

Coloradan

Alumni Magazine Fall 2023



THE ROAD AHEAD

CAN WE TRUST
AUTONOMOUS VEHICLES? CU
RESEARCHERS WEIGH IN.

Be Boulder.

 Alumni Association
UNIVERSITY OF COLORADO BOULDER

NOW

SEPT. 17, 2023

Sepp Kuss (Advert'17), center, won the Vuelta a España, one of professional cycling's three European Grand Tours. He is the first American to win a Grand Tour in 10 years.

"At some point, I felt it was possible. I was getting stronger and more confident every day," Kuss said after the race. "This is an achievement I will remember for the rest of my life."

Kuss is from Durango, Colorado, and was a bike racer at CU Boulder as a student.





COVER CU Boulder researchers are working to advance the autonomous driving field safely and responsibly. Illustration by Matt Chinworth.

ABOVE Ralphie VI takes the field with her student handlers during the CU vs. Nebraska game Sept. 9. Photo by Glenn Asakawa.

17 Is the World Ready for Self-Driving Cars?

Self-driving cars are hitting the road in cities across the U.S. Can they be trusted? CU Boulder researchers weigh in.

25 CU Boulder Grad Students Make a Mark in Cañon City

Students partner with Colorado organizations to help identify solutions to environment-related challenges.

27 From South Park to Sopaipillas

South Park creators **Trey Parker** (DistSt'18) and **Matt Stone** (Art, Math'93) reopened the Casa Bonita restaurant after a major renovation.

33 Behind the Sci-Fi

Erin Macdonald (Math, Phys'09), *Star Trek*'s science guru, sounds off on landing the role of a lifetime and what you don't see on screen.

35 Turning Science into Startups

CU Boulder has launched nearly 180 startups, ranking it fifth in the nation for startup creation.

39 (Art)ificial Intelligence

Some CU MFA students embrace AI programs in their work. Some stay far away.

EDITOR'S NOTE

In an age of technological advances, progress still hinges on an essential human experience — trust. In a world where artificial intelligence (AI) is evolving at a rapid pace, the poignant questions remain: How should we be using it, and can it be trusted?

Imagining an era without AI is akin to returning to June 28, 2007 — the day before the first iPhone hit the market. New modes of living and working, as well as new challenges, have unfurled since the advent of the now ubiquitous smartphone.

Join us for the ride as we explore the ways CU Boulder researchers are studying AI, from classrooms and art studios to cities and highways. Buffs across campus are reshaping the world as we know it.

Did you know CU Boulder ranks fifth nationwide among universities for startup creation? Don't miss this story and profiles about the Buffs behind Casa Bonita's revival, *Star Trek*'s science expert, plus students making an impact in rural Colorado.

Maria Kuntz

CONTACT THE EDITOR AT
EDITOR@COLORADO.EDU



DEPARTMENTS

1 NOW Sepp Kuss

7 Campus News

15 ORIGINS Boulder Pottery Lab

43 Alumni News

55 Class Notes

5 INQUIRY Sidney D'Mello

8 Boulder Beat The Pied Piper

31 Infographic Mountain Research Station

47 Chancellor's Essay

61 Feedback

13 LOOK CU vs. Nebraska

49 Sports

65 THEN Sandy Hildner

A New Way of Learning in the Classroom

Sidney D'Mello is a professor in CU Boulder's Institute of Cognitive Science and Department of Computer Science. He is also director of the National Science Foundation AI Institute for Student-AI Teaming, which aims to develop artificial intelligence (AI) technologies to facilitate social and collaborative learning experiences for all students.

A look into the future of AI-powered classrooms.

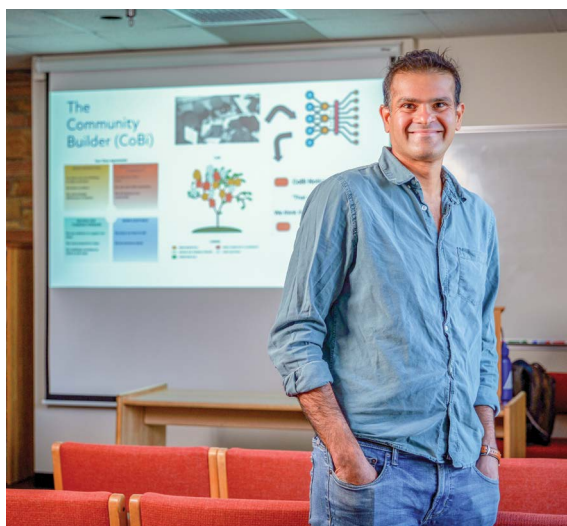
Can you talk about your research with AI and education?

There are five flagship NSF research institutes that focus on supporting learning with AI, and we were the first one. Schools right now haven't changed in a hundred years — they're focused on efficiency as an outcome. The use of AI in education has been to keep that vision of efficiency going where students individually work with computer programs powered by AI.

The vision I want for classrooms is a place where students are working together, being loud, and it's a noisy, rambunctious environment where they're challenging ideas, and they're building social relationships. This vision is centered around a different perspective of learning, which is that learning is authentic to students' interests and identities and so on. A key question we ask is how best to integrate AI within that vision.

