University looks to make most of research and discovery[1]

The University of Colorado is engaged in an effort to enhance its research operations and infrastructure, as well as to diversify the entities it partners with, all with the intent of increasing revenue in one of CU's most significant funding streams.

"We have innovative research faculty and we not only need to facilitate their great work by having an efficient and effective research infrastructure, we also need to find new partners to augment what we already do for federal agencies," said CU President Bruce Benson. "I have every confidence that we can substantially increase the amount of research funding we attract."

Faculty across the CU system brought in some $815 million in research funding last year.

The university posted a request for proposal in the spring to invite firms to work to help CU develop strategic direction for the initiative. It was recently awarded to McKinsey and Company.

Benson stressed that the effort will recognize the unique research culture on each of CU's campuses and is not aimed at centralizing operations.

"While we can and will share best research practices across the CU system and continue cross-campus collaboration, we also are mindful that one size will not fit all," he said. "Solutions have to be campus based."

A team that included campus chancellors selected McKinsey, a global management consulting firm that works with businesses, governments and institutions, said Dr. Laura Simon, who is coordinating the effort. She most recently served in the Office of Corporate Alliances at the CU Anschutz Medical Campus.

"This project is a great way for CU to leverage its intellectual capital and create what is essentially an innovation machine," Simon said. "We are working to build a new business model within the university that takes advantage of the significant expertise among our research faculty and their work in areas important to the state and nation, including energy, health care, aerospace and medical devices, among others.

"Succeeding at this effort should help differentiate CU as the institution of choice for retaining and recruiting top faculty, and an academic partner of choice for research innovation with government and other research partners."

The effort will look for faculty to bring forward ideas that would be attractive in sectors where the university does not have a particularly large research funding footprint, such as industry and philanthropic organizations. It also aims to cut red tape and improve research processes.

Simon said one of the facets of the initiative is a series of Pathfinder Projects, efforts from each campus that will be used to glean perspective about the challenges inherent to CU's current research environment and provide insight into solutions that will lead to process improvement, she said. They will also help inform the university's comprehensive research vision.

Benson said the project may also allow CU to increase the return on its intellectual property. The overall focus on increasing revenue generation is driven in large measure by threats to federal and state funding, he said.

"Over the past several years we have worked to bring efficiency and effectiveness to all our operations, particularly those that generate revenue," Benson said. "This initiative is the latest step in that effort and perhaps one of the most important."

Five questions for Wendy Guild[2]

[3]
The sports and entertainment industry generated about $1.75 trillion globally in 2012, and as revenues continue to increase, the business model becomes more complex. Marketing, management and finance, in particular, demand more technical knowledge, skills and industry expertise from prospective employees than before. It's one of the reasons Wendy Guild launched the Sports and Entertainment Management program in 2007 at the University of Colorado Denver.

Guild graduated from MIT's Sloan School of Management with a Ph.D. in organization studies in 1999. She began her academic career at Emerson College, where she directed a graduate program, and it was here that she realized she enjoyed teaching as well as administrative duties. While at a conference in Steamboat Springs in 2002, she fell in love with a man who lived in Boulder and headed west. The two were later married and she began working at CU Denver's Business School.

It was another man in her life -- her father -- who influenced her career choice. "I grew up listening to his stories of his challenges managing people. I thought people were endlessly fascinating," she says. "Realizing that adults spend most of their waking hours at their jobs, and also recognizing that I might be able to make a living studying or consulting to people at work, I knew at an early age that I wanted to study life in business organizations."

For her dissertation, she focused on a ski resort and detailed how individuals' identities were instrumental in motivating employees to do their work. Other research has centered on the role of the producer as the "organizational glue" in the Australian film industry. Recently, she presented a paper at a conference on how sponsorships are sold inside sponsoring organizations with a focus on the argument and process behind spending large sums to sponsor events like the Olympics or putting an organizational name on a large venue.

1. How did the program get started and in what ways do students learn about sports and entertainment management through the program?

Six years ago I launched the Sports and Entertainment Management Graduate Specialization, and one and a half years ago we started offering the Sports Management Undergraduate Specialization. This followed a number of conversations with Dean Sueann Ambron about the exciting local industries that might require well-trained talent – industries that students might be excited to study. Dean Ambron helped open the doors to a number of local executives who were tremendously helpful and became part of my advisory council, steering the design of the program, and – to this day – playing a critical role in what we do and serving as speakers in our courses.

Many of our students love sports and/or entertainment. If you teach the business side of something they have a passion for, students are going to do the reading, they're going to be thinking about the subject, and thinking about the news of the industry differently. That's when you get their brains engaged. It has an impact because they'll go on to talk about what they have learned and remember what they have learned. Our class discussions are awesome. It's not like pulling teeth; it's herding cats. They do all the reading and come prepared. Even if they don't end up working in the industry, they learn important business principles in our courses. Jobs in the industry aren't always easy to find but 100 percent of our students who want internships have been able to find one in organizations such as Kroenke Sports and Entertainment, the Broncos, the U.S. Olympic Committee, AEG Live-Rocky Mountain and AEG HQ, and the Jimmy Fallon show.

The program's most innovative offering is our London Calling study abroad course each year during the Maymester term. I just returned from leading our fifth cohort of students to London for two weeks of site visits and lectures from industry leaders from organizations such as Chelsea Football Club, Wimbledon, Twickenham/Rugby Football Union, BT's sponsorship of the Olympics, Lord's Cricket Ground, the O2 Arena, the BBC, and the UK Department for Culture, Media and Sport. It is a bit like the Amazing Race as we dash around London to these iconic sites, often visiting two organizations a day. It is a fantastic learning experience for the students and I just love providing this opportunity for them. It's easier to assess the business side of an organization when they're not fans and aren't caught up in what the coach is doing or a recent trade.

