

ECONOMICS

DEPARTMENT NEWSLETTER • UNIVERSITY OF COLORADO BOULDER • 2015

A Report from the Chair

Nicholas Flores

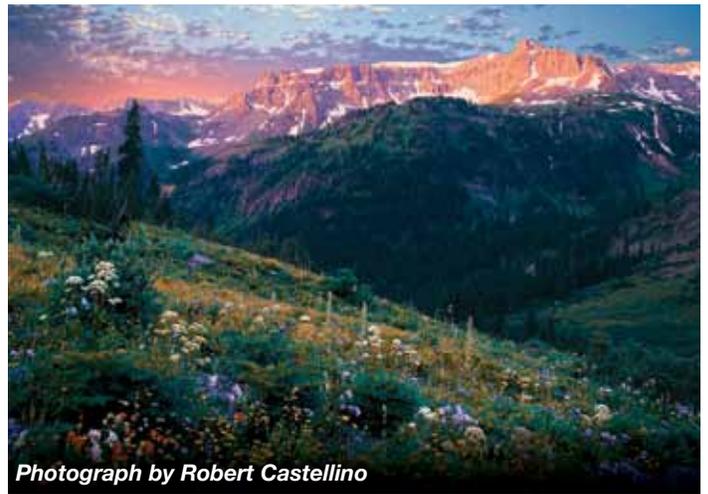
Dear Alumni & Friends,

Thank you for taking the time to look at our newsletter. We appreciate your interest in and support of the department. Below I highlight a few of the exciting things that have recently taken place in the department. There are also many specific events reported in faculty, student, and alumni notes. I hope you enjoy the read.

Student News

As you have probably seen or heard in the news, there has been and continues to be a significant realignment of student major choice in colleges and universities. Enrollments in the humanities and some of the social sciences have declined precipitously over the past five years. Here at CU, some of these departments have lost over half of their enrollments and majors. Our majors have grown along with those in STEM (science, technology, engineering, and mathematics) disciplines. Economics is the third largest major in the College of Arts and Sciences and the fourth largest major on campus. This realignment is a nationwide phenomenon. In the short term the student realignment creates problems because we suddenly need more economics and STEM discipline professors and not so many professors in humanities or political science based on student demand. Since the total number of students is growing, there is funding to increase the number of faculty to address this problem but realignment of faculty lags behind student realignment. Fortunately the College of Arts and Sciences is backing us with new hires each year in order to meet student demand. The department is also redeploying current faculty to meet demand as efficiently as possible.

Our major is popular because a BA in economics is highly valued in the marketplace. The analytical training we offer our students prepares them for diverse workplace environments. Forbes magazine reported that the average annual starting salary for an economics major is \$58,600. This is slightly higher than the average starting salary for a finance major (\$58,000) or an accounting major (\$52,900) and only behind computer science (\$66,800), engineering (\$65,000), and mathematics/statistics (\$60,000). A study by Patricia Flynn and Michael Quinn published in the *American Economist* in 2010 finds that the fraction of economics graduates who become CEOs of major companies is greater than



Photograph by Robert Castellino

any other undergraduate major. The upshot of all of this is that our majors are well compensated and extremely versatile, finding good jobs in literally all industries. The versatility of the major allows our graduates to move about the economy and from my perspective this leads to the potential for an interesting life.

Since 2010, we purposely reduced the size of our PhD program from 87 students to 69. We did this in order to ensure funding for our students while they are in the PhD program and this in turn allows us to be a more attractive and competitive PhD program. All of our PhD graduates find good jobs with starting salaries nearing twice that of the average annual starting salary for our undergraduates. Over the past few years about 60% of our PhD graduates have started in tenure-track professor jobs at universities and colleges with another 20% going to postdoctoral or visiting professor jobs and the rest going to government or industry. In the past ten years, approximately two-thirds of our PhD graduates end up in tenure track university/college jobs after three years. Having spent twenty years in the department, it is nice to see our graduates succeeding in the profession. We provide alumni profiles in this newsletter for two of our successful PhD graduates who went through our program in the late 1990s.

New Faculty

The department hired two new professors since our last newsletter. Assistant Professor Giacomo Rondina joined the department in August of 2014. Professor Rondina earned his PhD from the University of Wisconsin Madison in 2007. From 2007-2014 he was a professor of economics at the University of California San Diego. Professor Rondina conducts research

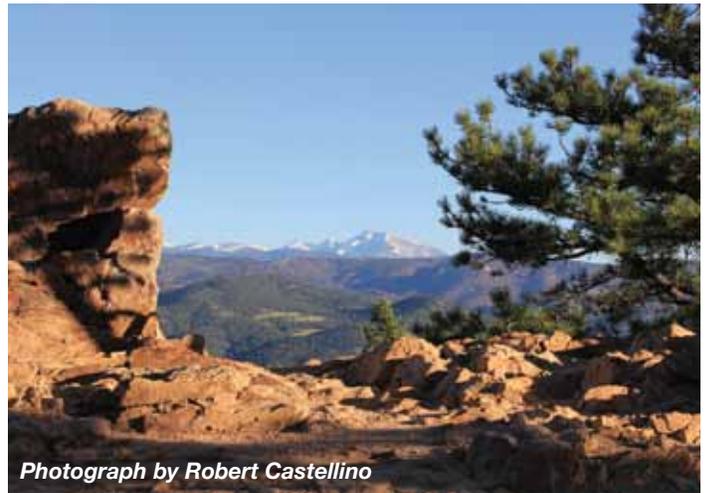
in macroeconomic theory and international macroeconomics. In addition to teaching one of our PhD core macroeconomics classes, Professor Rondina teaches our super-size principles of macroeconomics (400+ students) for undergraduates. Assistant Professor Jeronimo Carballo joined the department this fall having completed his PhD in economics at the University of Maryland. Professor Carballo is an international trade economist who worked for the Inter-American Development Bank in Washington DC before starting the PhD program in Maryland. Professor Carballo will teach international trade and principles of microeconomics. In addition to these two excellent hires, we have authority to hire two more assistant professors in the 2015-2016 academic year, one in macroeconomics and another in economic history.

Economics alumnus Dr. Eugene D. Eaton (BA 1965, MA 1967, PhD 1971) provided a bequest of just over \$6M to the University in 2014. The bequest provides an endowed chair in economics, an endowed chair in music, and establishes an undergraduate travel sabbatical fund for students pursuing studies outside of the US in their senior year. The department is currently searching for a senior scholar to be the first Eugene D. Eaton Chair in Economics. The entire faculty is excited to hire the chair and the two assistant professors.

Faculty & Staff News

In 2014, Professor Tania Barham was promoted to associate professor with tenure. In 2015, Professor Xiaodong Liu was promoted to associate professor with tenure while Professors Martin Boileau and Terra McKinnish were promoted to full professors. The Boulder Faculty Assembly honored two faculty members with excellence awards in spring 2015. Professor Yongmin Chen received an excellence award in research, scholarly, and creative work while I received an excellence award for leadership and service. Several of our faculty took on new editorial positions. Professor Ann Carlos is now the co-editor of the *Journal of Economic History*. Professor Daniel Kaffine is an associate editor for *Resource and Energy Economics*. Professor Keith Maskus is an associate editor for *Economic Inquiry*. Professor Brian Cadena is an associate editor at the *Journal of Human Resources*. The American Economic Association has a standing committee, the Committee for the Status of Women in the Profession (CSWEP). This year CSWEP added a new position, Associate Chair and Director of Mentoring. Professor Terra McKinnish was appointed as the inaugural chair. Professor Keith Maskus is now the Director of the Program on International Development in the Institute of Behavioral Science.

Fortunately most of our staff remains with us and continues to do an excellent job administering the department. We had two new additions since our last newsletter. Melissa Piper came to the department from Regis University and is serving as an administrative assistant and office receptionist. We also added an undergraduate academic advisor, Eryn Elder, who splits her time between advising economics students and advising political science students.



Photograph by Robert Castellino

Supporting CU Economics

As my summary suggests, many good things are happening for our students thanks to the hard work and dedication of our excellent staff and distinguished faculty. Despite an increase in state funding for the current fiscal year from last year, the percentage of our campus budget that comes from the state remains below 5%, at 4.3%. Most of our peer state flagship institutions have state support of over 20% in their budgets. Governor Hickenlooper's budget request for fiscal year 2016-2017 calls for a \$20M cut in higher education funding. While we do not yet know the impact on next year's state funding to our campus, we will almost certainly be facing a reduction and this likely translates into a tuition increase for students.

Tuition for resident and non-resident students has gone up considerably since I became chair in 2006. While tuition may have gone up over this period, the department has worked to make the student experience better each year. Some of the experiential improvement comes from organizing the curriculum and course schedules so that students can graduate as soon as possible. Another way we have improved the experience is by using gift funds to directly support students. Examples include scholarships/fellowships, funding for student research, funding for student conference travel, funding to studying abroad, and funding for student internships. Without donor support, all of the things I just listed would not be possible. In order to keep improving the experience, we need to expand these programs and build new ones for our students. To this end, your continued support makes a big difference for our students and the department. If you have not given lately, I encourage you to do so. If you have given lately, I encourage you to give more. I am always available to talk to you about giving opportunities to match your passion for CU Economics and CU. ■

Nicholas E. Flores

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Coal, Gas, and Wind

Understanding Our Evolving Electricity System

By Daniel Kaffine

The electricity generation profile of the US has changed significantly over the last decade. Coal-fired generation, once representing a majority of US electricity generation, has declined approximately 25% from 2007 to 2013, reducing associated annual carbon emissions from coal by a substantial 500 million tons of CO₂. At current estimates of the social cost of carbon, this represents approximately \$20 billion dollars in avoided social damages annually from CO₂ alone. At the same time, a dramatic decrease in natural gas prices, largely due to an increase in supply brought about by hydraulic fracturing extraction techniques, has led to substantial increases in gas-fired generation. Furthermore, renewable generation, particularly wind, has also increased dramatically, driven by state-level renewable portfolio standards (RPS), federal production and investment tax credits, and technological advances. Clearly, these changes in coal, gas, and wind are related, but how?

Understanding the relationship between coal, gas, and wind in the electricity sector is the goal of current research with Professor Harrison Fell of the Colorado School of Mines. In particular, we empirically examine how decreased natural gas prices and increased wind generation have individually and jointly affected coal-fired generation and emissions. We aim to quantify the source of these historic shifts in generation profiles and to predict effectiveness of future energy and environmental policies.

The focus on the electricity generation sector is motivated by several important factors. The electricity generation sector is an important anthropogenic source of local and global pollutants, such that even small changes in this sector may have profound impacts on air quality and total climate-related emissions. The US has actually witnessed a decline in CO₂ levels from 2005 to the present, with the majority of this decline attributable to the electricity sector, despite relatively flat electricity demand over this time period. As such, the shift out of coal towards wind and gas looks to be driving a large portion of the decline in US CO₂ emissions.

Furthermore, the interaction between wind, gas, and coal is a complex relationship based on generation costs, demand levels, and intermittency issues. Understanding these relationships is a pressing need, as policies such as renewable portfolio standards and potential greenhouse gas pricing (in addition to market factors such as fracking and natural gas export) suggest that the electricity sector will continue to evolve in dramatic ways over

the next several decades. It is not a stretch to say that understanding the future evolution of coal-fired generation is a key and crucial aspect in terms of US sources of carbon emissions and impact on global climate change.

While previous studies have separately examined the impact of renewables and low natural gas prices on the electricity generation sector, there are reasons to believe there may be important interactions. Historically, cheaper coal-fired generation was used to meet baseload demand, while more expensive gas-fired generation met peak demand. Under these conditions, wind generation would primarily offset the more expensive gas-fired generation. However, the recent substantial decline in natural gas price has led some coal generation to become more expensive than some gas generation, implying more coal would be offset by increased wind generation. Additionally, the fact that gas turbines are better suited than coal for ramping in response to the intermittency of wind may increase the demand for gas generation to handle the volatility associated with higher levels of wind generation.