How could your vision be implemented?

This is a vision that's been articulated forever in the learning sciences, but it is difficult for teachers to implement because



they can't be listening in on several student groups at once. Some conversations may go off track, or perhaps some conversations are amazing, but the teacher is unaware of the discussion happening. So the question is, how can AI help support this?

Our idea is thinking of AI as this social collaborative partner immersed in these small groups to help them along. The AI is actually interacting with small groups, listening in on the conversations, analyzing nonverbal behaviors like pointing, and then figuring out how to facilitate those small-group conversations, but always by coordinating with the teacher. The teacher remains the

centerpiece here. The AI is providing decision support around the teacher to help them orchestrate their classroom as they see best.

How are students responding to your research?

We know that with AI comes great responsibility. We didn't want to build anything without first working with the students themselves. We organized workshops with them to be transparent, acquire their trust and have their voices heard. However, we soon realized that it was challenging for youth to imagine what good collaboration could look like beyond what they had experienced in school.

So we took a group of students to this cooperative house in Berkeley, Colorado, where they learned how house members had to live together and collaborate outside of schooling. They were introduced to the idea of community agreements, which are mutually agreed upon norms of behavior that the house members themselves co-negotiate and use to hold each other accountable. The youth wondered if an AI could help them to generate and maintain such agreements and developed a design sketch to embody their ideas.

What happened as a result?

This led to one of our AI technologies called the Community Builder (CoBi). With the help of the teacher, students work in small groups to input their examples of agreements into the CoBi interface. As students engage in collaborative learning, CoBi analyzes student discourse for evidence, or "noticings," of these agreement categories. The results are visualized by way of a growing tree animation that everyone can see, where the noticings are shown as flowers that bloom. Teachers and students use these visualizations to reflect and make sense about their adherence to their agreements.

Now this is where privacy becomes really important. By working with students and getting their sense of comfort, we learned they are terrified of any of their individual talk being known to the

teacher. So we do not give the teacher any information on who's speaking and saying what. We don't even say which student group. It's all aggregated in this class-level interface, which is the tree.

Are students interacting with the AI interface?

We actually show them what the CoBi is doing, and then the idea is they can correct it if they see something off with its predictions. That gives us good data, and the students can help it improve itself. But more importantly, they

good for their language piece, but they are not grounded in the real world. That's why we are working with foundational AI to integrate semantics of speech with gesture, gaze and social cues to make an understanding from multimodal, multi-party discourse.

How can teachers quickly be trained in AI?

You can get teachers caught up in AI, and we're developing curricula for AI literacy for this very purpose. But it's really a more foundational thing — how can we change learning? How do you

WE KNOW THAT WITH AI COMES GREAT RESPONSIBILITY.

can have a conversation about why it's doing what it's doing. Because, remember, we also want to teach youth how to learn and collaborate. And so they can have a conversation like, 'Hey, CoBi, we thought this was an example of being respectful, but you missed it.'

What concerns do you have about ChatGPT right now?

I don't think we should ban these tools, as that never works. But there's a lot of stuff that needs to be addressed with these AI programs still. For example, when I'm talking, I'm gesturing and pointing. So I'm making meaning in that context. ChatGPT and all of those other programs are

design a curriculum that does 21st-century skills, collaboration, critical thinking, inquiry, disciplinary knowledge, experimentation and developing character at the same time?

You've talked a lot about ethical and equitable AI. What does that mean?

Right now a phrase that's used a lot is "responsible AI". It's not asking what AI can do, it's asking what AI should do, basically. We have a framework of responsible innovation that we implement in everything we do from the start, and it begins with ourselves — our values, our processes and our commitment to our students and teachers. INTERVIEW BY CHRISTIE SOUNART (JOUR'12)

Philip DiStefano to Retire as Chancellor

DiStefano returning to the School of Education faculty after 15 years.



On Sept. 26, during his annual State of the Campus address, Chancellor Philip DiStefano announced his retirement as chancellor of CU Boulder. He has served in the role since May 2009.

DiStefano will remain in the chancellor position until a national search for his replacement is complete, he said, and then he will return to the faculty in CU Boulder's School of Education, where he began his CU career as an assistant professor in 1974.

"It has been such a rewarding and humbling experience to serve as chancellor of Colorado's flagship university for the past 15 years," he told the crowd in the Glenn Miller Ballroom. "I am so proud of our faculty, staff and students and all that you have accomplished, and I also will treasure the many alumni, donors, parents and friends of the university I was lucky enough to meet."

Beginning in fall 2024, DiStefano will serve as senior executive director at the Center for Leadership and continue his role as the Quigg and Virginia S. Newton Endowed Chair in Leadership.

In addition to his duties as chancellor, DiStefano — a first-generation college graduate — has served as an educator, dean and provost at the university, dedicating his career to making CU Boulder a nationally recognized research institution while also serving as a champion for democracy.

He intends to continue the work toward improving the university and helping students succeed, he said.

"When a Forever Buff asks themselves, 'Am I better off for having attended CU Boulder?'" he concluded in his speech, "let's make sure they can automatically and unequivocally say 'yes'... not simply because of the dollars in their pocket, but because of the totality of their lives and the richness of the world around them."