2. We've been reminded locally that "sports is a business" with the recent firing of Denver Nuggets coach George Karl, the search for a more "business-minded" athletic director at CU-Boulder as well as changes at

other universities and sports organizations. Sometimes the reason cited is that the team hasn't won a championship. Is there too much emphasis on the ever-elusive trophy? Is the push for more profit ruining the "game" or the experience for fans?

Winning is terribly important for sports organizations; nowhere is it as obvious that success begets success. Depending on the sport, there is usually some kind of direct pay-out for a championship win (either because of a cash prize and/or media rights revenue sharing and ticket sales, merchandise sales, etc., from the championship event). Of course, the fans, the sponsors, the players, the team employees, etc. – everyone on the winning side is thrilled and gains emotionally, and often financially:
Sponsors affiliated with a property that is a winner are willing to pay more in the next round of contracts and new sponsors want to sign up. Fans want to support winners. Winning sells more premium seats and corporate purchases are higher, too. Business people want to entertain their clients with good experiences and a winning team provides a better experience than one that loses. The same is true of donors to universities – they want to support winners. And winning attracts new fans and donors. Players want to play for winning teams, and a team might even be able to pay them a bit less for this opportunity. Employees want to work for winning teams and want to work in organizations where people are happy. Employee retention is much higher in teams that win.
So when teams are winning, everyone is happier and revenues are higher. This means a team can pay for more talented players, coaches, etc., which then can lead to more success. Start losing a lot and the opposite trends are all visited on the losing team.

Is the push for profit ruining games? I think a way to take on this question is to look at what leagues are doing to ensure competitive parity and ensure that the distribution of the winnings is fair. Should large-market NFL teams – with a very large fan base -- get a much larger share of the NFL media rights deal? Now they don't. Why? Because the NFL wants to ensure that, within reason, competitive parity is maintained. On the other hand, MLB teams get to manage all of their own local media rights. You see a large-market team like the Yankees effectively owning the organization (regional sports networks, in this case, YES Network) that holds these rights and serves a huge market and they benefit financially. It is well-known that the Yankees do their best to stock their team with the best talent money can buy and they have the money to buy high-priced talent.

This leads to a second question: Do you have to pay top dollar for talent to win? Generally, the answer is "yes," but it is more complicated than one might think. It is more important in professional team sports to field a team that has talented players in all of the key positions who can work together well and can execute well-designed strategies that come from good coaching. But having a star player certainly helps by bringing attention, talent and leadership to a team. Attention allows the organization to bring in more revenues, which allows the team to pay for other key players. The benefit of top-level talent is obvious, but great talent has an impact on everyone else by raising the standard for all other players. And hopefully, your star is a team leader who helps bring out the best in everyone. The best strategy for a team is something along the lines of a star plus a "Moneyball"/farm team approach. Buying cheaper players with specific, overlooked talents for below-market cost, combined with growing your own talent in a farm team can get you a long way in sports.

That said, celebrity is huge, and the leadership that goes with it can sometimes catapult a team to the next level. The Broncos are a great example of this with the signing of Peyton Manning. He has brought the attention, talent and leadership that has translated to wins and higher revenues. Joe Ellis, the president of the Broncos spoke in my class last spring. He recounted what happened once the news broke of the signing of Peyton Manning: The Broncos received significantly increased interest in their premium seat sales – both club seats and suites – in addition to an uptick in sponsorship interest and greater merchandise sales.

So winning, stars, broad-based talent, teamwork, great strategy, etc., all matter, but as the saying goes, it is anyone's game on any given Sunday. Luck is, of course, an element.

3. But there's only one champion per sport per year so is it correct to say that organizations don't necessarily have to win the big prize to make money?

The interesting thing about sports is that very few teams make money. The Congressional-ordered Mitchell report in the '90s gave us an unprecedented peek into MLB team finances, and it is clear that many teams struggle to break

even. Their expenses are so high – player payroll and facilities being the primary expenses -- that many teams either barely break even or lose money. But before we rally crowdsourcing funding for our favorite team, it is important to keep in mind that the value of the franchises have increased exponentially over the years. This means teams have a cash-flow problem. They can only really tap into the increased value of the team when they sell it, so they have to find ways to increase revenues to keep up with grossly inflating expenses.

Sports teams have to deal with the fact that there's an arms race for pay for players – much like there is for CEO compensation. Teams want the best talent and the competition for this talent is driving the price through the stratosphere. At the same time, teams (in some leagues) are working with a salary cap so they are on a teeter-totter: They're chasing talent; they want to pay talent more but have to balance a salary cap. Or they are the Yankees and don't care about any of that and throw money at players. League rules matter as to whether or not the system supports both competitive parity and potential for profitability. If there's a salary cap, this can help curb the inflation in payroll costs, and this can allow teams to stay financially viable in terms of cash flow. But even with supportive league rules, it is not easy to make money in sports.

In the NBA, MLB and NHL, smaller-market teams aren't able to tap into the same kind of revenue base that big-market teams have. If the owners are running the organization as a business and don't want to write personal checks to cover annual shortfalls, then maybe they opt for mid-level talent and cross their fingers. Teams that follow this strategy can make money. However, it's tricky to get enough players together who will do well enough to draw people who will buy tickets. This means sales, marketing, customer relations and in-game entertainment teams are critical for keeping people coming and tuning in. The owners that go after top-priced talent with an eye toward winning a championship are playing a risky game. Only the top-performing, larger-market teams are likely to generate the revenues to cover the cost of this strategy.

4. How has the business of sports changed over the years?

The money is bigger and technology is changing and organizations need to know how to capitalize on that.

People used to just go to a game, but now the home experience is eclipsing the game experience. You have a massive television screen, your own food and you can sit in a Snuggie without anyone swearing obscenities next to your child or spilling beer on you. Media contracts are healthy and growing like crazy because a sports event is one of the few things on TV people like to consume at the exact moment it is happening. Advertising rates are high for live sports because advertisers can be sure that people are in front of their televisions during the broadcast.