To better understand these complex interactions between gas and wind, our research examines daily generation and emissions from hundreds of coal-fired generators across the US from 2008 to the present. These generation and emissions levels are matched against daily regional gas prices and daily regional wind generation to obtain a comprehensive view of how coal-fired generators respond to these factors independently and jointly.

Results-to-date find that low natural gas prices and increased wind generation have both led to large reductions in coal-fired generation and emissions. Furthermore, we find evidence that the interaction between natural gas prices and wind generation is important in most regions of the US, and led to a greater reduction in coal-fired generation and emissions than would be explained by either factor alone. In other words, the large increase in wind generation from 2008 to 2013 led to more coal-to-gas switching, while the large decline in natural gas prices from 2008 to 2013 led wind to offset more coal-fired generation and emissions.

Our findings have substantial policy implications. New carbon intensity standards proposed at the federal level will implicitly place a price on carbon emissions, while renewable portfolio

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ALUMNUS PROFILE



Rebecca Neumann

Rebecca Neumann (PhD 2000) is an associate professor of economics at the University of Wisconsin Milwaukee. Professor Neumann grew up in the mountains above Boulder and received an undergraduate degree at Bond University in Queensland, Australia.

After earning her BA, she enrolled in the PhD finance program at the University of Arizona but found she missed Boulder and the mountains. With an MS in finance Neumann returned to Boulder setting her sights on a PhD in economics. She has very fond memories of her time in the CU graduate program and especially those she worked with. Neumann became very close friends with many of her graduate school classmates and these friendships have stood the test of time. Neumann feels blessed to have had such a thoughtful and hard working dissertation committee. In addition to her close work with her dissertation advisor Professor Martin Boileau, Neumann benefited from the advice and insights provided by Professor Robert McNown regarding methodology/econometrics and Professor Keith Maskus for “keeping her honest in writing.”

Armed with a very strong dissertation in macroeconomics and international finance, Neumann went straight to the economics PhD job market in 2000 and landed an assistant professorship at the University of Wisconsin Milwaukee (UWM). At CU, Neumann was an outstanding graduate part-time instructor, winning the Stanford Calderwood Teaching Excellence Award for graduate students. She continued her streak in teaching excellence at UWM and also established a successful research program. In 2008 she earned tenure at UWM and was promoted to associate professor. Professor Neumann loves teaching undergraduate students at the upper-division level because these classes allow students to apply the core principles they studied earlier in the major. UWM has many non-traditional students who must work their way through college. Neumann feels extremely rewarded when students come to her to discuss continuing on to graduate school having developed skills and confidence through success in her class. Professor Neumann is a very active PhD advisor at UWM with recent PhD student placements as assistant professors at St. Lawrence University, the University of Oklahoma, and the University of Malaysia. As

a graduate student advisor, Neumann models herself after her own dissertation committee, striving to be helpful, supportive, and appropriately critical to enable students to transition from graduate students to successful and independent researchers.

Recently Professor Neumann has become passionate about conducting research and teaching on personal finance and financial literacy. At UMW she developed a short course on personal finance that provides students the basics of personal finance. Additionally, she recently joined the Board of Directors for the nonprofit Make a Difference–Wisconsin. The nonprofit’s mission is “to provide financial literacy programs and resources that empower students to make sound financial decisions. Our vision is to build strong communities where students and their families make informed financial decisions and take control of their financial future.” Through Make a Difference Neumann works with junior/senior high school students and college students. Many of the students she teaches have little or no understanding of the concept of using a bank as opposed to going to a check-cashing store. Her work at Make a Difference has given her a whole new perspective on the need for financial literacy training and research.

Professor Neumann lives in Milwaukee with her wife, Tina Kreitlow, and their children Chas, age 4, and Anaya, age 3. Both Chas and Anaya were adopted through the foster care program in Milwaukee. In addition to being blessed by two wonderful children, Rebecca and Tina’s work as foster parents in Milwaukee opened their eyes to problems of poverty and racial disparities in their community. In response to their experiences, they both work as advocates for and counselors to community members who struggle to leave the circle of poverty.

While Professor Neumann is happy with her colleagues and students at UWM, she is concerned about the future of public higher education in Wisconsin and the US in general. Recently the University of Wisconsin system faced dramatic budget cuts and Wisconsin’s elected officials passed legislation to redefine the system’s mission, eliminate many tenure protections, and eliminate shared governance (faculty and administration) rules. According to Neumann these changes have lowered morale in one of the nation’s premier public education systems. Professor Neumann worries that if this trend spreads across the country, the US will lose one of its greatest competitive advantages, the best publicly available higher education system in the world. ■

Coal, Gas, and Wind

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standards passed by states continue to grow in stringency. The existence of the interaction effect between wind and gas implies that implicit carbon pricing under a carbon intensity standard would lead to more coal-to-gas switching if wind generation continues to grow. Similarly, the impact on coal-fired generation

and emission from increasing renewable portfolio standards would be even greater if carbon pricing is implemented. ■



About the author:
Associate Professor Daniel Kaffine of the Department of Economics has research interests in the impacts of renewable energy policies; links between energy and environmental policy and transportation markets; property rights and natural resource use.

Long-term Effects of Conditional Cash Transfers

By Tania Barham



Curbing the transfer of poverty from one generation to the next is challenging. The disadvantages of being from a poor family starts when a child is in-utero, where a child's nutrition and development is affected by their mother's nutrition, health, and education. A family's poverty can continue to affect a young child's cognitive development through many channels including poor health and nutrition, poor parental knowledge of child development, family instability, and lack of resources. These problems are compounded when the child is school age as the child is more likely to drop out of school early.

In an effort to help alleviate poverty and reduce the intergenerational transfer of poverty a new type of welfare program was introduced in Latin America in the late 1990s, Conditional Cash Transfer Programs (CCTs). These programs give regular cash payments to poor families conditional upon the families engaging in behaviors designed to improve the health, nutritional and/or educational status of family members. For example, the cash payments may be conditional on every family member receiving regular preventive health care check-ups and their children enrolling in school and attending regularly. The cash transfers reduce short-term poverty by increasing a family's income, while the aim of the conditionalities is to build the human capital of the children. Economic theory posits that these programs will provide children with the skills to bring themselves out of poverty as an adult. The first large-scale CCT program, Progresa/Oportunidades, started in Mexico in 1997. The initial success in Mexico inspired similar programs, and CCTs are now been implemented in more than 30 low- and middle-income countries, and even in New York City.

To understanding the effects of this rapidly growing welfare program, governments piloted the CCTs in their countries before scaling up the program. Many of the pilot programs also included rigorous evaluations. Much like a randomized controlled drug trial, the evaluations required the use of randomized assignment to determine which communities would receive the program first (i.e. be the treatment group) and which would be the control communities. In some cases there was also extensive pre- and post intervention data collection. The control communities were usually phased-in at a later date after the success of the program was determined.

Short-term evidence points to the success of these programs on improving health, nutrition, and grades completed as a result of

CCTs. My research in this area highlights that the Mexican CCT reduced infant mortality by 11 percent, and that the program's conditionality that all household members receive regular health care check ups helped reduce the elderly mortality rate. Cost-benefit analysis based on the reduction in infant mortality alone justified the Mexican CCT program.

While research shows CCTs were successful in the short-term, little is known about the longer-term effects of the program on learning in school and later labor market outcomes. The question of whether kids who completed more grades in school actually learned more is unfortunately a salient one in many of these countries as the quality of school is low, kids go hungry to school, and in some countries teachers teach to the top of the class.

To help determine the longer-term effects of CCTs, my co-authors and I developed and fielded a survey in Nicaragua between 2009 and 2011 to examine the effects of the Nicaragua CCT program 10 years after the start of the program. The survey was funded by the National Science Foundation, the Inter-American Development Bank, and the International Initiative for Impact Evaluation. We collected data on over 30,000 people in the original treatment and control communities, and did extensive achievement and cognitive testing on people below the age of 23 in the survey. Many of the original program recipients in these areas had migrated, so significant effort was put into finding migrants in Nicaragua and Costa Rica.

We are still refining the analysis, but the findings so far point to some important program effects. Since the original control group eventually received the CCT program, our results are likely to be under-estimates of the full effect of the program. We find that boys who were 9 to 12 at the start of the program and at risk of dropping out of school, did learn more. Testing them 10 years after the start of the program when they were between the ages of 19 and 22, the children from the original treatment group's test scores on math and Spanish were still between 0.2 and 0.3 standard deviations higher than the original control group. This same group of boys in the original treatment communities also earned 10-30 percent more per month worked. This is particularly impressive, as good jobs are not easy to come by in Nicaragua. Indeed, it appears these young men temporarily migrated to find better paying agricultural jobs both within Nicaragua and in

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Mary Evans

Professor Mary Evans (PhD 2001) came to the CU Economics graduate program after graduating from James Madison University as the outstanding economics BA graduate of 1997. After completing PhD core training, Evans quickly took to research in environmental economics working under the guidance of her advisor, Professor Nicholas Flores. Her research as a graduate student caught the attention of Professor V. Kerry Smith, one of the profession's most distinguished environmental and resource economists. Professor Smith offered Evans a two-year postdoctoral fellowship in the Center for Environmental and Resource Economic Policy at North Carolina State University. Normally, economics PhD graduates go to the academic job market to seek a permanent position. However, recognizing the unique opportunity to work with Professor Smith, Evans seized the opportunity and together they began a long and highly productive research collaboration. When queried about highlights in her training at CU, Evans notes that in looking back, perhaps the most valuable skill she acquired from CU faculty and the dissertation process was learning to adapt. In her dissertation research, Evans had to build skills far beyond normal PhD core work to address specific research questions. In order to keep on the cutting edge of research, Evans has continued this pattern, constantly adapting by acquiring new skills.

In 2003, Evans became an assistant professor of economics at the University of Tennessee. Professor Evans thrived at Tennessee and was promoted to associate professor in 2009. While she enjoyed her time in Knoxville, Evans decided to head west to the Los Angeles area and in the fall of 2009 she became an associate professor at Claremont McKenna College in Claremont. In 2010 she became the Jerrine and Thomas Mitchell '66 Associate Professor

of Environmental Economics and George R. Roberts Fellow at Claremont McKenna College, a position she holds today.

At Claremont, Evans describes teaching Claremont McKenna students as “infinitely rewarding. Their constant enthusiasm and curiosity challenges me to continually find ways of improving myself as a teacher.” On the research front, Evans gets particular intellectual satisfaction conducting research that has the potential to influence environmental policy either locally or nationally. Her most exciting current work analyzes the relationship between environmental regulatory compliance and regulatory enforcement. In one project Evans uses a relatively new US Environmental Protection Agency (US EPA) data set that enables her to separately measure how compliance is affected by traditional enforcement, where the US EPA measures and records pollution, and non-traditional enforcement where this information is later made publicly available at the facility level. She finds both forms of enforcement significantly increase compliance. As indicators of research success, Evans was appointed to the US EPA's Science Advisory Board in 2012 and she also serves in editorial positions at the *Journal of the Association of Environmental and Resource Economists* and the *Journal of Economic Behavior and Organization*.

Away from work, Professor Evans enjoys spending time in sunny Los Angeles with her husband, J.R. DeShazo (also an economist), her 15-year-old stepdaughter, Abigail, her 3-year-old son, Quinn, and their 10-year-old dog, Lucas. But at times Professor Evans thinks back to Boulder and remembers early morning arrivals at her office in one of the Economics building towers and seeing her friend and office mate Jennifer Thacher (PhD 2003) who had arrived even earlier. Evans, “I loved that quiet time of day, enjoying the smell and taste of a cup of coffee while hearing the rest of campus and the hill start to come alive. I didn't appreciate at the time how rare it is to have a time in your life when you have few responsibilities other than to learn and apply what you've learned.” ■

Long-term Effects

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neighboring Costa Rica. We also find that girls in the original treatment areas learned more.