Chancellor DiStefano, center, began his career in 1974.

John Parker



In the late 1950s, a tiny diner on The Hill called the Pied Piper was a hangout for CU students.

When you were hungry and didn't have any money, the Pied Piper had your back.

The owner of the small Pennsylvania Street diner on The Hill, John Parker, had a book where you could chalk up your debts. Although, in the late 1950s, most people seldom let it get past \$20, Parker never squawked, and a couple of people, it is told, ran it up to \$100. But as long as you paid Parker before summer break or made some arrangement with him, it was OK.

I have only heard it referred to as the Pied Piper once or twice. True enough, the red letters above the door said that, but nearly everyone called it Parker's.

Parker — a small man with ruddy cheeks and a hard-worked face — worked every day from 6 a.m. to 6 p.m. except on Friday afternoons, when he closed at 2 p.m. because

that's when many of his customers were drinking.

Parker's place had seven stools, a cash register and a small upraised counter on the right side of the diner where "the book" was kept. In addition to the money owed for food, various bets were placed under different customers' names. One could open the book to their name, for example, and the total owed would be near the bottom of the page: "\$13.72." The right side of the page could read, "White Sox to win the pennant, \$5."

The place had a small grill where Parker cooked hamburgers, eggs, ham, bacon, steak, hot dogs and morning rolls. He turned the grill on in the morning with a pair of pliers. He had a tin to cook poached eggs, along with a toaster, coffee pot, small freezer, shelf for rolls and pies, and a milkshake maker. That was it. The menu remained the same; the

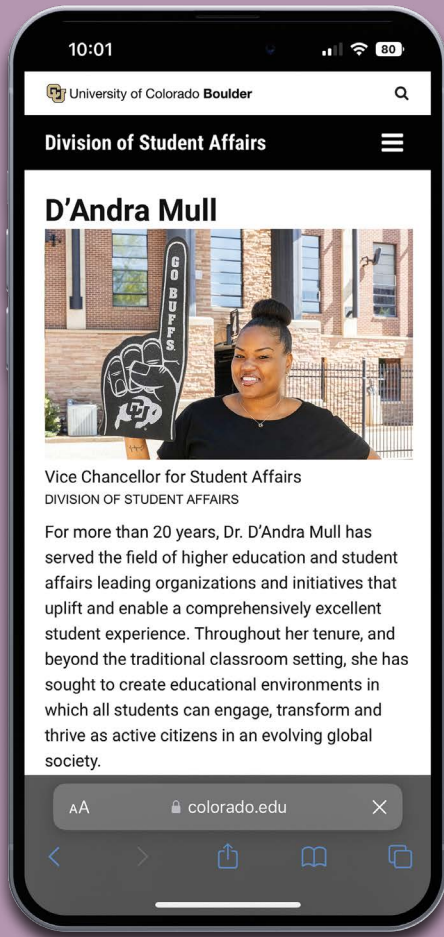
prices remained the same. You could get a hamburger steak dinner, which included a double hamburger portion, fries, bread and butter, soup or juice for \$0.65 or a small steak with the same extras for \$1.25.

You had to take two napkins and throw them down on the fries before you ate them. But you only did this when Parker was facing the grill, otherwise he'd tell you to "get the hell out" if you didn't like the food. **Jack Wyrick** (A&S'61) was the expert at sopping up the grease before Parker turned around.

But everyone, especially CU athletes and fans, went to Parker's. His coffee was good, his prices were cheap and, of course, you could eat on credit.

The last time I ate at Parker's was the summer of 1960. Sadly John died suddenly in January 1962 and Parker's was no more.

BY ROBERT TRUETT (FIN'60)



Since June, **D'Andra Mull** has served as CU Boulder's vice chancellor for student affairs. In her role, she leads a division focused on student support and growth beyond the classroom. "Every day I get to wake up and love to do the work that I do," she said.

Model: Apple 14 Pro Max

APPS

Most-used apps

Baby+



Safari



Snapchat



Most-used emoji



A Love for Student Work

How soon after waking up do you look at your phone? Immediately!

App you wish you had the inner strength to delete? Amazon!

Last person you called? My best friend.

Location and description of last selfie? Times Square, New York City — after a meeting with parents of our incredible Buffs.

Does anyone else have your passcode? Yes! My best friend.

Oldest photo on your phone? I had to look back a bit for this one. It is from Nov. 13, 2013. I was in Rio de Janeiro, Brazil.

What is your lock screen or background image? My lovely six-month-old daughter, Gigi.

What do you use your phone for most? Emails, texting and FaceTiming my daughter!

Riding Along on a Historic Asteroid Mission

CU researchers have been involved with the OSIRIS-REx spacecraft, which launched in 2016 and landed in September.

On Sept. 24, 2023, a space capsule about the size of a used tire landed in a patch of Utah desert not far from Salt Lake City. Aboard was a tiny chunk of an alien world — roughly half a pound of rocks from an asteroid called Benu.

This “sample return” was the culmination of one phase of a NASA mission called OSIRIS-REx. The OSIRIS-REx spacecraft launched in 2016, beginning a seven-year journey to study and even pick up a piece of Benu — which is about as tall as the Empire State Building and shaped a bit like a spinning top.