So while media revenues are increasing, teams have to compete with the home experience and try to create an exciting environment at the game to keep people coming. A lot of the revenues come from suites, club seats and high-priced tickets, but these folks aren't the ones generating the buzz. The in-game experience is something organizations consciously manage by selling general admissions tickets at lower prices so the arena is filled with all the die-hard fans who are drinking the beer, screaming, making the thunder in the stadiums, and creating the atmosphere.

Sports organizations constantly ask for feedback to ensure people are getting the experience they want. One of the things they want is better technology – Wi-Fi, for instance. Stadiums are trying to update their technology for ticket buyers but also for the organizations so they can manage their own social network presence during the game and otherwise.

There's also the issue of making sure you provide the right type of entertainment for your demographic. Teams are giving ticket buyers an experience rather than pure sport. As such, they introduce entertainment into the game – music, dancing, mascots, games, giveaways, etc. – to create an exciting experience for fans. Teams are betting that the entertaining aspect of the experience will keep people coming back even when the team is losing. They need people to continue to buy tickets to keep the machine going. So this brings us back to the question of whether business is degrading the true sport. There's no final answer because people will consume what they think is interesting and they will consume it in a way that works for them. For instance, if old-school fans don't like the style of the television commentators during a sporting event, they might mute the TV and listen to radio coverage. Teams have to craft an experience to provide entertainment to different types of people and allow access in different ways. In the end, it's still a show.

5. What are some leisure activities that you enjoy?

Watching grand slam tennis -- the Wimbledon men's final was amazing (Sunday) -- enjoying wine and food, working it off at the Bar Method, skiing, swimming, biking, hiking, kayaking/canoeing, and traveling with my family. Walking Bella, our silver lab, and enjoying the company of my good friends and dancing with my son.

Regents re-elect Carrigan as chair, Sharkey as vice chair[4]

Carrigan

The University of Colorado Board of Regents on July 1 did in one round of voting what it failed to do in 14 rounds on June 21[6] – elect a chairman.

At a special meeting at 1800 Grant St., Michael Carrigan, D-Denver, was re-elected on a 4-3 vote, with two members of the nine-member board abstaining. Steve Bosley, R-Longmont, was the other nominee.

Sue Sharkey, R-Windsor, was re-elected vice chair on a 6-0 vote, with three abstentions.

"I'm excited to be re-elected chair and look forward to working with the entire board to make our great university even better," Carrigan said.

The board traditionally elects the chair by secret ballot. Regent Kyle Hybl, R-Colorado Springs, brought forward a motion for a roll-call vote for chair, but it was defeated 5-3. Regents Bosley and Glen Gallegos, R-Grand Junction, joined Hybl in voting for the motion. The chair did not vote.

Carrigan is the fourth consecutive regent to be re-elected to a second term, following Hybl, Bosley and Pat Hayes.

Tallman promoted to interim leader of Tech Transfer[7]

Tallman

Kate Tallman, senior director for CU's Technology Transfer Office (TTO) at the Boulder and Colorado Springs campuses, has been named Interim Associate Vice President of Technology Transfer for the university.

Patrick O'Rourke, vice president, university counsel and secretary to the Board of Regents, announced the promotion, which took effect July 1.

Tallman succeeds Tom Smerdon, who served in the same role since last August[9], when David Allen, associate vice president for Technology Transfer, left the university[10]. Smerdon is pursuing new opportunities in his home state of Texas.

"I am grateful to Tom for his service, especially over the last year as he has led the office," O'Rourke said. "During his tenure, Tom expanded the support for industry research initiatives, maintained key relationships, and streamlined agreement templates.

"I am also excited that Kate has agreed to lead the office."

Tallman has been with TTO since 2002. During her time there, invention, patent and licensing activity on the Boulder campus has more than doubled, enabled by constant innovation in business practices. She will continue to focus on enhancing the pipeline of high-value intellectual properties and help define the role of innovation management in collaborative development opportunities with industry.

Tallman previously was director of marketing and co-founder of Roving Planet, a venture-backed Colorado software company specializing in wireless LAN technology; it was later acquired by 3Com, then HP. She earned her MBA from CU-Boulder's Leeds College of Business, where she focused on marketing. She previously spent four years as a research analyst, performing market and financial analysis of health care companies.

The CU Technology Transfer Office[11] pursues, protects, packages and licenses to business the intellectual property generated from research at CU. The TTO provides assistance to faculty, staff and students, as well as to businesses looking to license or invest in CU technology.

Business School highlighted during Global Cities Initiative[12]

Former Chicago Mayor and JPMorgan Chase Senior Adviser Richard M. Daley, left, and Denver Mayor Michael B. Hancock.

The recent talk around Denver was about global economies, global commodities and global cities. Denver was the latest great city to host the JPMorgan Chase and the Brookings Institution's Global Cities Initiative[14].

It's only fitting that the two-day event aimed at helping metropolitan leaders around the world maintain and strengthen their position within the global economy would stage its invitation-only kick-off program at the J.P. Morgan Center for Commodities[15] at the University of Colorado Denver Business School.[16]

Business School Dean Sueann Ambron jumped at the chance to host the event with J.P. Morgan that brought university, government and business leaders together to discuss the city's future in 21st century global markets. The event included an afternoon program titled, "Denver: The Commodity City," followed by dinner and speakers on the same topic.

"We are almost never able to bring these sectors together to talk back and forth," Ambron said. "Commodities feed the world. They power the world. And they build the world. In this setting, we are able to highlight the importance of commodities education through our J.P. Morgan Center for Commodities."

The event also marked the official opening of an impressive traveling exhibit from the American Museum of Natural History in New York which will be featured in the lobby of the CU Denver Business School for the next six months. "Our Global Kitchen: Food, Nature, Culture"[17] includes large-scale educational panels, an interactive touch point and a unique vertical garden. JPMorgan Chase [18]helped develop the original exhibit in New York and was instrumental in bringing the re-creation to Denver.