We also examined the effects of receiving the CCT while a child was in-utero and for the first two years of their life in the original treatment areas, compared to receiving the program after age 2 in the original control area. We find that at age 10, boys exposed to the CCT during their first 2 years of life have better cognitive outcomes, but are not taller than those who received the intervention after the age of 2. The original treatment group boys are no taller because the boys in the original control communities caught up in height when they received the program after the age of 2. This has important policy implications as it shows that intervening early in life is important for cognitive development of children.

CCT programs are still relatively young, and more research of the early CCT programs are needed to determine the longer-term effects of such programs. Results from Nicaragua are exciting and point to the possible longer-term effects of these innovative programs. Nicaragua is a poor country and had low levels of education prior to the start of the program; kids were not completing grade 4. It will be interesting to see if research finds similar positive effect in countries that are better off to start. ■



About the author:

Associate Professor Tania Barham of the Department of Economics has research interests in investigating the impacts of conditional cash transfers on various child health and educational outcomes in Mexico, Nicaragua, and Yemen, determining the long-term effects of family planning and early child health interventions on cognitive development of older children and adolescents, using a randomized experiment in Yemen to test the unitary model of the household and to determine if expenditure patterns differ depending on if money in the hands of men versus women, exploring the effect of electrification on poverty in Brazil.

A Passion for Solving the Climate Change Problem



Photograph by Robert Castellino

CU economics alumnus Robert Castellino (BA 1985) has a passion for mountain adventure that led him into all of Colorado's mountain regions over the past forty years. As a professional photographer, Castellino shared inspirational vistas by publishing notable photography books on Colorado: *Boulder: Heart & Soul—People & Place* (1998), *Colorado: Heart & Soul* (1999), *Denver: Gateway to the Rockies* (2001), *Colorado Roadside Photography Guide* (2002), and *Boulder: Yesterday and Today—A Photographic Retrospective* (2006). With so much mountain experience and given his keen eye as a photographer, Castellino noticed changes occurring to the places he loves. He observed the retreat of mountain glaciers in the Indian Peaks Wilderness Area and the Maroon Bells followed by the invasion of Colorado's forests by the mountain pine beetle. Pine beetle infestation and drought have devastated tracts of forest in the San Juan Mountains, one of his favorite areas. As a lover of nature, Castellino became aware of the problem of human-induced climate change, a problem science links to the changes he was observing.

Unsettled by these observations, Castellino decided to make a difference. He put together photographic presentations to educate people about rapid changes occurring right here in Colorado. His presentations stressed that climate change is not some future generation's problem, but a problem facing Coloradans today. Renewable energy innovations and economic analysis were also central to his presentations as solutions people can implement on their own. His presentations were well received by CU classes, business groups, and civic groups, leading him to think of bigger ways to educate and equip people with the means to make a difference. To this end Castellino founded the non-profit Climate Colorado (Climatecolorado.org) in 2014 with a vision of approaching the global climate change problem as a local problem that people can work together toward solving. Under Castellino's leadership, Climate Colorado implemented several new and exciting programs with more on the way.

In November of 2014, Climate Colorado created the Colorado Climate Summit on the CU Campus. The Summit brought together experts on renewable energy, electric utilities, and transportation along with interested students and citizens. In addition to expert talks, there were moderated brainstorming sessions for responding to the challenge of achieving net zero carbon emissions in energy production by 2020. Participants were led through a planning and design process for meeting this goal us-

ing rapid prototyping, a technique applied in manufacturing and high tech development. A recent high-profile application of rapid prototyping is the development of Google Glass led by Tom Chi. Rapid prototyping applied to the climate challenge required Summit teams to articulate a concrete plan for meeting the climate challenge within an hour then revisit and revise the plan in rapid succession resulting in a prototype plan. According to Tom Chi, rapid prototyping induces people to partake in what he refers to as expansive learning—learning done on behalf of humanity that has the potential to discover new possibilities in a short time. The rapid march using only immediately available information forces people to think independently and outside of the box. Colorado Climate Summit participants were very pleased with their rapid prototyping experience and walked away feeling empowered and engaged as a community committed to making the change they envisioned together.

Most recently Climate Colorado created a new program, Schools to Zero for K-8 and high school students. The kickoff event happened in October of 2015 with the STEM Magnet Lab School Climate Challenge Summit. The Summit engaged third and eighth grade students with a climate challenge for their school building to achieve net zero emissions, zero waste, and reduce water by one half in five years. Using the same rapid prototyping principals and guidelines the event was moderated by school faculty and Climate Colorado's professionally trained team of rapid prototyping specialists. Students came up with plans for meeting the climate challenge while school district administrators and board members observed. The Summit not only engaged students in the climate change problem, but also gave them a voice in the redesign of their school building that is being planned now that remodeling funds are available.

Castellino's efforts as the CEO of Climate Colorado are attracting attention. Climate Colorado has been endorsed by a long list of other nonprofit organizations and Castellino has been invited to address Colorado State officials, delivered testimony to the US EPA on the Clean Power Plan, and given a talk at TEDxVail. Castellino's love of the backcountry and desire to preserve it led him down a path he had not foreseen. His mantra is making a difference one person at a time, one school at a time, one city at a time so that together the climate change problem can be resolved. ■

DEPARTMENT OF ECONOMICS

2012-13 Graduates

DOCTOR OF PHILOSOPHY

Luis Fernando Castro Penarrieta
Jieun Chang

Randall Scott Hiller
Joyce Chia-Heng Loh

Catherine Massey
Christopher Ryan McMahan

Soojae Moon
Kyungsoo Oh

MASTER OF ARTS

Patrick Gourley
Mariesa Ho
Timothy Bywater Larsen
Seamus Xiaoyang Li

Gregory Madonia
Eric Osborne-Christenson
Se Mi Park
Eric Penner
Kristina Sargent

Joseph Vavrus
Xin Wang
Nan Xu
Tianxiao Zheng

BACHELOR OF ARTS

Christopher Robert Aarvig
Ahmad Frank Abderrahim
Sean Christopher
Abramson
Cecilia N. Achuka
Nathan Lee Adams
Ross John Adams
Hasan Ayel Al Ahbabi
Rami Ahmad Al Zamel
Jon Andre Alanis
Zachary Ziad J. Alaywan
Matthew Graham Allen
Benjamin Matthew
Ambrose
Kristopher James Amstutz
Trent William Anderson
Aaron Michael Aragon
Garrett Lee Aschermann
Brian Gregory Ash
Hamid Reza Ashtiani
Frederic Vincent Askham
Daniela Alejandra
Averdano
Andrew Thomas Barnes
Zachary Dain Barone
Alex Charles Baumgart
Andrew Brian Beach
Caleb Myer Benson
Evin V. Berg
Elliott Berger
Alexander William Bieker
Samuel Bay Binder
Tyler Colton
Bodine-Smith
with distinction
summa cum laude
Dominic Edward Boggeri
Vivienne A. Born
with distinction
Douglas Steven Bosswick
Richard Daniel Boyd
Michael Richard Boylan

Jake Patrick Bradley
William W. Braun
Kevin John Breen
Walton Barnes Brown
Jonathan Michael Bruno
Nathan Bruno
Brandon Carrigan Buse
Conner O'Dell Buttermore
Justin Ray Cahoon
Ryan Joseph Campagnola
Jonathan Winston
Campbell
Nicholas Stephen Caron
Christian Del
Carpio-Thomas
Jordan M. Cevaal
Yu-Chun Chen
Jeffrey Michael
Chmielewski
Hunseok Choi
Adam Samuel Ciesielski
Trevor Joseph Clayton
John Francis Cody IV
Joseph Michael Conboy
Alexander Gillen Cossoff
William Bartley Cox
Samuel Austin Creamer
Adam James Cribari
Danielle Rebecca Croft
Jennifer Lauren Csaszar
Spencer Bradford Cuiper
Stephanie Renee Curry
Jonathan Clark Cutler
Alexander Mark Czernik
Sean Patrick Daley
Christian Dalsgaard
Meaghan Lilja Darwin
Jessica Davidoff
Clifford Arlen Davis II
Hayley Rae Davis
with distinction

Jose Jorge Federic
Deman Garcia
Timothy Mark Demus
cum laude
Michael Thomas Destito
Mark Anthony Diaz
Michael Mark Domanico
Ryan Russell Donnel
Michael Dopp
Angela Christine Dowdy
Sean Patrick Driscoll
Stephanie Eaton
Matthew Joseph Elmer
Nico Salvatore Enea
Edward Richard Ericson
Andrew Gardner Evans
Stuart Brent Eynon
Austin Kenneth Faroni
Elliott James Farquharson
Yazan Fattaleh
Edward Jorge Fernandez
Stephen Edward Feuerstein
Michael Patrick Field
Nicholas Donald Finch
Cassie Reyna Finer
magna cum laude
Nina Rene Fiorillo
Alexander Wynne Fisher
Nadia Gabriela Florez
Max Cooksey Forster
Wesley Edwin Foudriat
Margaret Elysia Fox
Charles Shelby Frank
Lauren Rachel Fredrick
Hayden Scott Fries
Yang Gao
David Harris Gardner
Conner Pius Gertje
Kyle David Gillette
Timothy Paul Gleason
Shelby Lynn Goldenberg

Christopher Julian Grain
Nicholas Thomas Gray
Samuel William Gray
Alison Janelle Grove
Brendon Stewart Guichet
Jing Guo
David Mark Hackworthy
Iilir Hajdari
Sean Michael Hall
Thomas Edward Hammer
Matthew James Hammett
Kristie (Jimin) Han
Tyler William Harch
James R. Harmoush
Hailey Anne Harrington
Scott Michael Hausmann
Brice Alton Heller
Walker Hill
Hugi Hilmisson
Kronan Burns Hoffman
Christine Elizabeth
Holloway
Joshua Richard Hosch
Connor Hoy
Michael Benjamin Isaacson
David Jonathan Jaffe
Laura Ospino Jaramillo
Timothy Evan Jenkins
Biying Jiang
Alexandra Mae Kahn
Vasilena Vasileva
Karaivanova
Zachary Alexander Karr
Taylor Michael
Keddington
William Peter Kelley
Dana Alan Kennedy
Alexander Frederick Kilen
Diana Kimberly Kim
George Edward Kinsella III
Dailey Alexander Kluck

Andrew Paul Koller
Garrett Kramer
Laura Marie Kraus
John Hayden La Rue III
Scott Martin Lagana
Brendon Westley Larson
Perry Vance Latimer
Alexander Michael
Lauderbaugh
magna cum laude
Sean Michael Layden
John Lee
Paul William LeNeveu
Daniel Leon Levine
Kenneth Allan Lewis, Jr.
Zishen Li
with distinction
Derik Andrew Linch
Nicholas Thor Lind
with distinction
Erika Dane Lohmann
Benny Lu
Jack Geyao Lu
Zachary C. Lyon
Robert John Macauley II
Thomas James MacPherson
William Alexander
Madden
Allison Leigh Madigan
Tatyana Malinina
Christopher Marshall
Keith David Martinez
Alexander James Martini
Mae Takiko Matsuura
Ryan Michael Matzen
Tyler Andrew McBride
Devin George McCafferty
Will Grant McCaskill
Lauren McDavid
Thomas Alexander McKee
Jeffrey Allan McKinnon, Jr.
Corbin E. McNutt