Researchers at CU Boulder were along for the ride. Daniel Scheeres, distinguished professor in the Ann and H.J. Smead Department of Aerospace Engineering Sciences, led a team that used the spacecraft's navigational instruments to peer deep inside the asteroid. The group's research data is opening a new window into the dawn of the solar system billions of years ago.

Among other things, the researchers — which included four graduate students — discovered that Benu's interior may be much less dense than its outer layers — like a crème-filled chocolate egg in space.

As for the sample of Benu, Paul Sánchez, senior research associate of aerospace engineering, will help analyze that treasure. He'll explore how tiny grains of rocky material can hold themselves together to form a massive space behemoth like Benu.

“We were hoping to find out what happened to this asteroid over time, which can give us better insight into how all of these small asteroids are changing over millions, hundreds of millions or even billions of years,” Scheeres said. “Our findings exceeded our expectations.”

CU was part of the historic asteroid mission.

BY DAN STRAIN



CAMPUSnews

DIGITS

Old Main Beehives

In August, CU Boulder extracted two beehives from Old Main that were nearly a century old. The bees will be rehomed.

8/15

Date beekeeper removed the hives

2024

Old Main restoration project expected to begin

80+

Years old

Two Hundred Thousand

Bees in both of the hives

Four

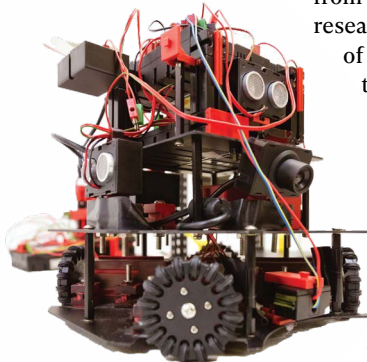
Feet long (larger hive)

60 lbs

Of honey collected

Accreditation for CU Art Museum

After a five-year process, the CU Boulder Art Museum gained its first accreditation from the American Alliance of Museums (AAM) this summer. Only about 3.5% of the nation's estimated 33,000 museums — including 26 in Colorado — have this designation. AAM awarded the art museum accreditation for its professional standards for education, public service and care of collections.



New Robotics Degrees

This fall, CU Boulder began offering a master's and doctorate program in robotics. The program, which is one of about 15 like it in the nation, will equip students for careers in security, agriculture, healthcare,

hospitality, manufacturing and first response. Specific courses include “Machine Learning,” “Medical Device Design” and “Introduction to Virtual Reality.”

In Couples, Opposites Don't Attract

A CU Boulder analysis of more than 130 traits in heterosexual couples found that partners were more likely to have traits in common than not. The study looked at data from existing and new research for millions

of couples, and found that partners were most likely to be similar in about 80% to 90% of traits, which can range from preferences in politics to religion or substance use habits.

“A lot of models in genetics assume that human mating is random. This study shows this assumption is probably wrong,” said the study's senior author Matt Keller, who is director of the Institute for Behavioral Genetics.

The authors are studying same-sex couples in separate research.

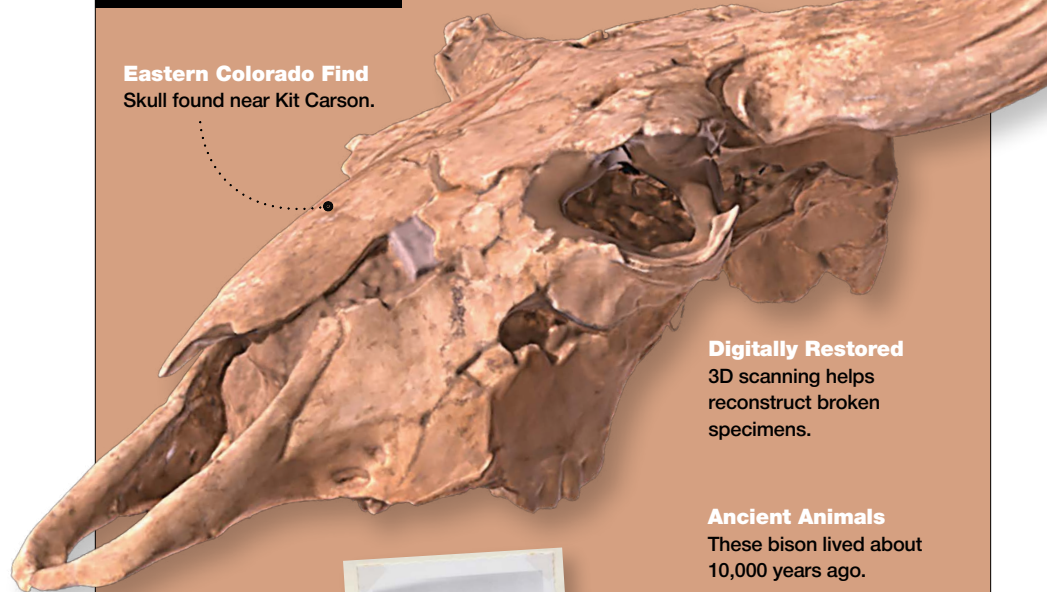
Heard Around Campus

“YOU MAY TIP YOUR HAIRDRESSER, BUT DO YOU TIP YOUR PHYSICAL THERAPIST? PROBABLY NOT, BUT WHY?”