Panel discussing "Denver: The Commodity City," moderated by CU Denver Business School Dean Sueann Ambron, far right.

Ambron noted that the Business School is used to doing things for the first time and added that to her knowledge this is the first time a business school has hosted a major museum exhibition. "Our Global Kitchen is a model for a different kind of education," she said. "The exhibit is a great educational opportunity for students, families and tourists where they can browse and learn. We would like to follow this exhibit with additional exhibits focused on energy or minerals."

After guests visited the global kitchen, Chancellor Don Elliman helped provide a welcome to the dinner and turned the focus back to the subject of the day, stressing the importance of providing an educated workforce for Denver's evolving leadership as a global commodity city. "From business to engineering to everything out at the Anschutz Medical Campus, we are proud that our campuses are providing career path degrees," Elliman said.

Denver Mayor Michael B. Hancock, an alumnus of the CU Denver School of Public Affairs, referred to the Business School's innovative commodities center in his dinner remarks, calling the public-private partnership between CU Denver and J.P. Morgan impressive. "This is the stuff greatness is made of," he said. "It reflects the ingenuity of the Business School and the leadership of Dean Ambron and Chancellor Elliman."

He described Denver as a city that yearns to play competitively on the global stage. "Cities that are connected globally will survive and thrive. It is necessary for us to look beyond our borders to find bold opportunities for generations we will never meet," Hancock said. "We will keep beating the drum for the Mile High City."

Mayor Hancock shared the microphone with former Chicago Mayor Richard M. Daley, a longtime friend and mentor, and currently a senior adviser with JPMorgan Chase. Hancock recalled their first meeting when he was still a Denver city councilman. "Anyone who's mad about me being mayor should blame Mayor Daley," Hancock said. "Meeting him in his office inspired me. He showed me how to serve for the right reasons."

The former Chicago mayor was the dinner's co-host along with Bruce J. Katz, vice president and founding director of the Brookings Metropolitan Policy Program. Daley is credited with helping to create the Global Cities Initiative, based on his own global vision and efforts for Chicago during his time in office.

The subject "Denver: The Commodity City" was explored from a variety of perspectives during the afternoon presentations. Colin Fenton, global head of commodities research with J.P. Morgan, spoke about the global context of the commodity city, detailing macro trends in commodities globally and their impact on metro Denver.

Roy J. Salamé, global head of commodities sales and structuring with J.P. Morgan, moderated a conversation with George H. Solich, president and CEO of Energy IV, LLC, which focused on the business perspective of the commodity city.

Discussing oil and natural gas, Solich told the audience that the energy sector "is in an absolute renaissance, there is a massive amount of opportunity." He added that Colorado is poised to be in the forefront. "We have an educated workforce, great engineering schools and a great quality of life," he said. "Denver has always been a great, independent, producing energy city."

Before breaking for dinner, Ambron moderated a diverse panel which discussed the talent it takes to power a commodity city. Antony M. Bahr is executive vice president of CoBank's Banking Services Group, Peter A. Dea is president and CEO of Cirque Resources LP, William Dowling is the Colorado Department of Labor and Employment's employment and training director and Ledy Garcia-Eckstein is the director of workforce development at the Denver Office of Economic Development.

Garcia-Eckstein pointed to the importance of the state and industry working in tandem to train and provide the workforce needed to compete successfully. Dowling added that Colorado is a leader in looking at the needs of the industry, at looking beyond just one company and creating an education pipeline. He called it, "growing our own workforce."

The Global Cities Initiative is a joint project of Brookings and JPMorgan Chase and the discussion and exchange of ideas would continue on day two of the forum with participation from a much larger audience at "Going Global: Boosting Metro Denver's Economic Future". With that in mind, Tom Clark, CEO of the Metro Denver Economic Development Corporation and executive vice president of the Denver Metro Chamber of Commerce, helped close out the evening and keep the anticipation high. "Each community and each generation has the opportunity to have an impact for the next 50 to 100 years," he said. "Brookings and JPMorgan Chase are here in Denver because they recognize that we think that way."

Prominent religious leader to discuss the separation of church and state[20]

Lynn

The importance of separating government and religion will be the focus of a 7 p.m. July 18 event at the University Center Theater.

Rev. Barry Lynn, executive director, Americans United for Separation of Church and State, will discuss what he perceives to be the predominant issues concerning religious liberty in his talk titled, “Three 800-Pound Gorillas are Attacking the Wall of Separation Between Church and State: And It Is No Joke.”

According to Jeff Scholes, assistant professor, Department of Philosophy, and the director of the Center for Religious Diversity and Public Life, the line between church and state is often blurred. He hopes the event will help clarify the subject and provide a safe environment to talk about the issue.

“The American public is very polarized on how they believe church and state should interact, and for many on either side of the debate, there is little room for compromise,” Scholes said. “We want to provide a space where people can talk about a pressing religious issue such as this and feel safe and respected.”

During the event, Lynn will give a 25-minute presentation, which will be followed by an audience-led question-and-answer session.

The event is free and open to the public, but tickets are required as seating is limited. The UCCS Department of Public Safety will provide complementary parking for the event in Lot 3. For tickets, please visit revbarrylynn-auco.eventbright.com.

For additional assistance or information, please contact Renee Ten Eyck, chairwome(a)n, Americans United-Colorado, at 719-357-5474 or renee.establish_au_co@q.com[22].

The event is sponsored by the UCCS Center for Religious Diversity and Public Life, and the Colorado Chapter of Americans United.

Americans United is a religious liberty watchdog group based in Washington, D.C. Founded in 1947, the organization educates Americans about the importance of church-state separation in safeguarding religious freedom.

