in geography. The field is endless!” - high school teacher
• “Current and relevant information on the drought really caught the students attention.” - jr. high/high school teacher
• “I don’t think my students had ever considered that geography was something that went beyond thinking of the earth’s surface. To consider satellite imagery, false colors, and the visualization of geographic changes over time was really informative for my class and for me as well.” - middle school teacher
• “The students were given a hands-on activity with candy representing water that they were thrilled about!” - elementary school

Editor’s note: Many thanks to Geography graduate student Kitty Currier for providing the information above and hats off to all of the Geography personnel who devoted their time and energy to such a worthy cause.
“UCCONNECT (University of California Center on Economic Competitiveness in Transportation) was established in 2013 through funds awarded from the US Department of Transportation and Caltrans. Its mission is to serve as the new University Transportation Center for federal region 9. As part of that mission, UCCONNECT will support faculty within its consortium of five UC campuses (Berkeley, Irvine, Los Angeles, Riverside, and Santa Barbara) and its affiliate, Cal Poly, Pomona, to pursue research aligned with our new center’s broad theme of promoting economic competitiveness by enhancing multi-modal transport for California and the region; and one or more of the priority research topics described in the Research section of our website” (source).

The first Student Conference sponsored by UCCONNECT was held during the weekend of February 27-28 2015 on the campus of UC Santa Barbara. In addition to hosting the event, UCSB Professor Kostas Goulias and student assistants Adam Davis and Jae Hyun (Jay) Lee presented a well-rounded interactive program that facilitated lively discussion between students from various UC and Cal State campuses, as well as among faculty and government transportation officials; UCSB students Nate Isbell, Tim Nibblet, Carlos Baez, Crystal Bae, and Ellisa McBride were members of the organizing committee.

The speakers addressed a wide variety of topics, such as the inference of activity based models using advanced machine learning tools, the mining of Foursquare’s check in data to capture LA’s pulse, the use of a cyber search to analyze the location of existing fire stations in the LA area, and cyber-security from control and game theory perspectives. The late afternoon of day one included a talk by CUTC student of the year Jack Reilly, who presented the results of his award-winning dissertation, followed by a reception and welcome talk given by UCSB Geography Professor Keith Clarke who described the activities of the Department.

The first day concluded with a Lightning-Talk Poster session using a ‘pass the mic’ format. This innovative approach proved effective in engaging the poster presenters and the audience in further discussion about the research. The first day concluded with a meeting of the UCCONNECT Executive Committee.

Day two of the conference started with a meeting of the UCCONNECT Advisory Board. After that, Professors Goulias and Cassidy addressed the students in attendance in their opening remarks, which were followed by a double keynote presentation from Caltrans’ Coco Briseno, Chief of Division of Research, Innovation and System Information, and Katie Benouar Chief of the Division of Transportation Planning. Each discussed the present state of transportation research in California and funding currently provided to UCCONNECT, as well as the future of transportation research and the role that students of transportation will play in designing and shaping paradigms for California and beyond.

Much of the second day was thereafter dedicated to podium sessions on a myriad of topics presented by students from throughout the UC system as from various campuses at the California State University. The late afternoon featured a panel discussion composed of the UCCONNECT Advisory Board members in attendance. Those members fielded questions from the audience in what was a lively debate.

The penultimate event of the conference was the Mel Webber Lecture presented by Professor Hani Mahmassani, of Northwestern University. In his lecture, Professor Mahmassani addressed the challenges and opportunities associated with the use of big data in transportation. Interesting and provocative research and implementation examples were presented.

The final event of the evening fittingly acknowledged the students by presenting awards based on a number of criteria as judged primarily by the Advisory and Executive Committee members. The award for best overall presentation went to UCSB graduate student Nate Isbell (right) for “Modeling Second-by-Second Emission in a Mega-Region.”

According to Jay Lee, the UCSB organizers received a lot of compliments for doing such a good job. Prof. Karen Frick from Berkeley, (a member of the UCCONNECT executive committee) said she already knew that UCSB people know how to organize a conference well, and that “they did a great job on this one, as expected.” Another executive committee member, Dr. Juan Argote, sent an email stating: “Indeed, this was by far the best UCTC conference that I have ever attended.” Kudos to all concerned!
Alumni Mei-Po Kwan and Sergio Rey Receive Outstanding Service Awards

UCSB Geography alumna Mei-Po Kwan (PhD 1994; Golledge, Committee Chair) and alumnus Sergio Rey (PhD 1994; Anselin, Committee Chair) each received the 2015 Outstanding Service Award from the Association of American Geographers (AAG) Spatial Analysis and Modeling (SAM) Specialty Group. Li An, the SAM Chair and a professor at San Diego State University congratulated them as follows:

“Congratulations to Drs. Mei-Po Kwan from the University of Illinois at Urbana-Champaign and Dr. Sergio Rey from Arizona State University, who have been selected to be recipients of the 2015 Outstanding Service Award! This very prestigious award is annually given to individuals who have substantially contributed to the SAM group through outstanding service, including excellence in promoting the awareness and reputation of the SAM group as well as exceptional research and outreach activities that render the general public or researchers from other disciplines to accept/use spatial analysis and modeling theories or techniques.”