— CU Boulder economics professor Jeff Zax, who told *CU Boulder Today* this summer he believes the U.S. economy would be healthier without tipping practices and would like to see employees compensated more fairly instead.

ARTIFACT Bison Skull

Eastern Colorado Find
Skull found near Kit Carson.

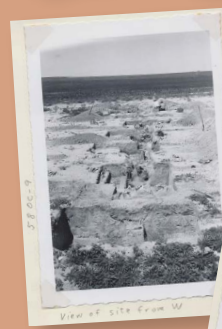


Digitally Restored
3D scanning helps reconstruct broken specimens.

Ancient Animals
These bison lived about 10,000 years ago.

Food for Many
Remains from about 200 bison found in a dry arroyo bed.

Well-Preserved
More than a dozen well-preserved skulls found at the site.



Bison, the Sustainer of Early Life

In the summers of 1958 and 1960, CU Boulder's first curator of anthropology, Joe Ben Wheat, excavated the Olsen-Chubbuck site, an area near Kit Carson, Colorado, that contained remains of bison dating to 8200 B.C.

The site gave insight into techniques Native hunters used to kill the approximately 200 bison more than 10,000 years ago, which would have provided them with about 60,000 pounds of meat.

“Wheat's detailed analysis of the bison remains helped researchers understand the sophistication of ancient bison hunting tactics; reconstruct how and why they were processed, butchered and prepared; and demonstrated the importance of the bison and buffalo in the lives of the earliest people of Colorado and the Front Range,” said William Taylor, assistant professor and archaeology curator at the CU Museum of Natural History.

Now, with the help of a grant from the History Colorado's State Historical Fund, Taylor's team is working to preserve these bison artifacts for the future, including making 3D scans of the fossils, such as the one pictured here. The team is also rethinking the ways they care for the animal remains in the museum collections, said Taylor, who also teaches and conducts research in archaeozoology, the study of ancient animal remains.

“We are working with tribal partners to develop culturally informed practices and policies that will restore respect, transparency and care of these resources to the communities they belong to,” he said.

LOOK CU vs. Nebraska



The Rivalry Continues

On Saturday, Sept. 9, the CU Buffs celebrated a 36-14 win over the Nebraska Cornhuskers. The game launched the 100th year of Folsom Field with 53,241 fans, the highest game attendance in 15 years. Enthusiastic students, including the Buffs Going Bananas club (pictured above), came in droves to support the team — many as early as two hours prior to the 10 a.m. kickoff. After the game, thousands of fans flooded the field in celebration.



OFFICIAL
CRAFT BEER PARTNER
OF THE
CU BUFFS



[BRECKBREW.COM](https://breckbrew.com)
[#BRECKBREW](https://twitter.com/breckbrew)





Betty Woodman, Master Potter and Boulder Legend

For decades, Boulderites have enjoyed affordable ceramics education programming at the Boulder Pottery Lab, perched in the University Hill neighborhood within the historic Fire Station No. 2.

The hub of local creativity began as an innovative vision of the late Betty Woodman — master potter and CU Boulder professor for 30 years. Upon moving to Colorado, Woodman persuaded the city of Boulder in 1954 to open a recreational ceramics program that grew from seven students to 400 in 15 years. In her tenure at CU Boulder, she most likely taught thousands of students, said Scott Chamberlin, ceramics professor.

“She mentored some of the most important artists and teachers in the nation,” Chamberlin said. “You will not find a ceramic artist who has studied American ceramics that does not know [of] her, many personally.”

Originally run by the Parks and Recreation Department for over 60 years, the Boulder Pottery Lab was the first city-supported pottery program in the country. In 2015, the Parks and Recreation Department entered a public-private partnership with Studio Arts Boulder to manage and operate the facility.

Throughout her rich career spanning nearly seven decades, Wood-

man became known for altering the perspective of pottery from functional objects to fine art. During her time as a postwar American artist, her work was showcased worldwide in more than 100 solo exhibitions, including a 2006 retrospective at the Metropolitan Museum of Art, which gave her the unique distinction as the first living female ceramicist to receive such an honor.

At CU Boulder, ceramic objects acquired during Woodman’s three decades of teaching are displayed as part of the Woodman Study Collection in the Visual Arts Complex.

“During critiques, her hands were never still — she was always touching the pieces on the table,” said Jeanne Quinn, a former student of Woodman who is now a professor of ceramics at CU Boulder. “She used her senses with amazing precision.”

In honor of Woodman and her legacy at CU and in the Boulder community, the university created the Betty Woodman Fund in 2023 to support emerging ceramics artists and faculty professionals in the ceramics program. The fund also provides stipends for the Woodman Artists Residency, which provides one to two artists the opportunity to stay and create art for several weeks in the former home of Betty and her husband George Woodman, located in the rural Tuscan region of Italy.

“For her, ceramics was the crown jewel in all of the arts, the one that allowed touch and taste and sight and sound,” said Quinn. “She showed this to us.”

To support the Betty Woodman Fund, visit giving.cu.edu/fund/art-and-art-history-department-fund-0 and note “Betty Woodman” in the comment section of your gift details at checkout. **BY ALLISON NITCH**

Betty Woodman in her studio in Antella, Italy, 2012.