Since 1992, the Lynn has served as executive director of Americans United for Separation of Church and State, a Washington, D.C.-based organization dedicated to the preservation of the Constitution’s religious liberty provisions. In addition to his work as a long-time activist and lawyer in the civil liberties field, Lynn is an ordained minister in the United Church of Christ, offering him a unique perspective on church-state issues.

For more information about the UCCS Center for Religious Diversity and Public Life, and future events, contact Jeff Scholes at jscholes@uccs.edu[23] or go to: www.uccs.edu/rdpl[24].

CU study shows how early Earth kept warm enough to support life[25]

An artist’s conception of Earth during the late Archean, 2.8 billion years ago. (Image courtesy of Charlie Meeks)

Solving the “faint young sun paradox” -- explaining how early Earth was warm and habitable for life beginning more than 3 billion years ago even though the sun was 20 percent dimmer than today -- may not be as difficult as believed, says a new University of Colorado Boulder study.

Two CU-Boulder researchers say all that may have been required to sustain liquid water and primitive life on Earth during the Archean eon 2.8 billion years ago were reasonable atmospheric carbon dioxide amounts believed to be present at the time and perhaps a dash of methane. The key to the solution was the use of sophisticated three-dimensional climate models that were run for thousands of hours on CU’s Janus supercomputer, rather than crude, one-dimensional models used by almost all scientists attempting to solve the paradox, said doctoral student Eric Wolf, lead study author.

“It’s really not that hard in a three-dimensional climate model to get average surface temperatures during the Archean that are in fact moderate,” said Wolf, a doctoral student in CU-Boulder’s atmospheric and oceanic sciences department. “Our models indicate the Archean climate may have been similar to our present climate, perhaps a little cooler. Even if Earth was sliding in and out of glacial periods back then, there still would have been a large amount of liquid water in equatorial regions, just like today.”

Evolutionary biologists believe life arose on Earth as simple cells roughly 3.5 billion years ago, about a billion years after the planet is thought to have formed. Scientists have speculated the first life may have evolved in shallow tide pools, freshwater ponds, freshwater or deep-sea hydrothermal vents, or even arrived on objects from space.

A cover article by Wolf and Toon on the topic appears in the July issue of Astrobiology. The study was funded by two NASA grants and by the National Science Foundation, which supports CU-Boulder’s Janus supercomputer used for the study.

Scientists have been trying to solve the faint young sun paradox since 1972, when Cornell University scientist Carl Sagan -- Toon’s doctoral adviser at the time -- and colleague George Mullen broached the subject. Since then there have been many studies using 1-D climate models to try to solve the faint young sun paradox -- with results ranging from a hot, tropical Earth to a “snowball Earth” with runaway glaciation -- none of which have conclusively resolved the problem.

“In our opinion, the one-dimensional models of early Earth created by scientists to solve this paradox are too simple -- they are essentially taking the early Earth and reducing it to a single column atmospheric profile,” Toon said. “One-dimensional models are simply too crude to give an accurate picture.”

Wolf and Toon used a general circulation model known as the Community Atmospheric Model version 3.0 developed by the National Center for Atmospheric Research in Boulder and which contains 3-D atmosphere, ocean, land, cloud and sea ice components. The two researchers also “tuned up” the model with a sophisticated radiative transfer component that allowed for the absorption, emission and scattering of solar energy and an accurate calculation of the greenhouse effect for the unusual atmosphere of early Earth, where there was no oxygen and no ozone, but lots of CO2 and possibly methane.

The simplest solution to the faint sun paradox, which duplicates Earth’s present climate, involves maintaining roughly 20,000 parts per million of the greenhouse gas CO2 and 1,000 ppm of methane in the ancient atmosphere some 2.8 billion years ago, said Wolf. While that may seem like a lot compared to today’s 400 ppm of CO2 in the atmosphere, geological studies of ancient soil samples support the idea that CO2 likely could have been that high during that time period. Methane is considered to be at least 20 times more powerful as a greenhouse gas than CO2 and could have played a significant role in warming the early Earth as well, said the CU researchers.

There are other reasons to believe that CO2 was much higher in the Archean, said Toon, who along with Wolf is associated with CU’s Laboratory for Atmospheric and Space Physics. The continental area of Earth was smaller back then so there was less weathering of the land and a lower release of minerals to the oceans. As a result there was a smaller conversion of CO2 to limestone in the ocean. Likewise, there were no “rooted” land plants in the Archean, which could have accelerated the weathering of the soils and indirectly lowered the atmospheric abundance of CO2, Toon said.

Another solution to achieving a habitable but slightly cooler climate under the faint sun conditions is for the Archean atmosphere to have contained roughly 15,000 to 20,000 ppm of CO2 and no methane, said Wolf. “Our results indicate that a weak version of the faint young sun paradox, requiring only that some portion of the planet’s surface maintain liquid water, may be resolved with moderate greenhouse gas inventories,” the authors wrote in Astrobiology.

“Even if half of Earth’s surface was below freezing back in the Archean and half was above freezing, it still would have constituted a habitable planet since at least 50 percent of the ocean would have remained open,” Wolf said. “Most scientists have not considered that there might have been a middle ground for the climate of the Archean.

“The leap from one-dimensional to three-dimensional models is an important step. Clouds and sea ice are critical factors in determining climate, but the one-dimensional models completely ignore them.”

Has the faint young sun paradox finally been solved? “I don’t want to be presumptuous here,” Wolf said. “But we show that the paradox is definitely not as challenging as was believed over the past 40 years. While we can’t say definitively what the atmosphere looked like back then without more geological evidence, it is certainly not a stretch at all with our model to get a warm early Earth that would have been hospitable to life.”

Said Toon, “The Janus supercomputer has been a tremendous addition to the campus, and this early Earth climate modeling project would have impossible without it.” The researchers estimated the project required roughly 6,000 hours of supercomputer computation time, an effort equal to about 10 years on a home computer.