Michael James Merwin	John Posada	William Russell Serne, Jr.	Kenny Neal Szulczewski	Xiaoxiao Wang
Zachariah Montana Milby <i>with distinction</i>	Taylor Chris Preusch	Kevin McGraw Sexton	Lindsey Kathryn Tagen	Ye Wang
Kelly Anne Miller <i>magna cum laude</i>	Jean Maurice Provosty	Tyler James Sharkin	Casey Culpepper Talley	Daniel Copell Watson
Christian Albers Milleville	Greg Matthew Pruett	David James Sheehan	Nutthavuth Tamang <i>magna cum laude</i>	Peter Holm Webermeier
Martin Ignacio Minondo	Fabian Lucas Ptok	Pasang Sherpa	Matthew David Terral	Lucas Bernard Webster
Jordan Thomas Monson	Ariel Grace Froelich Raehn	Jaron Simpson	Benjamin William Te Selle	Rachel Jessica Werner
Lindsay Ann Mullineaux	Nicolaus Francis Ramos	Grace Catherine Skelly	Saugat Kumar Thapa	Madeline Elizabeth Wheeler
Carl Robert Newman	Othman Refai	Dustin Lynn Slagle <i>with distinction</i>	Bryce Kazuo Tottori	Alianna Marie Williams
Scott David Nobles	Michael Albert Reid	Jonas Taylor Smead	Michael Ryan Tower	Tyler James Wilson
Justin James O'Donnell	Anna Riba	Anthony R. Smith	Kristi Twilleger	Merrill Wing
Nikko Coen Okamoto	Andrew Richter	Jacob Smith	Jake Thomas Tyson	Michael Harold Wood
Philip Robert Olson	Zachary Ryan Ricketts	Lloyd Douglas Snider II	Leonid V. Vaisberg	Christopher Michael Woolman
Laura Ospina Jaramillo	Zac Joseph Riera	Ryan Gregory Snyder	Courtney Nicole Vanier	George Forrest Wortham IV
Eileen Elizabeth O'Toole	Brandon Michael Rizzo	James Edward Sober III	Mark Kenneth Velemirovich <i>with distinction</i>	Logan P. Wright
Jazmin Pando Chacon	Brian Stephen Robles	Kyle Robert Stafford	Kohlman Stock Verheyen	Changhao Wu <i>with distinction</i>
Nicholas Harrison Parker	Brandon Rochelle	Julia Staines	Dustin Alexander Vile	Wanqing Xiang
Tyler James Paschke	Alexander George Rodriguez	Meghan Malloy Stearns	Henry Kilmer Von Storch	Justin Micheal Yates
Katie Jill Patterson	Roxanne Leigh Ross	Willy Edward Stewart III <i>with distinction</i>	Joshua Michael Wainer	Chi Zhang
Taylor John Paules	Eric Randolph Rosswog	Patrick Acadia Stokes	Thomas Bennett Waldschmidt	Jin Zhang
Jamie Perse	Megan Rustigian	Brayden Anthony Stolfe	Thomas Darryl Walton <i>with distinction</i>	Cheng Zheng
Laura Faye Peters	Jordan David Saffold	Molly Ann Streff	Eugene Wan <i>with distinction</i>	Yuanxin Zhuge <i>with distinction</i>
Hunter Lot Phillips	Elliot Louis Sachs	Ryan Blake Streit <i>with distinction</i>	Jay Wang	David John Zippie
Ryan Andrew Phillips	Vincent Craig Santiago	Katherine Theresa Strickland	Jingyi Wang	Justin William Zuckerman
Joshua Philip Picker	Jeff Sarceno	Collin Joseph Sullivan		
Benjamin Asher Pomarantz	William Ryan Scheffler			
	Rachael Marie Schroeder			
	Bradley Page Seamans			

2013-14 Graduates

DOCTOR OF PHILOSOPHY

Maryam Kabiri
Priti Kalsi
Ross William Knippenberg

Sheena Lynn Murray
Molly Christine Podolefsky
Yuchen Shao

Steven Michael Smith
Un Jung Whang
Kenton Richard White

MASTER OF ARTS

Nathan Adkins
Alexander Cauley
Bentley Clinton
Daniel Diebel

Mark Goldfarb
Alexander Hill
Alex Kormendi
Tyler Mangin

Amit Patel
Richard Peterson
William Ridley
Joshua Schabla

Patrick Turner
Matthew Vance
Sihong Xie
Eric Werfel

BACHELOR OF ARTS

Fredric Michael Abood
George Athos Adamson
Bryan Yuuki Albaugh
Samuel Jonathan Alschuler
Kyle Alan Ambler
Bradley Anderson
John Frederick Anderson
Graham Edward Annett
Jalen Luis Aquino
Gina Elizabeth Armijo
with distinction
Jason Assaf
Jaylen Devaughn Baca
Timothy Sanders Baird

Aaron William Barlow
Stanley Sroufe Barnes
Katharine Danielle
Baroway
Kristina Alexys Barry
Deborah Hallinan Batson
Justin Michael Baughn
Lauren LeeAnn Beegle
with distinction
Robert Glenn Begani
Samuel Philipp Bell
Samuel Enrique Belloso
Targa
Jordan Harris Benudiz

Martha Teferi Berhane
Ross Lucien Berger
Samuel William Bican
Nicholas Mann Biehl
James Francis
Blackburn IV
Adam Michael Blank
Austin Jake Blodgett
Tyler Colton Bodine-Smith
with distinction
Ronald Alexander
Bornsztain
Matthew Watkins Boss
Malcolm Graham
Bourne IV

Thomas Dylan Brackett
Sean Michael Brading
Brendan Scott Bradley
Matthew Ernest Brand
Connor Breitbach
Kelly Elizabeth Brown
William Windisch Brown
Justin Ray Cahoon
Austin Douglas Cannell
Carlos Adolfo Cantor
Victor Alan Casebolt II
Devin Jay Castor
Joshua Michael John
Catalano
summa cum laude

Nicholas John Catalano
Heather Simone Cerna
Jordan M. Cevaal
Kiefer James Chapman
Yao Yao Chen
Aubre Vasili Chevalier-
Kousiotas
Tiyana Clark
Chase Coale
Tyler Alan Collins
Kevin Harrison Comstock
Abbigale Cook
Christopher Michael
Coviello

Julia Elisabeth Creighton	Wade Tatsuo Hirokawa	David Daniel Lowery	Fabian Lucas Ptok
Chen Cui	Alexander John Hiser	Nicholas Arthur Lubell	Stephanie Nicole Pyne
Micah Clayton Current	Daniel John Hittler	Ke Ma	Chase Curtis Quigley
Kevin Scott Dageforde <i>with distinction</i>	Quinn B. Hood	Dane Thomas Mailhiot	Matthew James Quinn
<i>magna cum laude</i>	Nathaniel Cody Houston	Brian James Main	Nicolaus Francis Ramos
Gregory Colin Dagger	Connor Hoy	Joelle Marie Makuta	Michael Albert Reid
Rachel Kathleen DeHaan	Huan Hu	Alphonse Marcello	David Marshall Retzer
Sean Patrick Daley	Nathan Allen Huey	Zachary Peter Marchlik <i>with distinction</i>	Anna Riba
Graham Alan Davis	Harrison Charles Hunter	Ethan Victor Markovitz	Nicholas Simon Rice
Samuel Greene Davis	John Malcom Hunter	Marcus Alexander Martinez	Lana P. Rimboym
Gabriel Adam Davison	Piper Jackson-Sevy <i>with distinction</i>	Christopher James Matchett	Mitchel Ryan Rivard
Mark Anthony Diaz	Ross Davis Jackson	Alexander Flynn McBroom	Parker Hayden Robbins
Philip Doetsch	John David Jaen	Devin George McCafferty	Jorge Robles
Zacki Ullah Ebadi	Dylan Austin Johnson	Connor Patrick McCall	Nicholas Fredrick Russo
Madeline Rene Eckles	Riley Matthew Jones	Conor Robert Liam McCarthy	Daniel Sean Ryan
Grant Vaughn Ehrick	Taylor Ryan Jung	Michael Eugene McCluskey	Hassan Alan Safieddine
Daniel Andrew Eichholz	Adam Trent Kager	Richard George McKinney	Joseph C. Saling
Nicholas Anton Eichler	Mitchell Aaron Kahl	Jeffrey Allen McKinnon Jr.	Miran Ayman Salloum
Christian Michael Elliott	Nicholas A. Kanner	Robert Normand McManus	Matthew Mogan Sanders
Ethan Samuel Elliott	Zachary Alexander Karr	Kyle Kenneth McMillan	Marisa Rae Sandoval
David A. Esposito	William Peter Kelley	Jeff David McMillan <i>with distinction</i>	Raili Larsson Schilling
James Blair Eulenstein	Dana Allen Kennedy	Dillon John McNamara	Edward Robert Schmitt
Robert L. Fay	Madison Paige Kiani	Edward Adkins McNichols	Dana Elizabeth Schnee
Zachary Noah Feldstein	Sang Kim	Max Henry Meints	Giorgianna Seibt
JonPaul William Ferzacca	Weston Scott Kim	David Zachary Mendelsberg	Riley Seidel
Nina Rene Fiorillo	Robert Gregory Kimball	Josephine D. Merklein	James Carl Seifert
Austin Fitzgerald Fisher	Robyn Taylor Knapp	Alexa Mersman	David James Sheehan
Carley Anne Flynn	Morten J. Knobbe	Daniel Ralsey Miller V	William Russell Serne, Jr.
Morgan Katherine Flynn <i>with distinction</i>	Evan P. Koehn	Davina Mayela Miller	Jie Shen
Crawford Noel Follett	Brian Raymond Konsiky	Jeffrey David Miller	Daniel Adam Sherman
Max Cooksey Forster	Ivan A. Konvalin	Julie Elise Bow Miller	Kevin Gordon Sherman
Herbert Oliver Funsten IV	Natasha Elaine Kosik <i>with distinction</i>	Sherman Ralsey Miller	Veronica Shim
Douglas Edward Gabbard	Tyler Edwin Korenblat	Nicholas Alexander Mohr	John Mark Silhavy Jr.
Siyu Gao	Laura Marie Kraus	Sean Michael Moser	Alexander James Shogan
Andrew Michael Gartland	Tyler Joseph Krieger	Jonathan Joseph Moyes	Paul Andrew Simpson-Johnson
Nicolas Paul Gavora	Patrycja Danuta Krystman	Phu Nguyen	Alexandra Elizabeth Skewes-Cox
Yemane Gebremeskel	Trevor Philip Laborde	Thy Hue Nguyen	Ryan Michael Small
Ian Anthony Gibbs	Ian Scott Langer <i>with distinction</i>	Mackenzie Spencer Nichols	Daniel Murphy Smith
Geoff Paul Gilbert	John William Lanz	Matt William Nippes	Matthew Robert Smith
Monica Anne Glicken	Thomas James Laugeni	Christopher J. Nizich	Samuel Allen Smith <i>with distinction</i>
Christian Julian Grain	Michael J. Lawrence	Alec Nyberg	<i>magna cum laude</i>
Michael Andrew Gold	Nora Rachel Leccese	Nikko Coen Okamoto	Trenton Wade Smith
Gabriel Leslie Gomez	David Sungkun Lee	Chi Pan	Ryan Gregory Snyder
Juan Antonio Garcia-Gonzalez	Samantha Marie Lee <i>with distinction</i>	Andrew Harrison Pappas	Guanxiong Song
Grant Jonah Gordon	Joshua Samuel Leftin	Ilho Park	Sara Song
Jessica Erin Graebel	Peter Alexander Lemieux	Alexandra Lynne Parker	Alexander Stauter
Brendon Stewart Guichet	Michael Joseph Lescanic	Harry Sherman Pascarella <i>summa cum laude</i>	Chad Michael Strong
Dillon J. Guidice	Paige Nicholle Leuschner <i>with distinction</i>	Heather Leigh Patterson	Richard Stubblefield
Eduardo Gutierrez	<i>cum laude</i>	Jillian May Peacher	Gregory Douglas Stula
Matthew Stuart Gutkowski	Meijia Li	Sterling Chandler Perkins	Wanyu Sun
Conor Jeffrey Hansen	Xinran Li	David James Perry	Alyssa Lauren Sunoo
Philip Cooper Harlan	Yang Li	Rachel Peterson	Nicholas Scott Szelog
Bardia Eliot Harsini	Michael Andrew Linneman	Joshua Picker	Elizabeth Ashley Szoke
Ross Daniel Hastings	Louis Lish	Robert Sean Pollard	Benjamin William Te Selle
William Daniel Hauptman <i>with distinction</i>	Parker West Livingston	Dylan Anders Porter	John Terrien
<i>magna cum laude</i>	Jennifer Lobue	Tyler Lee Priest	Soon-Guan Ti
Jiaji He		Jean Maurice Provosty	Nicholas Tolley
Brice Alton Heller		Joshua Michael Pruitt	Matthew Evans Tram
			Jesse Camille Tuell