IS THE WORLD READY FOR SELF-DRIVING CARS?

AUTONOMOUS VEHICLES ARE HITTING THE ROAD IN CITIES ACROSS THE U.S. CAN THEY BE TRUSTED? CU BOULDER RESEARCHERS AND ALUMNI WEIGH IN.

BY DANIEL OBERHAUS



IN

August, the California Public Utilities Commission made history when it voted to allow two self-driving car companies, Waymo and Cruise, to commercially operate their “robotaxis” around the clock in San Francisco.

Within hours, Cruise reported at least 10 incidents where vehicles stopped short of their destination, blocking city streets. The commission demanded they recall 50% of their fleet.

Despite these challenges, other cities — including Las Vegas, Miami, Austin and Phoenix — are allowing autonomous vehicle startups to conduct tests on public roads.

Self-driving car proponents see the jump from laboratories to real-world testing as a necessary step that has been a long time coming. The first autonomous vehicle was tested on the Autobahn in Germany in 1986, but the advances stalled in the 1990s due to technology limitations.

After a 2007 Defense Department’s Advanced Research Projects Agency (DARPA) competition featuring autonomous driving capabilities, it seemed like the era of driverless cars had finally arrived. The competition kickstarted a Silicon Valley race to develop the first commercial driverless car. Optimism abounded, with engineers, investors and automakers predicting there would be as many as 10 million self-driving cars on the road by 2020.

“The question for the last 30 years is — how long is this going to take?” said **Javier von Stecher** (PhDPHys’08), senior software engineer at Nvidia who has worked on self-driving car technology at companies including Uber and Mercedes-Benz. “I think a lot of people were oversold on the idea that we could get this working fast. The biggest shift I’ve seen over the past decade is people realizing how hard this problem really is.”

The stakes may be high, but that’s not deterring CU Boulder researchers. From creating systems and models to studying

human-machine interactions, university teams are working to advance the field safely and responsibly as self-driving cars become a fixture in our society.

Their next big question: Can we learn to trust these vehicles?

CRUISE CONTROL

The idea behind autonomous vehicles is simple. An artificial intelligence system pulls in data from an array of sensors including radar, high-resolution cameras and GPS, and uses this data to navigate from point A to point B while avoiding obstacles and obeying traffic laws. Sounds simple? It’s not.

When a self-driving car encounters an unexpected obstacle, it makes split-second judgment calls — should it brake or swerve around it? — that develop naturally in humans but are still beyond even the most sophisticated AI systems.

Moreover, there will always be an edge case that the AI-powered car hasn’t seen before, which means the key to safe autonomous vehicles is building systems that can correctly favor safe choices in unfamiliar situations.

Majid Zamani, associate professor and director of CU Boulder’s Hybrid Systems Control Lab, studies how to create software for autonomous systems such as cars, drones and airplanes. In autonomous vehicles’ AI systems, data flows into the AI and helps it make decisions. But how the AI creates those decisions is a mystery. This, said Zamani, makes it difficult to trust the AI system — and yet trust is critically important in high-stakes applications like autonomous driving.

“These are what we call safety critical applications because system failure can cause loss of life or damage to property, so it’s really important that the way those systems are making decisions is provably correct,” Zamani said.

In contrast to AI systems that use data to create models that are not intelligible to humans, Zamani advocates for a bottom



SELF-DRIVING CAR PROponents SEE THE JUMP FROM LABORATORIES TO REAL-WORLD TESTING AS A NECESSARY STEP THAT HAS BEEN A LONG TIME COMING.

-up approach where the AI's models are derived from fundamental physical laws, such as acceleration or friction, which are well-understood and unchanging.

"If you derive a model using data, you have to be able to ensure that you can quantify how much error is in that model and the actual system that uses it," Zamani said.

Mathematically demonstrating the safety of the models used by autonomous vehicles is important for engineers and policymakers who need to guarantee safety before they're deployed in the real world. But this raises some thorny questions: How safe is "safe enough," and how can autonomous vehicles communicate these risks to drivers?

COMPUTER, TAKE THE WHEEL

Each year, more than 40,000 Americans die in car accidents, and according to the National Highway Traffic Safety Administration (NHTSA), about 90% of U.S. auto deaths and serious crashes are attributable to driver error. The great promise of autonomous vehicles is to make auto deaths a relic of history by eliminating human errors with computers that never get tired or distracted.

The NHTSA designates six levels of "autonomy" for self-driving cars, which range from Level 0 (full driver control) to Level 5 (fully autonomous). For most of us, Level 5 is what we think of when we think of self-driving cars: a vehicle so autonomous that it might not even have a steering wheel and driver's seat because the computer handles everything. For now, this remains a distant dream, with many automakers pursuing Level 3 or 4 autonomy as stepping stones.

"Most modern cars are Level 2, with partial autonomous driving," said Chris Heckman, associate professor and director of the Autonomous Robotics and Perception Group in CU Boulder's computer science department. "Usually that means there's a human at the wheel, but they can delegate some functions to the car's software such as automatic braking or adaptive cruise control."