ABC’s ‘Extreme Weight Loss’ comes to Anschutz Health and Wellness Center[27]

[28]
The University of Colorado’s Anschutz Health and Wellness Center (AHWC) has been selected by ABC-TV and producer Eyeworks USA as the medical oversight, weight loss and nutrition services partner for the fourth season of the network’s hit series “Extreme Weight Loss.” Production of the show’s fourth season is underway.

“Extreme Weight Loss”[29] is a noncompetitive show about weight loss that documents the unprecedented, 365-day journeys of courageous, “super obese” people. Working alongside transformation specialist and trainer Chris Powell, these individuals set out to safely lose up to half their body weight, ultimately revealing an amazing metamorphosis.

In the series’ fourth season, while participants continue to work with Chris, they also will spend the first 90 days of their weight loss journeys at the Anschutz Health and Wellness Center, under the care of medical director Holly Wyatt, M.D., and associate professor of medicine at the University of Colorado. AHWC will be their home for nutritional education, guidance and techniques, personal training and fitness classes to ensure they attain their weight loss goals.

James O. Hill, Ph.D., is Anschutz Health and Wellness Center’s executive director, and the Anschutz professor of pediatrics, medicine, physiology and biophysics at the University of Colorado School of Medicine. He and Wyatt are internationally known experts on obesity, weight loss and weight management.

“The team at Anschutz Health and Wellness Center fully supports the ‘Extreme Weight Loss’ participants in their weight loss quests, and will draw upon our research and practical expertise to ensure they reach their goals and maintain them,” Hill said. “Our evidence-based weight loss and maintenance strategies[30] are proven and effective focusing on what works for each individual.”

Added “Extreme Weight Loss” Executive Producer J.D. Roth, “Anschutz Health and Wellness Center has one of the best weight management programs in the world, and promotes and advances a comprehensive approach to overall wellness, which is an equally important part of the process. This, coupled with the fact that Colorado is one of the

healthiest states in the country, made AHWC an ideal choice for our show as we head into production on season four."

As medical director of AHWC, Wyatt is responsible for leading the team of registered dietitians and fitness experts who assist with the weight loss of the show's participants.

"Supporting people who are committed to significant weight loss is my passion and the focus of my life and career," Wyatt said. "I admire the courage and desire it takes to make this transformation. It's hard to lose weight, even harder to keep it off over time and I look forward to being involved in every step of their journey."

Wyatt's team supports the show's host, trainer and transformation specialist, Chris Powell, who guides the show's participants through their yearlong journeys.

The "Extreme Weight Loss" participants underwent extensive medical testing at AHWC, including a physical examination, blood work, metabolism evaluation, and body mass and body composition tests. Each was given a personalized wellness report, created by experts at the center, providing insight into physical and metabolic fitness, diet and nutrition, sleep, stress and quality of life.

Abdalati named new director of CIRES[31]

[32]
Waleed Abdalati is the new director of the Cooperative Institute for Research in Environmental Sciences (CIRES), a joint institute of the University of Colorado Boulder and the National Oceanic and Atmospheric Administration.

Abdalati -- a CIRES Fellow, CU-Boulder professor of geography, and director of the CIRES Earth Science and Observation Center – took office July 1.

"It is an honor to be selected as director of an organization full of such talented people doing such important work," Abdalati said. "The depth and breadth of the outstanding scientists at CIRES and the societal importance of the research we do make CIRES a truly special place."

Abdalati's research focuses on using satellites and aircraft to understand how Earth's ice cover, particularly glaciers and ice sheets, is changing and what those changes mean for life on the planet. He became director of the Earth Science and Observation Center in 2008 and led the Ice Cloud and land Elevation Satellite-2, or ICESat-2, Science Definition Team, which developed capabilities to map and understand changes in ice sheet elevations by using space-based laser altimetry. From January 2011 to December 2012, while on leave from CU-Boulder, Abdalati served as NASA's chief scientist, advising NASA Administrator Charles Bolden on science programs and strategic planning.

He has published more than 60 scientific papers and technical reports; lectured to a wide range of audiences throughout the world, including scientists, policymakers, the media and the general public; and received many notable honors and awards, including the NASA Exceptional Service Medal and the Presidential Early Career Award for Scientists and Engineers.

Abdalati earned a bachelor of science degree from Syracuse University and master of science and doctoral degrees from CU-Boulder, working with CIRES scientist and former CIRES Director Konrad Steffen. He went on to work as a scientist at NASA for 12 years before returning to CIRES.

"This appointment has special meaning for me because I earned my Ph.D. at CIRES 17 years ago, and back then, I never could have imagined serving as its director," Abdalati said.

"William M. Lewis Jr., a CU-Boulder professor of ecology and evolutionary biology and CIRES Fellow, has served as interim director of CIRES since the summer of 2012. Under his leadership, CIRES has successfully adapted to the budget impacts of federal sequestration and secured the next five years of its core funding to support its collaborative

work with NOAA, according to Stein Sture, vice chancellor for research at CU-Boulder.

Austin named interim dean of College of Music[33]

Austin

James Austin, a professor of music education, has been named interim dean of CU-Boulder's College of Music.

Austin joined the college in 1994 and has served as associate dean of undergraduate studies since 2006. He was the music education chair from 1997 to 2012. In 2004, the college awarded Austin the Richard Bern Trego faculty fellowship.

Austin will serve in the post for the 2013-14 academic year while a national search is reopened for a permanent dean of the college.

"This is a critically important transitional period between the long and distinguished tenure of Daniel Sher and that of a new permanent dean," Austin said. "During this time, we have a unique opportunity to recommit to our core missions, explore new possibilities for leadership, and enhance current operational procedures and programs."

Sher stepped down this month after 20 years in the position. He returned to the faculty and also is involved in community and donor relations for the college.