Jami Sue Tuzzeo
David John Vaughan III
Delilah Rose Vigil
Jonathan Matthew Volfson
Thomas Bennett Waldschmidt
Lexi Nicole Walega
Anna Therese Walters
Alisha Eleanor Walton
Tracy Waithera Wanjiru
Alexander Phillip Ward
Calvin Andersen Ward

Matthew H. Waters
Jeffrey David Watson
Brian Jacob Weinstein
Kevin Wendt
Jonathan Robert Wezner
Eric Wienrich
Cole Harrington Williams
Evan Michael Williams
with distinction
Christian Akira Wilson
Matthew Colin Wilson

Brennan Matthew Wolf
Christina Elizabeth Wright
Logan Patrick Wright
Cheng Wu
with distinction
Jingyin Xia
Xinyan Xie
Fangzhong Xu
Shuo Yang
Cebraill Yasar Yavuz
with distinction

David Brian Yoshida
Kaiwen Yu
Jianpeng Zhang
Xiezhou Zhang
Xuefei Zhang
Cheng Zheng
Yi Zheng
Michael Hahn Zoppa
with distinction

2014-15 Graduates

DOCTOR OF PHILOSOPHY

Yucheng Ding
Zachary Lee Feldman
Dustin Dale Frye

Xin Geng
Gisella Anne Kagy
Jongheuk Kim

Edward Lawrence Kosack
Na Kyeong Lee
Sooyoung Lee

Jose Ivan Rodriguez
Sanchez
Paulo Quinderé Saraiva

Austin Crowley Smith
Zachary Alexander Ward
Weisi Xie

MASTER OF ARTS

Javier Andres Santiago
Scot Beattie

Matthew Ridge Butner
Mallory Joan Keeler

Hoyn Kim
Samara Virginia Mendez

Doyoung Park
April Christine Ross

Brandon Michael Spears
Li Yao

BACHELOR OF ARTS

Joshua Ryan Adams
Bryan Yuuki Albaugh
Faris Al-Jassim
Ahmed Alkendi
Liy Nah Ayman Alkhadhra
Zohair Jawad Al-Sharshani
Bradley Anderson
Christopher Doukas
Anderson
David James Anderson
magna cum laude
John Frederick Anderson
Trent William Anderson
Isaac Jaymes Andresky
Aidar Aralbayev
Sebastian Arango
Bradley D. Arnold
Alexander Audi
Thomas Bruce Augason
Christopher Mark Baines
Cory Balk
Alexander Herrick Barber
Charles Claude Henry
Barkmeier
Avery Michael Bengé
Cody Jess Bennett
Tyler Dale Bentley
Martin Berg
Ru Bi
Lingyu Bian
Bo Christian Birkeland
Jacob John Bishop
Willem Raleigh
Bloemsma

Adam Christopher
Boggeri
Mac David Bolling
Bryan Richard Bonack
Sidney William Grant
Bonser
Jacob Ethan Bornstein
Cameron Fabin Botts
Paolo Steffey Bouchard
Thomas Dylan Brackett
Lauren Rogge Bratschun
John Thomas Brewer
Bailey Barton Bulls
Carlye Anne Burke
Davin Burke-Reinhart
Amy L. Burnett
magna cum laude
Frances Ann Butler
summa cum laude
John Webster Butler II
Brandon James Calano
with distinction
Anthony Campolo
Marissa Wilson Cannady
Hunter Jensen Carmichael
Cole Alexander Carlson
Kelsey Anne Carpenter
Maxwell Caudle
Lok Hin Chan
Bryant Chen
Cameron Chittick
Maxton Daniel Coates
Jared Nicholas Codina
Taylor Leigh Cohen

Stephen Macken Collins
Cody James Columna
Erik Nicholas Comer
Dylan Byrne Connolly
Christopher S. Conrad
Marchant Cottingham
Christopher Michael
Coviello
William Elias Cox
William Crimmins
Rhett Doss Cross
Grazina Dageyte
Christopher James
D'Ambrosio
Olivia Porter Daniels
Clayton Hunter Davis
Taylor Mary Davis
David Scott DeCamp
Marissa Lauren DeFeyter
Ryan Joshua De La Vega
Kathleen Allison
Deptowicz
Haley Elaine DeRudder
McKayla Inez Dolan
Benjamin B. Donegan
Travis James Dowdy
Hayley Katharine Dunn
James Ainsworth Dupar
Zacki Ullah Ebadi
Victoria Leisy Eberlein
Scott Lee Edwards
David Esposito
Alexandrea T aylour
Esquibel

Derik Thomas Fabrizio
Nicholas Peter Fallon
Austin K. Faroni
Victoria Ferguson
Alberto Ernesto
Fernandini
Anthony D. Ferrufino
JonPaul William Ferzacca
Nine Rene Fiorillo
Loren Franklin
Ellen Mary Franks
Calvin Frauenfelder
Bayley Fuller
Herbert Oliver Funsten IV
Douglas Edward Gabbard
Carl Bacharach Ganz
Siyu Gao
Cary Garfinkel
William Henry Garvey
Andrew Thomas Patrick
Gendron
Michael David Gilman
Ryan Robert Ginter
Christopher Shields
Gluckman
Gabriel Leslie Gomez
Cory Nicholas Goode
summa cum laude
Samuel Goodnight
Jake Aaron Goodstein
Grant Jonah Gordon
Christopher Ryan Graham
Travis Gruenler
Nuvan Ian Gunaratne

Mikhael Maximiliano
Gustin
James Hafer
Michael Halax
Stephen Fredric Harman
Bardia Eliot Harsini
Morgan Christi Harris
Peter James Hawkes
Dwayne Haynes
Jie He
Sheng He
Jacob Ryan Henston
Charles William Heskett
Alexander John Hiser
Scott Brown Hodges
Christopher Tyler Holston
James Hopkins
Molly Jill Horowitz
Kevin Barry Howes
Daniel Intolubbe-Chmil
cum laude
Seth Daniel Ivanoff
Gookjin Jeong
with distinction
Jake Erik Jeronimus
with distinction
Walker Phillip Jezek
Yuwei Jiang
Lea Mackenzie Johnson
Tessa Johnston
Max Peterman Joles
with distinction
Christa Brittany Jones
Israel Nkola Kalombo

Ian Michael Kamlet
 Dana Alan Kennedy
 Alexander Roy Kent
magna cum laude
 Adrian Macy Keyes
 Jongwan Kim
 Linda Dianne Klouser
 John Robert Kramer
with distinction
 Laura Marie Kraus
 Tyler Joseph Krieger
 Thomas Curray Kubancik
 Scott Andrews Lalli
 Mark Benjamin Lamb
cum laude
 Thomas James Laugeni
 Alexandra Brooke
 Lawrence
 Louis Christian Lazo
 Yiming Le
 ByungJin Lee
 Michel Lefebvre
 Phillip Wesley Lemmons
 Marshall John Leng
 Kristi Leung
 Shangqian Li
 Ethan Robert Lilly
 Michael Linscome-Hatfield
 Lu Liu
 Yang Liu
 Karen Kar-Yee Lu
with distinction
 Matthew Kevin Lynch
 Robert John Macauley II
 Daniel John Maccarone
 Thomas John Magpiong
 Dane Thomas Mailhiot
 Ethan Victor Markovitz
 Stefano Marzano
 Lindsay Caitlin Mattson
with distinction
 Ana Laura Mazan
 Austin James McCormick
 Alexander Caldwell
 McDonald
 Michael McGirk
 Robert McManus
 Edward McNally
 Gemma Kassandra
 Mendoza
 Veronica E. Meyers
with distinction
 Sherman Ralsey Miller
 Benjamin Gannon Mingo
 Jennae Rose Monette
 Megan Jean Moran
 Stefan Alexander Morton
 Matthew Richard
 Mullersman
 Michael Mullins
 Andrew Traverse Murdock
 Maria Gabriela Murillo
 Savannah Jane Murtha
 Adam Benjamin Nguyen
 Thanh Nguyen
 Alex Samson Nunnamaker
 Cameron Oliver O'Leary
 John R. O'Neil
 Kaitlyn Neptune-Benton
 Matt William Nippes
 Michael Patrick O'Shea
 La'akea Malina Ma
 Kauano'e Pakele and Cabot
 Shelby Wilson Palmer
 Eric Andreas Pande
 William Jacques Pannetier
 Marcos Alberto Peña
 Nicole Taylor Pesuti
 Stanley Mansour Peterson
 Kimberly Katherine Petrick
with distinction
 Samuel Phillips
 John Anthony Prager
 Zhen Qian
 Yi Qu
 Jack Christian Ramirez
 Guiliana Marie Ranallo
 Gregory Austin Randolph
 Matthew Christopher Reiser
 Colton Richard
 Andrew Richtsmeier
 Parker Hayden Robbins
 Patrick J. Rodriguez
with distinction
summa cum laude
 Adam Ehrich Ross
 Daniel James Rosson
with distinction
 Alexandra Rozgonyi
 Alexander Bloch Rugoff
 Ashleigh Sall
 Matthew Mogan Sanders
 Natalie Sawicki
 Jade Iman Scales
 Tanner Madison Arch Schenck
 James Richard Schuetz
 Grant Watson Schultz
 Benjamin Searchinger
with distinction
cum laude
 Alexander Davis Sedillo
 Nicholas Andrew Shaffer
with distinction
magna cum laude
 Michael Edward Shain
 Alexander James Shogan
 Joseph Andrew Shrawder
 Garrett Smith
 George Murray Smith IV
 Hallie Inga Smith
 James Edward Sober III
 David Marshall Solomon
 Heather Renee Spencer
 Roland Mikael Spjeldet
 Kathryn Ann Sprague
summa cum laude
 Jonathon Royce Stevenson
 Natalie Larke Stinson
 Ian Stuart
 Peter Von Stumm
 Claudia Jolanta Tadla
 Arthur Taratuta
 Kimberly Tarde
 Nicholas T. Taylor
 David Robert Tegano
 Chase D Thacker
 Grant Aulik Thompson
 Nathanael Robert Thompson
 Owen Jones Toland
with distinction
 Silvestre Enrique Tovar D'Agostino
 Nathan E. Treece
 Steven Michael Trimboli
 Trevor LaVerne Trinkino
 Samantha Tara Tucker
 Gregory Washburn Tuthill
 Trevor Vance Ullman
 Axel S. Urie
magna cum laude
 Anna Corrine Vallad
magna cum laude
 Haley van Raaphorst
 Jonathan Grant Villaume
 Nikita Voskoboynik
 Vivian Thanh-Hien Vu
 Naomi Waibel
 Trevor Wakeman
 Regan Anthony Walton
 Zhongpei Wang
 Aaron James Whitaker
with distinction
 Richard James White
 Matthew Wholey
 Jeremy Nicholas Wicker
 Michael Wilcox
 Ryan Scott Wilding
 Alec John Wilkie
 Jamison Boyd Wilson
 Matthew Colin Wilson
 Kyle Andrew Winje
 Jacob Andrew Winn
 Christopher David
 Wittenberg
 Adrian Wong
 Alexander Dougherty Worth
 Christopher William Worthington
 Chenzhu Xu
 Christopher P. Yago
 David Brian Yoshida
 Yuan Yuan
 Cyril Zhang
 Xi Zhang
 Wannu Zheng
 Ran Zhuo
 Rongjiao Zong ■

GRADUATE NEWS

Graduate Student Placement

2013

Luis Castro Penarrieta: Assistant Professor at Universidad Privada Boliviana in La Paz, Bolivia.

Jieun Chang: Visiting Assistant Professor at Southwestern Oklahoma State University in Weatherford, Oklahoma.

Subsequent: Assistant Professor at Southwestern Oklahoma State University

Randall Hiller: Assistant Professor at Fairfield University in Fairfield, Connecticut.