While these hybrid AI-human systems can improve safety by assisting a driver with braking, acceleration and collision avoidance, limitations remain. Several fatal accidents, for example, have resulted from drivers' overreliance on autopilot, which stems from issues of human psychology and AI understanding.

FOSTERING TRUST

This problem is deeply familiar to Leanne Hirschfield, associate research professor at the Institute of Cognitive Science and the director of the System-Human Interaction with NIRS and EEG (SHINE) Lab at CU Boulder. Hirschfield's research focuses on using brain measurements to study the ways humans interact with autonomous systems, like self-driving cars and AI systems deployed in elementary school classrooms.

Trust, Hirschfield said, is defined as a willingness to be vulnerable and take on risks, and for decades the dominant engineering paradigm for autonomous systems has been focused on ways to foster total trust in autonomous systems.

"We're realizing that's not always the best approach," Hirschfield said. "Now, we're looking at trust calibration, where users often trust the system but also have enough information to know when they shouldn't rely on it."

The key to trust calibration, she said, is transparency. When an autonomous vehicle can show the driver information about how it's making decisions or its level of confidence in its decisions, the driver is better equipped to determine when they need to grab the wheel.

Studying user responses is challenging in a laboratory setting, where it's difficult to expose drivers to real risks. So Hirschfield and researchers at the U.S. Air Force Academy have been using a Tesla modified with a variety of internal sensors to study user trust in autonomous vehicles.

"Part of what we're trying to do is measure someone's level of trust, their workload and emotional states while they're driving," Hirschfield said. "They'll have the car whipping around hills, which is how you need to study trust because it involves a sense of true risk compared to a study in a lab setting."

Although Hirschfield said that researchers have made a lot of progress in understanding how to design autonomous vehicles to foster driver trust, there is still a lot of work to be done.

HUMAN-CENTERED DESIGN

Sidney D'Mello, a professor at the Institute of Cognitive Science, studies how human-computer interactions shift the way we think and feel. For D'Mello, it's unclear whether the cur-

rent crop of self-driving cars can shift to a new driver-focused paradigm from the current perfected engineering-forward approach.

"I think we need an entirely new methodology for the self-driving car context," D'Mello said. "If you really want something you can trust, then you need to design these systems with users starting from day one. But every single car company is kind of stuck in this engineering mindset from 50 years ago where they build the tech and then they present it to the user."

The good news, D'Mello said, is that automakers are starting to take this challenge seriously. A collaboration between Toyota and the Institute of Cognitive Science focused on designing autonomous vehicles that foster trust in the user.

"The autonomous model typically implies the AI is in the center with the human hovering around it," said D'Mello. "But this needs to be a model with the human in the center."

Even when users learn to trust autonomous vehicles, living with driverless cars and reconceptualizing how they relate to them is complex. But there's a lot we can apply from research on prosthetics, said Cara Welker, assistant professor in biomechanics, robotics and systems design.

Much like autonomous vehicles analyze surroundings to make navigation

and control decisions, robotic prostheses monitor a wearer's movements to understand appropriate behavior. And just as teaching users to trust prosthetics requires strong feedback loops and predictable prosthetic behavior, teaching drivers to trust autonomous vehicles means providing drivers with information about what the AI is doing — and it requires drivers to reconceptualize vehicles as extensions of themselves.

"There's a difference between users being able to predict the behavior of an assistive device versus having some kind of sensory feedback," Welker said. "And this difference has been shown to affect whether the people think of it as 'me and my prosthesis' instead of just 'me, which includes my prosthesis.' And that's incredibly important in terms of how users will trust that device."

How, then, will drivers evolve to experience cars as extensions of themselves?

NEXT EXIT

In 2018, a pedestrian was killed by a self-driving Uber in Arizona, which marked the first fatality attributed to an autonomous vehicle. Although the driver pleaded guilty in the case, the question of who is responsible when autonomous vehicles kill is far from settled.

Today, there is limited regulation dictating autonomous vehicle safety and



WHEN AN AUTONOMOUS VEHICLE CAN SHOW THE DRIVER INFORMATION ABOUT HOW IT'S MAKING ITS DECISIONS OR ITS LEVEL OF CONFIDENCE IN ITS DECISIONS, THE DRIVER IS BETTER EQUIPPED TO DETERMINE WHEN THEY NEED TO GRAB THE WHEEL.

liability. One problem is that vehicles are regulated at the federal level while drivers are regulated at the state level — a division of responsibility that doesn't account for a future where the driver and vehicle more closely aligned.

Researchers and automakers have voiced frustration with existing autonomous driving regulations, agreeing that updated regulations are necessary. Ideally, regulations would ensure driver, passenger and pedestrian safety without quashing innovation. But what these policies might look like is still unclear.

The challenge, said Heckman, is that the engineers don't have complete control over how autonomous systems behave in every circumstance. He believes it's critical for regulations to account for this without insisting on impossibly high safety standards.

"Many of us work in this field because automotive deaths seem avoidable and we want to build technologies that solve that problem," Heckman said. "But I think we hold these systems [to] too high of a standard — because yes, we want

to have safe systems, but right now we have no safety frameworks, and automakers aren't comfortable building these systems because they may be held to an extremely high liability."