Matt Niblett Explains the Importance of Scale Relating to Habitat of Key Species

One of the biggest challenges facing conservation biologists and ecologists is the development of a knowledge base that is sufficient to make cogent decisions in protecting threatened species. Often, expert opinion drives the derivation of the key question: what comprises suitable habitat for key species? Such opinion and even modeling tends to support what is commonly known, but doesn’t always capture what is necessary.

The research that alumnus Matt Niblett (PhD 2014) reports in “Structure of Fisher (Pekania pennanti) Habitat in a Managed Forest in an Interior Northern California Coast Range” provides a close look at habitat needs for the Fisher, a member of the weasel family with the Latin name Pekania pennanti. Using a new statistical approach involving an appropriate scale of analysis, Niblett found that the potential habitat for the fisher in California is considerably larger than previously thought. But, it still faces threats, like development, the use of rodenticides by illegal marijuana growers, and decreased numbers of prey during times of drought.

Katie Maynard Appointed As Goleta Planning Commissioner

Goleta Mayor Paula Perotte appointed Katie Maynard to serve as her Planning Commission representative. The position became available when Perotte’s former Planning Commissioner, Meg West, resigned to serve on the Board of Directors for the Goleta Water District.

‘Ms. Maynard’s experience will be very beneficial as proposed projects come before the Commission,’ said Mayor Perotte. ‘It’s wonderful to have someone with her background working in this role, and I am grateful she is willing to serve our community in this way.’

Katie is the UCSB Sustainability Coordinator and Event Manager of several UC, CSU, and CCC Sustainability Conferences, including the recent Third Annual Central Coast Sustainability Summit. Katie attended UCSB as a student and started a sustainability organization on campus. The current UCSB faculty at the time liked her organization’s mission so much that they let her write her own job description, and she began working in the Geography Department as a Sustainability Adviser.

Alumnus Park Williams Finds that June Gloom is Waning in Southern California

The summer fog that shrouds coastal southern California – what locals call the June Gloom – is being driven up into the sky by urban sprawl, according to scientists who have studied 67 years of cloud heights and urban growth in the region. Less fog may, at first, seem like a good thing. But less fog is bad news for native plants in the coastal hills and mountains, which depend on the cool fog as their only source of water during the rainless summer months. So less fog means warmer, drier, less healthy hillsides and, potentially, more fires.

Alumnus Park Williams (PhD 2009) found that cloud-bottom heights have risen at airports where there was the most urban growth. The pattern is especially clear at night and early morning, when fog is most common. “At night and early morning, that’s when clouds are closest to the ground,” explained Williams. “That’s when fog clouds deposit water directly on plants. This effect has been weakened.” The findings were published in Geophysical Research Letters.
Alumnus Jason Davis Receives Major NIH Award

Jason Davis (PhD 2010), a current postdoctoral scholar at the Carolina Population Center, University of North Carolina-Chapel Hill, recently received a prestigious NIH Pathway to Independence Award (K99). K99 awards fund two years of postdoctoral research, as well as three years of full faculty support. Jason’s K99 research plan strives to untangle the countervailing effects of economic migration—parental absences vs. remittance—on left-behind children’s growth outcomes. The monetary remittances that are generated through economic migration are a major mechanism for alleviating chronic poverty in these settings. However, the benefits derived by remittances are often diminished by negative impacts attributable to parental absences.

Alumnus Landon Romano Uses Drones to Aid South African Exotic Game Farmers

Landon Romano (BA 1999) leads an exciting and exotic life. After graduating from the University of California, Santa Barbara with a BA in Geography in 1999, he travelled extensively and then settled in the Bay area where he worked for Veritas Software for over 4 years. He then moved to Waco, Texas in 2006 and enrolled at Baylor University in order to earn an MBA which he completed in 2008, and he has since settled in Pretoria, South Africa, where he now runs a private investment company. Private investment certainly can be exciting, but Landon has expanded that side of his career into more exotic fields, literally and figuratively. For one thing, he farms African game animals in South Africa, and that enterprise has led to the establishment of Drone Safaris, a business that uses drones to aid the thousands of fellow exotic game farmers in the area. It makes perfect business sense, according to Landon.

Dr. Greg Husak (PhD 2005), a UCSB Researcher in UCSB Geography’s Climate Hazard Group, comes across as a fortyish, quiet, and soft spoken guy, but there’s a more flamboyant side to him. “Hollywood” Husak has won three national championships playing ultimate frisbee with the UC Santa Barbara Black Tide and the San Francisco Jam, a world championship with the Santa Barbara Condors, and, just recently, a gold medal with the U.S. Open Master team in this year’s World Championships of Beach Ultimate in Dubai.

As for the nickname “Hollywood,” Greg got that in college because he was a “hunk” from southern California, was (and remains) a star in ultimate frisbee, and had a personality some described as “flamboyant and a bit overconfident” in his early days.

The activities of the other Husak, “Humanitarian Husak,” center on the remote monitoring of rainfall and cropped area to estimate food production in the developing world: “As part of this, I administer a large grant supporting graduate students, researchers, and field scientists performing activities related to the Famine Early Warning Systems Network.”