Catherine Massey: Economist at the US Census Bureau in Suitland, Maryland.

Christopher McMahan: Associate at PricewaterhouseCoopers in Miami, Florida.

Soojae Moon: Visiting Assistant Professor, University of Colorado, Denver, Colorado.

Kyungsoo Oh: Research Fellow at Korea Energy Economics Institute in Uiwang, South Korea.

Wooyoung Park: Research Fellow at Korea Energy Economics Institute in Uiwang, South Korea.

Molly Sandt Podolefsky: Managing Consultant, Energy Practice, at Navigant Consulting in Boulder, Colorado

Song Bo Sim: Research Fellow at Korean Information Society Development Institute in Gwacheon, South Korea.

Kenton White: Corporate Economist at NIKE in Beaverton, Oregon.

2014

Yongho Choi: Research Fellow at Korea Rural Economic Institute in Seoul, South Korea.

Priti Kalsi: Assistant Professor at California State University Chico in Chico, California.

Jongheuk Kim: Research Fellow at Financial Supervisory Service in Seoul, South Korea.

Ross Knippenberg: Economic Analyst at the American Veterinary Medical Association in Schaumburg, Illinois.

Yibei Liu: Assistant Professor at Yale NUS College in Singapore.

Sheena Murray: Assistant Professor at Curry College in Milton, Massachusetts.

Yuchen Shao: Assistant Professor at Nanjing University in Nanjing, China.

Steven Smith: Postdoctoral Fellow in Economics and Environmental Studies at Haverford College in Haverford, Pennsylvania.

Zachary Ward: Lecturer in Economics at the Australian National University in Canberra, Australia

Un Jung Whang: Research Fellow at Korea Institute for International Economic Policy in Seoul, South Korea.

2015

Yucheng Ding: Assistant Professor at Wuhan University in Wuhan, China.

Dustin Frye: Assistant Professor at Vassar College in Poughkeepsie, New York.

Xin Geng: Associate Research Fellow at the International Food Policy Research Institute in Washington DC.

Gisella Kagy: Assistant Professor at Vassar College in Poughkeepsie, New York.

Edward Kosack: Assistant Professor at Xavier University in Cincinnati, Ohio.

Timothy Larsen: Senior Lecturer at Vanderbilt University in Nashville, Tennessee.

Na Kyeong Lee: Assistant Professor at Hanyang University in Seoul, South Korea.

Jose Ivan Rodriguez Sanchez: Research Associate Economist at the University of Texas in El Paso, Texas.

Paulo Saraiva: Consultant at EconOne in Berkeley, California.

Austin Smith: Assistant Professor at Miami University of Ohio in Oxford, Ohio.

Weisi Xie: Assistant Professor at Jiao Tong University in Shanghai, China. ■

UNDERGRADUATE NEWS

Phi Beta Kappa

Congratulations to Economics majors who were candidates for Phi Beta Kappa, the nation's oldest and best known academic honorary:

Fall 2012

Evin Berg
Ethan Brown
Hayley Davis
Morgan Flynn
Kyle Huelsman
Pawel Janas
Alexander
Lauderbaugh
Henry Laurion
Zishen Li
Zachariah Milby
Dustin Slagle
Willy Stewart
Ryan Streit

Thomas Walton
Cheng Wu
Michael Zoppa

Spring 2013

Kelly Brown
Kevin Dageforde
Matthew Elmer
William Hauptman
Nicholas Lind
Tatyana Malinina
Melissa Pohutsky
Mark Velemirovich
Xiaoxiao Wang
Jin Zhang

Fall 2013

Lauren Beegle
Kevin Bashor
Monica Glick
Ian Langer
Paige Leuschner
Natasha Kosik
Jeff McMillan

Spring 2014

Christopher Anderson
Gina Armijo
Phillip Lemmons
Joshua Catalano
Natasha Kosik
Samantha Lee

Patrick Rodriguez
Dana Schnee
Jessica Yanker

Fall 2014

Brandon James Calano
Molly Graber
Robert Gordon Ericson
Jie He
Veronica E. Meyers
Harry Sherman
Pascarella
Kimberly Katherine
Petrick
Floyd Joseph Pierce
Nicholas Andrew Shaffer

Grant Aulik Thompson
Patrick Tyler Toman

Spring 2015

Beckett Butterfield
Alexandra Eagle
Darius Ebrahimi
Harry Green
Jake Jeronimus
Shu Lee
Ganghua Mei
Laura Meyer
Eli Mogel
Galen Moore
David Nguyen
Varoom Theplertboon ■

Francisca Antman published “Spousal Employment and Intra-Household Bargaining Power,” *Applied Economics Letters*, 21(8): 560-63, 2014; “Incentives to Identify: Racial Identity in the Age of Affirmative Action,” (with Brian Duncan), *Review of Economics and Statistics*, 97(3): 710-13, July 2015; and “Gender Discrimination in the Allocation of Migrant Household Resources,” *Journal of Population Economics*, 28(3): 565-92, July 2015. In 2013 she received the University of Colorado Population Center Small Grant (\$2,500): “Incentives to Identify: Racial Identification in the Age of Affirmative Action.” She also received in 2013 the Implementation of Multicultural Perspectives and Approaches in Research and Teaching (IMPART) Award (\$2,000): “Incentives to Identify: Ethnic Identification in the Age of Affirmative Action.” In 2012 she was appointed to the American Economic Association (AEA) Committee on the Status of Minority Groups in the Economics Profession (CSMGEP). Her presentations in 2015 include: National Bureau of Economic Research Summer Institute, Development of the American Economy; Society of Labor Economists/European Association of Labor Economists Meeting, Montreal; University of California Santa Barbara, Broom Center for Demography Workshop; The Ohio State University, Department of Economics; Case Western Reserve University, Department of Economics; and Pacific Conference for Development Economics (PACDEV at UCSD). Her 2013 presentations include: Tufts University, Fletcher School, Medford, MA; Northeast Universities Development Consortium (NEUDC) Conference at Harvard University; University of Arizona, Department of Economics, Tucson, AZ; Arizona State University, Center for Population Research, Tempe, AZ; University of New Mexico, Department of Economics, Albuquerque, NM; Western Economic Association International Meeting, Seattle, WA; 12th IZA/SOLE Transatlantic Meeting of Labor Economists, Germany; University of Connecticut, Department of Economics, Storrs, CT; Society of Labor Economists Annual Meeting, Boston, MA; Emory University, Department of Economics, Atlanta, GA; Federal Reserve Bank of Atlanta, At-

lanta, GA; and Population Association of America Annual Meeting, New Orleans, LA (2 presentations). She also presented in 2014: the International Conference on Aging in the Americas, Boulder, Colorado; and the Western Economic Association International Meeting in Denver. She was also a 2014 Organizer of CSMGEP Dissertation Session, 2015 AEA Annual Meeting; Chair, ASHE/CSMGEP/NEA Joint Committee to select articles for the American Economic Review 2015 Papers & Proceedings; a 2015 CU Boulder representative to the Undergraduate Women in Economics (UWE) Challenge; and a 2014-15 Organizer and Chair, by invitation, for 2015 Population Association of America session on “Migration and Families” and session on “Migration and Inter-marriage.”

Oleg Baranov published “Market Design and the Evolution of the Combinatorial Clock Auction,” (with Lawrence Ausubel), *American Economic Review: Papers & Proceedings*, 104(5): 446-451, 2014.

Tania Barham published “Staying for Benefits? The Effect of a Health and Family Planning Program on Out-Migration Patterns in Bangladesh,” (with Randall Kuhn), *Journal of Human Resources*, 49(4), 982-1013, 2014; “Living Longer: The Effect of the Mexican Conditional Cash Transfer Program on Elderly Mortality,” (with Jacob Rowberry), *Journal of Development Economics*, 105 (November 2013) 226-236; “Boys’ Cognitive Skill Formation and Physical Growth: Long-term Experimental Evidence on Critical Ages and Early Childhood Interventions,” (with Karen Macours and John Maluccio), *American Economic Review: Papers and Proceedings*, 103(3), 467-71, 2013; and “Development Effects of Electrification: Evidence from the Topographic Placement of Hydropower Plants in Brazil,” (with Molly Lipscomb and Mushfiq Mobarak), *American Economic Journal: Applied Economics*, 5(2), 200-231, 2013.

Martin Boileau was promoted to full professor and “Corporate Cash Holdings and Credit Line Usage,” (with Nathalie Moyen), was accepted for publication at the *International Economic Review*.

Chrystie Burr published “Discrete Time Dynamic Oligopolies with Adjustment Constraints,” (with L. Gardini, and F. Szidarovszky), *Journal of Dynamics and Games* 2: 65-87, 2015; and “Corruption and Socially Optimal Entry,” (with Amir, R.), *Journal of Public Economics*, 123: 30-41, 2015. She also had a data grant, CoreLogic Academic Research Council (CLARC) in September 2014.

Brian Cadena published “Can Self-Control Explain Avoiding Free Money? Evidence from Interest-Free Student Loans,” (with Ben Keys), *Review of Economics and Statistics* 95(4), October 2013; “Native Competition and Low-Skilled Immigrant Inflows,” *The Journal of Human Resources*, 48(4) pp. 910-944, Fall 2013; “Recent Immigrants as Labor Market Arbitrageurs: Evidence from the Minimum Wage,” *Journal of Urban Economics* 80, pp. 1-12, March 2014; “Immigrants Equilibrate Local Labor Markets: Evidence from the Great Recession,” (with Brian K. Kovak) forthcoming January 2016 in *American Economic Journal: Applied Economics*; “Human Capital and the Lifetime Costs of Impatience,” (with Ben Keys), *American Economic Journal: Economic Policy*, 7(3), pp. 126-153, August 2015; and “The Labor Market Integration and Impacts of US Immigrants,” (with Brian Duncan and Steven J. Trejo), in *Handbook of the Economics of International Migration*, Barry R. Chiswick and Paul W. Miller eds., Vol. 1B, pp. 1197-1259, Elsevier, 2015. He gave seminars at the University of Western Ontario, the NBER, the Federal Reserve Board, and the Institute for Research on Poverty at the University of Wisconsin. He made presentations at the University of Michigan’s Ford School of Public Policy, a meeting of the National Academy of Sciences panel on the Economic and Fiscal Consequences of Immigration, the University of Pittsburgh in December 2014, the CEMIR and UC Davis Workshop on Advances in Migration Research in May 2015, and the WEAI Annual Conference in June 2015. He also served as Research Group Co-Leader for Immigration Policy as part of a grant initiative on Poverty, Inequality, and Mobility among Hispanics for the Stanford University Center for

Poverty Research. His working paper, "Immigrants Equilibrate Local Labor Markets: Evidence from the Great Recession," (with Brian Kovak), funded by a grant from the Russell Sage Foundation, was released as an NBER working paper and received media coverage in several news outlets including: *The Washington Post*, *The Wall Street Journal*, *The Los Angeles Times*, *Slate*, and the *NBER Digest*. He has a new working paper "Investment over the Business Cycle: Insights from College Major Choice," (with Erica Blom and Ben Keys) that has been featured in multiple media outlets also including: *Wall Street Journal*, *MarketWatch*, *Chicago Tribune*, *Inside Higher Ed*, *IZA Newsroom*, *Vox*, *Reuters*, and *Boulder Daily Camera*. He was appointed as Associate Editor at *Journal of Human Resources* and as a Research Fellow at IZA.

Ann Carlos took over as the co-editor of the *Journal of Economic History* on July 1, 2014 and published "Share Portfolios and Risk Management in the Age of Financial Capitalism: London 1690-1730," (with Erin Fletcher and Larry Neal), *Economic History Review*, vol. 68, no. 2, May 2015, pp. 574-599. She also presented seminars at California Institute of Technology and Fudan University.