CU-Boulder has been cited for three years in a row by the Fiske Guide to Colleges as one of just 25 in the nation -- among a total of 1,200 music programs in higher education -- for its excellence in music and has been ranked in the top 20 among all college, university and conservatory music programs by U.S. News & World Report.

Austin's research interests include student motivation and self-concept development, teacher education, classroom-level assessment, and school and arts policy implications. Before joining CU-Boulder, he taught instrumental music to fourth- through 12th-graders, and was an assistant professor of music education at Ball State University.

Shockley-Zalabak receives Range Riders' Silver Spur Award[35]

[36]
University of Colorado Colorado Springs Chancellor **Pam Shockley-Zalabak** was honored with the Pikes Peak Range Riders' Silver Spur Award during the group's annual dinner June 23.

"I was surprised, honored and humbled by this award," Shockley-Zalabak said. "The award really is for the work of an entire campus."

The Silver Spur Award recognizes Shockley-Zalabak's impact on the community and at UCCS. "Pam's impact on Colorado Springs has been immense, through her dedicated service, leadership, inspired vision, and a fervent commitment to our community," said Range Rider Chris Jones.

The Range Riders were founded in 1949 as an experiment to promote the Pikes Peak or Bust Rodeo. The dinner and award announcement typically wrap up the Range Riders' five-day horseback ride around Pikes Peak to publicize the rodeo. Because of the Black Forest fire, however, the Range Ride was canceled this year for only the second time in the group's 65-year history. The first was during the Hayman Fire in 2002.

Peterson receives grant for violence prevention[37]

[38]
Kerry Peterson, an assistant professor at the Beth-El College of Nursing and Health Sciences in the Graduate Nursing Department at UCCS, has been awarded a $5,000 grant from the American Psychiatric Nursing Foundation (APNF), a charitable foundation dedicated to preserving psychiatric mental health nursing's past and ensuring its future.

Peterson was awarded the grant for her proposal titled, "Evaluation of Two Dating Violence Prevention Programs on a College Campus."

She currently is pursuing her Ph.D. in nursing at Johns Hopkins University. Peterson is a psychiatric mental health clinical nurse specialist and nurse practitioner whose research interests include prevention and interventions for intimate partner violence and mental illness.

The APNF Research Grant Program[39] was established in 2008 with the intent to seed psychiatric mental health nurses who are in the early stages of their research careers, enhance the scientific contributions of psychiatric mental health nursing, and grow the base of evidence that informs psychiatric mental health nursing practice.

Trujillo named regional Coach of the Year[40]

[41]
Phil Trujillo, head coach of men's golf at UCCS, recently was named the Eaton Golf Pride South Central Region Coach of the Year in conjunction with the Golf Coaches Association of America. It is his sixth regional coach of the year award in his 13 seasons.

Trujillo led the Mountain Lions to their fifth national tournament appearance. The No. 10 finish at nationals matched the best in program history. UCCS was the only team from the South Central Region to advance to the national championships.

Trujillo also has coached five Mountain Lions to six All-America awards, including Third Team selection Kevin Witte this season. Witte finished No. 14 at the national championships, was the runner-up at the regional championships, and won the Rocky Mountain Athletic Conference (RMAC) championship. The Mountain Lions also finished the 2012-13 season with three all-region student-athletes, two RMAC All-Tournament players, four RMAC Golfers of the Week and two RMAC First Team student-athletes.

Video featuring Williams' research gets Emmy nod[42]

[43]
"Water: A Zero Sum Game," a five-minute video produced by the Office for University Outreach's Learn More About Climate Initiative at CU-Boulder, has been nominated for an Emmy Award by the Heartland Chapter of the National Academy of Television Arts and Sciences.

The video investigates how climate change is threatening Western water resources. The video highlights research conducted by **Mark Williams**, CU-Boulder professor of geography and fellow at the Institute of Arctic and Alpine Research. Williams, an expert in snow hydrology and mountain ecology, studies the storage and release of water from snowpack into mountain streams and what percentage of that water ultimately makes its way into homes and

municipalities.

As principal investigator of the Niwot Ridge Long-Term Ecological Research program at CU-Boulder's Mountain Research Station, Williams and his team also explore the effects of climate change, groundwater storage and pollution recorded at the research site above 10,000 feet in the mountains near Boulder. The National Science Foundation funds the Niwot Ridge Long-Term Ecological Research project.

"Water: A Zero Sum Game" is the latest in a series of videos produced by the Office for University Outreach and hosted at http://learnmoreaboutclimate.org[44]. The Learn More About Climate Initiative seeks to provide educators, policy makers and citizens with the most up-to-date scientific research in a user-friendly way to raise awareness and inspire an informed dialogue about climate change.

Winners of the awards for excellence in television and media production will be announced Saturday at the Heartland Chapter of the National Academy of Television Arts and Sciences' 27th Annual Emmy Awards Show and Silver Circle Presentations in the Seawall Grand Ballroom at the Denver Center for the Performing Arts.

Borden chosen for national symposium[45]

[46]
Mark Borden, a faculty member in mechanical engineering at CU-Boulder, was selected to participate in the National Academy of Engineering's 2013 U.S. Frontiers of Engineering Symposium.

Some 81 of the nation's brightest young engineers who are performing exceptional engineering research and technical work were selected to take part in the symposium in September in Delaware. The event will cover cutting-edge developments in four areas: Designing and Analyzing Social Networks, Cognitive Manufacturing, Energy: Reducing our Dependence on Fossil Fuels, and Flexible Electronics.

Borden and the other participants were nominated by fellow engineers or organizations and chosen from 310 applicants.

Taylor named interim assistant dean[47]

Robin Michaels, associate professor of cell and developmental biology, is stepping down after 19 years at the School of Medicine at the University of Colorado Denver. Michaels serves as assistant dean for essentials core curriculum, director of the State Anatomical Board, and co-director of the Digestive, Endocrine and Metabolic Systems Block.