Phil Graves published "The Educational Choice Anomaly for Principles Students: Using Ordinary Supply and Demand Rather than Indifference Curves," *The Journal of Economic Education*, Vol. 42, no. 3, (July 2011) pp. 310-314 (with R. Sexton, L. Calimeris); "An Implementable Institutional Reform that Transfers Control of Governmental Spending Levels from Politicians to Voters," *The IUP Journal of Governance and Public Policy* Vol. VI, no. 4, (December 2011) 14 pp.; "Linking Regional Science and Urban Economics: Long-Run Interactions Among Preferences for Amenities and Public Goods," *Modern Economy*, Vol. 3, no. 3 (May 2012), pp. 253-262; "Benefit-Cost Analysis of Environmental Projects: A Plethora of Biases Understating Net Benefits," *Journal of Benefit-Cost Analysis* manuscript 1041, August 2012; "Productive Complements: Too Often Neglected in the Principles Course?" (with G. Galles, R.

Sexton), *Journal of Economics and Finance Education*, Vol. 13, no. 2 (Winter 2014) pp. 81-89; "A Note on Monitoring Costs and Voter Fraud," (with G. Galles, R. Sexton), *The American Economist*, Vol. LIX, no. 2 (Fall, 2014); "Spatial Equilibrium in the Labor Market," Chapter 2, Volume I of the *Handbook of Regional Science*, Peter Nijkamp and Manfred Fisher (eds), section editors Alessandra Faggian and Mark Partridge, Springer, New York, pp. 17-33, 2014; "The Hedonic Method of Valuing Environmental Policies and Quality," Chapter 50, Volume VI of the *Handbook of Regional Science*, Peter Nijkamp and Manfred Fisher (eds), section editor, Amit Batabyal, Springer, New York, pp. 993-1008, 2014; and a new environmental economics textbook: *Environmental Economics: An Integrated Approach*. Boca Raton/London/New York: CRC Press, Taylor & Francis Group, 2014, 264 pp.

Chuck Howe and **Robert McNown** have completed a water demand forecasting study for the Mecca Region of Saudi Arabia. The unique issue in this study is the strong seasonal pattern of water use occasioned by the great Hajj pilgrimage that brings millions of pilgrims to Mecca and other holy places during the last month of the Islamic calendar year. That month shifts annually relative to the Georgian calendar, since it is based on the lunar calendar. As the month of the Hajj changes, so do the climatic conditions: very high temperatures during the summer period increase water demand per capita but reduce the number of pilgrims. Thus, to estimate demand and to make forecasts, it was necessary to project the numbers of pilgrims and future climate conditions. Forecasts of these variables were made out to the year 2030. Two articles based on the project are under journal review. The study was sponsored by the Unit for Ain Zubaida Rehabilitation & Groundwater Research of the King Abdulaziz University, in Jeddah, Kingdom of Saudi Arabia. Professor Omar Aburizaiza, Director of the Research Unit is the Co-PI.

Frank Hsiao and Mei-Chu Hsiao have been working on a book, *Economic Development of Taiwan—Early Experi-*

ences and the Pacific Trade Triangle. It is mostly a collection of papers they have published between 1989 and 2002. The book is in Volume 9 of the series of "Advanced Research in Asian Economic Studies" published by World Scientific Publishing (and the Imperial College Press) at the end of 2014. They are also working on the sequel of the book, *Economic Analysis of East and Southeast Asia—Trade, GDP and FDI*. Frank is continuing serving as an Associate Editor of the *Journal of Asian Economics* published by the American Committee on Asian Economic Studies (ACAES).

Jonathan Hughes published "Unintended Consequences of Transportation Carbon Policies," (with Stephen Holland, Christopher Knittel and Nathan Parker), *Energy Journal*, 36(3), July 2015; "Some Inconvenient Truths About Climate Change Policy: The Distributional Impacts of Transportation Policies," (with Stephen Holland), Christopher Knittel and Nathan Parker, forthcoming at *The Review of Economics and Statistics*; "Carpooling and Driver Responses to Fuel Price Changes: Evidence from Traffic Flows in Los Angeles," (with Antonio Bento and Daniel Kaffine), *Journal of Urban Economics*, 77, September 2013; and "Getting Green with Solar Subsidies: Evidence from the California Solar Initiative," (with Molly Podolefsky), *Journal of the Association of Environmental and Resource Economists*, 2(2), June 2015. Professor Hughes, together with James Bushnell and Aaron Smith (UC Davis), received a small grant from the Alfred P. Sloan Foundation and the National Bureau of Economic Research to study energy transportation infrastructure.

Daniel Kaffine published "The Effects of Regulation in the Presence of Multiple Unpriced Externalities: Evidence from the Transportation Sector," (with Antonio Bento, Kevin Roth, and Matt Zaragoza-Watkins), in the *American Economic Journal: Economic Policy* 6(3):1-29, 2014; "Did California's handheld cell phone ban reduce accidents?" (with Nicholas Burger and Bob Yu), in *Transportation Research Part A* 66(1):162-172, 2014; "Can decentralized planning

really achieve first-best in the presence of environmental spillovers?" (with Harrison Fell), in the *Journal of Environmental Economics and Management* 68(1): 46-53, 2014; "Scrap prices, waste and recycling policy" in *Land Economics* 90(1): 169-180, 2014; and "Community-based tradable permits for localized pollution," (with Peifang Yang), forthcoming in *Environmental and Resource Economics*, 2015. He presented a paper with Harrison Fell, "A one-two punch: Joint effects of natural gas abundance and renewables on coal-fired power plants," at the 4th Annual AERE Summer Conference in San Diego, June 3-5, 2015. He was appointed Associate Editor of *Resource and Energy Economics* in July 2015. He also recently received an NSF grant for "Good Neighbors: Legal, economic and natural science analyses of wind plant impacts and interactions," (with Julie Lundquist and K. K. Duvivier), \$248,673, 9/1/2014-8/31/2016.

Jane Lillydahl published "Assessing Economic Damages in Personal Injury and Wrongful Death Litigation: The State of Colorado," (with Gilbert Mathis), *The Journal of Forensic Economics*, Vol. 24, No. 2, Sept. 2013. The paper was also presented at the Southern Economic Association meetings in November 2012 in New Orleans.

Xiaodong Liu published "Endogenous Peer Effects: Local Aggregate or Local Average?" (with Eleonora Patacchini and Yves Zenou), *Journal of Economic Behavior & Organization* 103, 39-59, 2014; "Identification and Efficient Estimation of Simultaneous Equations Network Models," *Journal of Business & Economic Statistics*, forthcoming; and "Endogenous Network Production Functions with Selectivity," (with William Horrace Eleonora Patacchini), *Journal of Econometrics*, forthcoming.

James Markusen published "Expansion of Trade at the Extensive Margin: A General Gains-from-Trade Result and Illustrative Examples," *Journal of International Economics* 88, 262-270, 2013; "Foreign Firms, Domestic Wages," (with Malchow-Møller, Nikolaj and Bertel Schjerning), *Scandinavian Journal of Economics* 115,

292-325, 2013; "Putting Per-Capita Income back into Trade Theory," *Journal of International Economics* 90, 255-265; "Outsourcing versus Vertical Integration: Ethier-Markusen meets the Property-Rights Approach," (with Yiqing Xie) *International Journal of Economic Theory* 10, 75-90, 2014; and "International Trade Puzzles: a Solution Linking Production and Preferences," (with Caron, Justin and Thibault Fally), *Quarterly Journal of Economics*, August 2014.

Carlos Martins-Filho published "An asymptotic characterization of finite degree U-statistics with sample size dependent kernels: applications to nonparametric estimators and test statistics," (with F. Yao) *Communications in Statistics-Theory and Methods* 44, 3251-3265, 2015; "High order conditional quantile estimation based on nonparametric models of regression," (with F. Yao and M. Torero) *Econometric Reviews* 34, 906-957, 2015; "Semiparametric stochastic frontier estimation via profile likelihood," (with F. Yao) *Econometric Reviews* 34, 413-451, 2015; and "On nonparametric estimation: with a focus on agriculture," (with R. Fare, S. Grosskopf and C. Pasurka) in *Annual Review of Resource Economics* 5, 93-110, 2013. He presented "Consistency and asymptotic normality for kernel based nonparametric prediction under heterogeneous measurement error" at the 32nd International Seminar on Stability Problems for Stochastic Models in Trondheim, Norway, June, 2014; "Nonparametric estimation of conditional value-at-risk and expected shortfall based on Extreme Value Theory" at the Australasian Meeting of the Econometric Society in Sydney, July, 2013; 9th International Symposium on Econometric Theory and Applications (SETA) in Seoul, July, 2013; Asian Meeting of the Econometric Society in Singapore, August, 2013. His invited research seminars were at Emory University (Economics), University of Wisconsin at Milwaukee (Economics), University of Bonn (ZEF) and Kazakh National University (Mathematics).

Keith Maskus edited 3 books, *Intellectual Property Rights: Legal and Economic Challenges for Development* (Oxford: Oxford University Press), 2014, (with Mario

Cimoli, Giovanni Dosi, Ruth Okediji, Jerome Reichman, and Joseph Stiglitz); *Globalizing Information: the Economics of International Technology Trade*, *World Scientific Studies in International Economics*, Vol. 24 (Singapore: World Scientific Publishing), 2013; *Patent Challenges for Standard-Setting in the Global Economy: Lessons from Information and Communications Technology*, *Report of the Committee on Intellectual Property Management in Standard-Setting Processes*, Board on Science, Technology and Economic Policy, (Washington DC: National Research Council), 2013, with Stephen Merrill. He also published "Retailers as Agents and the Limits of Parallel Trade," (with Frank Staehler), *European Economic Review*, Vol. 70, 2014, 186-196; "China-Raw Materials: A Controversial Step toward Even-Handed Exploitation of Natural Resources," (with Marco Bronckers), *World Trade Review*, Vol. 12, No. 2, 2014, 393-408; "Labor Skills and Foreign Direct Investment in a Dynamic Economy: Estimating the Knowledge-Capital Model for Singapore," Gnanaraj Chellaraj and Aaditya Mattoo, *World Bank Policy Research Working Paper* no. 4950, *Review of Development Economics*, Vol. 17, No. 4, 2013, 627-643; "Doctoral Students and U.S. Immigration Policy," (with A. Mushfiq Mobarak, and Eric T. Stuen), *Science*, Vol. 342, 1, November 2013, 562-563; "The Economic Effects of Counterfeiting and Piracy: A Review," (with Carsten Fink, Keith E. Maskus and Yi Qian), *World Bank Research Observer*, forthcoming; and "Preferential Trade Agreements and Intellectual Property Rights: Unexplored Issues," *Journal of International Relations*, Vol. 13, No. 2, 2015, 95-110. In June 2013, Keith stepped down from his position as Associate Dean for Social Sciences and spent the academic year 2013-14 on sabbatical with stays in Adelaide, Australia (University of Adelaide) and Florence Italy (European University Institute). He was recently appointed to be a specialized co-editor for the journal *Economic Inquiry* and was appointed Editor in Chief of *World Scientific Series in International Economic Studies*. His presentations include: Workshop on Global Patent Systems at Harvard Kennedy School of

Government in January 2015; University of Economics Annual Conference (Keynote Speaker) in Bratislava, Slovakia in December 2014; the APJAE Symposium on Economic Development in Asia (Keynote Speaker) in Kitakyushu, Japan in September 2014; and CESifo Institute, Conference on the Global Economy (Keynote Speaker), Munich, May 2014.

On his 2013-14 leave and sabbatical, **Robert McNown** and his wife, Lauri McNown of Political Science, taught on Semester at Sea during the fall 2013 term. One highlight in Africa was the chance to visit with CU Economics PhD Said Boakye, who has been working for the Ministry of Finance in Ghana. For the spring 2014 term Robert and Lauri both received Fulbright Specialist Grants to support collaborations and faculty workshops in Penang, Malaysia. Robert was hosted by Soo Khoon Goh, who had earned her Masters degree in Economics at CU and also visited our department in 2012 as a Fulbright Scholar. In the workshops Robert presented simulation

methods for econometric research to faculty of universities across Malaysia. These methodologies became the basis for still ongoing collaborative research projects with colleagues at his host institution, University Sains (Science) Malaysia. The projects in Malaysia were followed by another workshop on time series econometrics and simulation models at the Bank of Korea in Seoul. Robert and Lauri's time in Asia ended with an extraordinary visit with the family of Sasiwimon Warunsiri Paweenawat, another recent CU Economics PhD. Sasi is on the faculty at the University of the Thai Chamber of Commerce in Bangkok, and she and Robert continue to collaborate on research on Thai labor market issues.

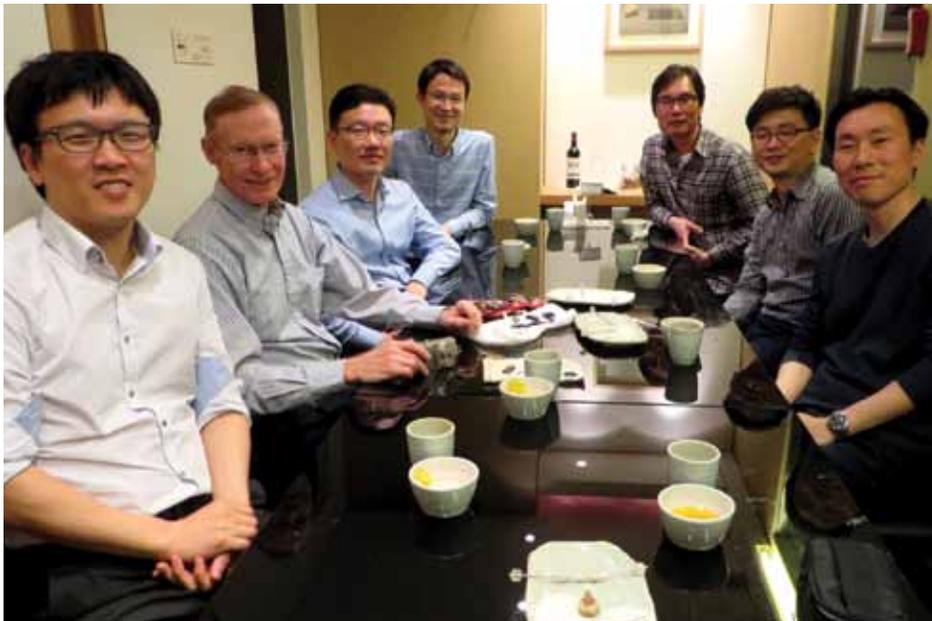
Scott Savage published "Network Unbundling and Retail Prices: Evidence from the Telecommunications Act of 1996," *Journal of Law and Economics* 56(2), 2013; "Market Restructuring and the Efficiency of Electricity Generation: Plant Level Evidence From the United States 1995 to 2006," *The Energy Journal*,

34(1), 2013; "Market Structure and Media Diversity," *Economic Inquiry*, 53(2), 2015, 872-888; and "Instructor Attire and Student Performance: Evidence from an Undergraduate Industrial Organization Experiment," (with J. Dean Craig), *International Review of Economics Education*, 17, 2014, 55-65. He received a Google Research Award, 2013/14 for "Measuring Broadband Price Indices" and a Fiber-to-the-Home Council Americas Research Award, 2014/15 for "Quantifying the Impact of Fiber Deployment on Residential House Prices."

Carol Shiue published "Endogenous Formation of Free Trade Agreements: Evidence from the Zollverein's Impact on Market Integration," (joint with **Wolfgang Keller**) in the *The Journal of Economic History*, December 2014.

Bud Udis addressed a session at the Western Economic Association International meetings on July 1, 2013 in Seattle, Washington. The title was "The Fifth-Generation Quandary and International Defense Acquisition Management," (with Raymond Franck, Ira Lewis, and Holden Simmonds). His sole authored section dealt with the development of the C-17 cargo aircraft with the understanding that it will be published in the Naval Postgraduate School's Acquisition Research series. He also presented part of a paper, coauthored with Raymond Franck, at two meetings, one at the Naval Postgraduate School's Acquisition Research Symposium held in Monterey on May 15, 2014 and the other at the Western Economic Association International's annual meetings in Denver, Colorado on July 1, 2014. The paper was titled "Quarrelsome Committees in US Defense Acquisition: the KC-X Case," a case study of the usefulness of Principal/Agent analysis in understanding defense procurement and was published online, *Defence and Peace Economics*, August 2015, Taylor & Francis Online, www.tandfonline.com.

Jeffrey Zax presented "Housing allocations, imputed rents and inequality in urban China" at the Urban Economics Association European Meeting 2014 in St. Petersburg, Russia. In April 2014 he



Robert is pictured with former CU graduate students during a reunion dinner in Seoul, South Korea. Pictured from left to right: Youngho Kang, Research Fellow at Samsung Economic Research Institute in Seoul, South Korea; Robert McNown; Namsuk Choi, Research Fellow at Korea Economic Research Institute in Seoul, South Korea; Song Bo Sim, Research Fellow at Korean Information Society Development Institute in Gwacheon, South Korea; Seoung Chung, Research Fellow at Ulsan Development Institute in Ulsan, South Korea; Wooyoung Park, Research Fellow at Korea Energy Economics Institute in Uiwang, South Korea; Young Moo Cho, Research Fellow at LG Economic Research Institute in Seoul, South Korea.

testified as an expert witness in federal court on behalf of the State of Colorado defending the Colorado State law which prevents the sale of large-capacity magazines for firearms. The decision, issued in June, upheld the law unreservedly. In June 2015 Jeffrey Zax presented “Provincial valuations of human capital in urban China, inter-regional inequality and the implicit value of a Guangdong hukou” at the 4th International Workshop on Regional, Urban, and Spatial Economics in China, Tsinghua University, Beijing, China, the Conference on Deepening

Economic Reforms, National School of Development, Peking University, Beijing, China, the Chinese Economists Society 2015 Annual Conference, Chongqing University, Chongqing, China, the 2015 Henan Symposium on Development and Institutional Economics, Henan University, Kaifeng, China, the Conference on Urban Development in China, Xi’an Jiaotong—Liverpool University, Suzhou, China, and the 2nd Biennial Conference of China Development Studies, Shanghai Jiaotong University, Shanghai, China.

Shuang Zhang presented at the Harvard China Economy Seminar, NBER Conference on the Economics of Environmental Protection in China, AEA Annual Meeting (Philadelphia), NEUDC (Harvard), PacDev (UCLA), Stanford Asia Health Policy Seminar, Barcelona GSE Summer Forum: Workshop “Children’s Health, Well-being, and Human Capital” and received the Chiang Ching-Kuo Foundation Junior Scholar Grant, 2014. ■

Department of Economics Awards

2012-13

Stanford Calderwood Faculty Teaching Award: Robert McNown

Stanford Calderwood Student Teaching Award:
Zachary Alexander Ward

Graduate Award for Public Policy Research: Priti Kalsi

Reuben A. Zubrow Fellowship in Economics: Dustin Dale Frye & Edward Lawrence Kosack

Leslie Whittington Endowed Fellowship in Economics:
Gisella Anne Kagy

Leslie Whittington Memorial Fellowship in Economics:
Xin Wang

Yordon Prize in Microeconomics:
Nan Xu

Prize in Macroeconomics:
Tianxiao Zheng

Prize in Econometrics:
Xin Wang & Nan Xu

Richard C. Meckley Graduate Fellowship: Steven Michael Smith

Allyn O. Lockner Award: Xavier Gitiaux

Val B. and Helen W. Fischer Scholarship for Academic Superiority in the Social Sciences Anthropology: John Michael Thomas Fitch
Economics: Kevin Scott Dageforde
Political Science: Mitch Whitus
Sociology: Megan Morris

2013-14

Stanford Calderwood Faculty Teaching Award: Carlos Martins-Filho

Stanford Calderwood Student Teaching Award: Dustin Frye

Graduate Award for Public Policy Research: Gisella Kagy

Reuben A. Zubrow Fellowship in Economics: Austin Smith & Zachary Ward

Leslie Whittington Endowed Fellowship in Economics:
Rebecca Jennings

Leslie Whittington Memorial Fellowship in Economics:
Patrick Turner

Yordon Prize in Microeconomics:
Patrick Turner

Prize in Macroeconomics:
Patrick Turner

Prize in Econometrics:
Patrick Turner & Amit Patel

Sieglinde Talbott Haller Endowed Economics Scholarship Fund:
Harry Pascarella

Val B. and Helen W. Fischer Scholarship for Academic Superiority in the Social Sciences: Anthropology: Megan Chelsea Barrie
Economics: William Hauptman
Political Science: Kelly Katz
Sociology: Casey Roark

2014-15

Stanford Calderwood Faculty Teaching Award: Daniel Kaffine

Stanford Calderwood Student Teaching Award: Alexander Cauley

Graduate Award for Public Policy Research: Gregory Madonia

Reuben A. Zubrow Fellowship in Economics: Patrick Gourley & Joseph Vavrus

Leslie Whittington Endowed Fellowship in Economics:
Kristina Sargent

Leslie Whittington Memorial Fellowship in Economics and Prize in Econometrics:
Javier Andres Santiago

Yordon Prize in Microeconomics:
Doyoung Park

Prize in Macroeconomics:
Samara Mendez

Richard C. Meckley Graduate Fellowship: Patrick Turner

Morris E. Garnsey Fellowship: Nan Xu

Eric D. Bovet Endowed Fellowship: Tianxiao Zheng

Val B. and Helen W. Fischer Scholarship for Academic Superiority in the Social Sciences Anthropology: Putri Lydwina Martosudarmo
Economics: Patrick Rodriguez
Political Science: Andrew Ormsby
Sociology: Wisam Alshaibi

Ahmed S. EL-Sharif (MA '71) is a professor teaching economics at the University of Benghazi in Libya and has written several papers in economics and economic policy with application on Libya.

Merilyn Rovira (BA '81) is a Senior Vice President for Capital Initiatives and Strategy at The Community Development Trust, a mission-driven real estate investment trust, based in New York City.

Darius Hatami (BA '85) is a Market and Financial Consultant for golf courses and resort communities and is currently the Managing Director at HVS Golf Services.

Kate Silz Carson (PhD '97) is a professor of economics at the US Air Force Academy and was awarded a residential Lab Fellowship at the Safra Center for Ethics at Harvard University. She spent her sabbatical year developing experimental and behavioral economics methods to study the causes of and solutions to institutional corruption.

Evan Galbraith (MA '04), after graduating with a BA and an MA in economics, his first position in transfer pricing was at Analysis Group, Inc., an economic consulting firm. He is currently a Senior Economist for the US Department of Treasury/IRS where his work involves valuations of tangible products, services, intangible assets, and business enterprises for international tax purposes. In July 2012 he was promoted to Senior Economist in the government's newly-formed Transfer Pricing Practice program.

Josh Susser (BA '02) is the Director, Corporate Development & Investments at ECMC Group, Inc., a national nonprofit organization based in the Twin Cities. He manages business development efforts for acquisitions, as well as, early stage and alternative investments. He is an MBA candidate in the "XP" (executive) Class of 2015 from Chicago Booth.

Jeff Young (BA '05) works for DeVry's Medical and Healthcare Talent Acquisition Group.

Joshua Zorsky (BA '07) is a Financial Industry Analyst at the Federal Reserve Bank of Dallas. He earned an Economics MA at Southern Methodist University in spring 2011 and a CFA Level 3 candidate.

Joel Gheen (BA '07) is a Managing Director at Core Capital Group, a boutique investment banking services firm headquartered in Colorado Springs. He runs institutional investment banking transactions. He completed an MBA at the University of Maryland's Smith School of Business in 2011 and published a book, *Crux Matters* in 2013.

Alexander F. Rek (BA '09) accepted the position of Assistant Vice President at American Street Capital, LLC, a real estate advisory firm headquartered in Chicago, IL. Previously, he was the Director of Marketing at Chicago Financial Services, a mortgage bank located in Chicago, IL. ■



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Half Dome at Sunrise. June 2011, photograph by Robert Castellino