Michaels has accepted a position as associate dean of student affairs and admissions at the University of Minnesota-Duluth and will focus on student success and well-being.

Matt Taylor, associate professor of cardiology and director of adult clinical genetics, has accepted the position of interim assistant dean for the essentials core curriculum.

Perkins contributes to mathematics book[48]

Katherine Perkins, associate professor at CU-Boulder, as well as authors **Karina Hensberry**, **NoahPodolefsky**, **Ariel Paul**, and **Emily Moore**, have contributed a chapter to "Common Core Mathematics Standards and Implementing

Digital Technologies," edited by Drew Polly (University of North Carolina at Charlotte).

"Common Core Mathematics Standards and Implementing Digital Technologies" provides a critical discussion of educational standards in mathematics and how communication technologies can support the implementation of common practices across state lines.

The chapter from the CU-Boulder authors focuses on the design and use of interactive simulations as a powerful tool for learning. Since 2002, the PhET Interactive Simulations project at the CU-Boulder has developed these tools to improving STEM (science, technology, engineering, and mathematics) teaching and learning.

The book is part of IGI Global's Advances in Educational Technologies and Instructional Design (AETID) Book Series.

White to hold board presidency[49]

Malaika White, CU Denver College of Nursing human resources manager, will become president of the Exempt Professional Assembly Board for the 2013-14 academic year. Seven new officers were elected. White was already on the board, having served as president elect during 2012-13.

The new vice president/president elect is **Tamika Coleman**, School of Medicine-Surgery, academic affairs and human resources coordinator. Also elected were: **Rachael Thompson**, communication coordinator; **David Clute**, Anschutz Medical Campus, at-large member; **Grant Chambers**, Anschutz, at-large member; **Erica Eyer**, Anschutz, at-large member; **Brooke Fitzpatrick**, Downtown Denver campus, at-large member; and **Joyce Cheatham**, Denver, at-large member.

Danny Felipe-Morales, board president in 2012-13, remains on the board as past president. Also remaining on the board in the same roles are: **Nicole Ganley**, secretary; **Carissa Smith**, treasurer; and **Larry Armenta**, DDC, at-large member.

The EPA Board will transition officers into their new roles during a retreat in mid-July.

Dropping names ...[50]

Price

Members of the College of Architecture and Planning at CU Denver were involved in the 2013 American Institute of Architects(AIA) National Convention and Design Exposition in Denver June 20-22. **JuleeHerdt**, professor of architecture,co-hosted Southern California Institute of Architecture's alumni event; **Ann Komara**,associate professor and Chair of Landscape Architecture, spoke at the University of Virginia alumni event. **Taisto Mäkelä**, associate professor and Chair of Architecture, led a tour titled "Coffee and Clyfford: A Walking Tour of Notable Architecture in the Golden Triangle Arts District." **Jody Beck**, assistant professor of landscape architecture, gave apanel presentation on affordable housing in Denver. … School of Medicine's **Christine Fisher**, assistant professor, Department of Radiation Oncology, has been appointed to the Colorado Breast and Cervical Cancer Screening Program Advisory Board. The seven-member board recommends guidelines for the services of the state's Women's Wellness Connection program, which provides cancer screening to eligible women at more than 130 sites statewide. …**Connie Savor Price**, associate professor of medicine, School of Medicine, and chief of the Division of Infectious Diseases at Denver Health Medical Center, is co-author of an article about the Middle East Respiratory Syndrome -- Coronavirus -- published last week in the New England Journal of Medicine. She was on a team of experts that traveled to Saudi Arabia in May to investigate the outbreak, which had caused the death of 11 of the 23 people infected. Saudi officials have since placed the death

toll at 25 with another 40 infected.

Legislative recap offered at Advocates' Lunch and Learn event[52]

[53]
Registration is open for the next CU Advocates Lunch and Learn program, a recap of CU's legislative activity during the 2013 General Assembly and a look ahead to next year.

Sponsored by the CU Advocates program in the Office of the President, the presentation will be led by Tanya Kelly-Bowry, CU vice president of government relations.

Attendees can learn about:
Status of bills affecting CU and higher education How much the state invested in higher education and CU's share Funding projections for higher education CU advocacy success 2014 legislative session preview
The event is set for 11:30 a.m. to 1 p.m. Aug. 15 at the CU Denver Business School, 1475 Lawrence St., Classroom 3100.

Lunch is included at the free event, though registration is required. To register and for more information, click here.[53] or contact Michele McKinney, 303-860-5622, michele.mckinney@cu.edu[54].

Securing your mobile devices[55]

[56]
Mobile devices such as smartphones have become one of the primary ways people communicate and interact with the Internet. You can instantly talk to or message anyone else around the world. In addition, you can now carry the power of a computer in your pocket. However, with all these new capabilities come many risks to your personal information as well as university information, if you use your mobile devices to access university information (which also includes your CU email).

For more information on how to secure your mobile devices, see the July 2013 Office of Information Security Cyber Security newsletter at https://www.cu.edu/content/oismonthlycybersecuritynewsletter[57].

You can also find useful guidelines on securing personally owned mobile devices here: https://www.cu.edu/content/policies-and-procedures[58].

Links
[1] https://connections.cu.edu/stories/university-looks-make-most-research-and-discovery[2] https://connections.cu.edu/stories/five-questions-wendy-guild[3] https://connections.cu.edu/file/5q-guildpng[4] https://connections.cu.edu/stories/regents-re-elect-carrigan-chair-sharkey-vice-chair[5] https://connections.cu.edu/file/reg-carriganpng[6] https://connections.cu.edu/news/regents-fail-to-choose-new-chair[7] https://connections.cu.edu/stories/tallman-promoted-interim-leader-tech-transfer[8] https://connections.cu.edu/news/tallman-promoted-to-interim-leader-of-tech-transfer/tallman[9]

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