Other industries may offer a vision for how to regulate the autonomous driving industry while providing acceptable safety standards and enabling technological development, Heckman said. The aviation industry, for example, adopted rigorous engineering standards and fostered trust in engineers, pilots, passengers and policymakers.

"There's an engineering principle that trust is a perception of humans," Heckman said. "Trust is usually built through experience with a system, and that experience confers trust on the engineering paradigms that build safe systems.

"With airplanes, it took decades for us to come up with designs and engineering paradigms that we feel comfortable with. I think we'll see the same in autonomous vehicles, and regulation will follow once we've really defined what it means for them to be trustworthy."

CU BOULDER GRAD STUDENTS MAKE A MARK IN CAÑON CITY

STUDENTS PARTNER WITH COLORADO ORGANIZATIONS TO HELP
BRING THEM SOLUTIONS FOR ENVIROMENT-RELATED PROBLEMS.

BY SARAH KUTA

The stoke is high in Cañon City, Colorado, which has developed 62 miles of new, purpose-built hiking and mountain biking trails within the last decade. Residents hit the trails during lunch, after work and on weekends, and travelers visit the area for outdoor recreation-themed vacations.

As Rick Harrmann, the city's economic development manager, said: "We love the trails, and we know visitors do too."

But actually quantifying their value to the community — and showing city

council a return on their investment — is a much harder task.

Fortunately, three CU Boulder graduate students in the university's master's of the environment (MENV) program are up to the challenge. **Nathan Boyer-Rechlin** (MEnv'24), **Joshua Corning** (MEnv'24) and **Eric Howard** (MEnv'24) are partnering with Cañon City trail advocacy nonprofit Fremont Adventure Recreation to help determine the socioeconomic impact of trails in Cañon City.

Since building new trails requires time, money and labor, the nonprofit — and the city more broadly — will use the students' findings to help inform future decisions.

"A socioeconomic impact report hasn't been done in this area — especially in regards to the value of recreation amenities," said Ashlee Sack, Fremont Adventure Recreation's coordinator. "In the wake of COVID-19 and the nationwide emphasis on work-life balance, as well as in the interest of attracting and retaining residents in our rural community, we'd like to be able to address trends, issues and opportunities in this arena."

The three students are undertaking the ambitious project as their master's capstone, an applied professional project that takes the place of a traditional master's thesis. As MENV students prepare to pursue a wide variety of careers related to the environment, the capstone gives them hands-on experience with real partners and problems.

Even if they don't end up working in an area that's specifically related to their capstone, the project gives them experience with everything from financial planning to community engagement.

Throughout their work, the students have found a common lesson.

"There is so much pivoting," said Boyer-Rechlin, a 31-year-old who came to the

program after working in conservation ecology. "It's constant learning and adapting as we encounter new challenges. It's messy, and you have to be ready to adjust."

Meanwhile, organizations that partner with CU Boulder's capstone projects get the benefit of working with highly motivated students who, acting as external consultants, can provide innovative solutions to their challenges.

"Harnessing the experience and education of the master's students is a natural fit for our community as we navigate this first round of data collection and analysis," said Sack.

Each year, MENV students undertake roughly 30 capstone projects in partnership with Colorado-based nonprofits, government agencies and companies. This year, for example, some students are working with the footwear company Crocs while others are working with Growing Gardens, a nonprofit focused on local food systems.

This diversity of projects is also reflected in the MENV students' career aspirations. Some will pursue roles in renewable energy, while others may specialize in urban resilience. No matter what field they choose to enter, they're poised to make a difference in Colorado and beyond.

"The breadth of what you can do with a master's in the environment these days is as broad as the environmental problems that we're facing," said Boyer-Rechlin.



FROM

South Park TO Sopaipillas

South Park creators Trey Parker and Matt Stone reopened the Casa Bonita restaurant this summer after a major renovation.

BY ALLYSON REEDY

Unlikely: Meeting in a CU Boulder film class and creating a cartoon about foul-mouthed children that would turn **Trey Parker** (DistSt'18) and **Matt Stone** (Art, Math'93) into household names.

Unlikelier: Taking that *South Park* money and dumping it into a bright pink, 49-year-old Lakewood strip mall restaurant, thus adding “restaurateurs” to Parker and Stone’s already lengthy resumes.

But that’s what the duo did in the summer of 2021, when they bought Casa Bonita for \$3.1 million and proceeded to pour \$40 million into renovating the iconic Mexican restaurant.

If the words “Casa Bonita” conjure up images of cliff divers and sopaipilla flags, then you either a) grew up in Colorado



celebrating birthday parties in Black Bart’s Cave, or b) watched Cartman frolic through the “Disneyland of Mexican restaurants” in an uber-popular 2003 *South Park* episode.

But if you’re a Casa Bonita noob and wondering why cliff divers are involved and who Black Bart is, just know that this is not your run-of-the-mill restaurant. Casa Bonita is a special place, one where cliff divers plunge off a 30-foot waterfall; where, inexplicably, someone runs around the 56,000-square-foot behemoth of a restaurant in a gorilla suit; and where, yes, sopaipillas are summoned by flags at each table.

It all started in Oklahoma City in 1968, where Casa Bonita’s kitschy “entertainment” model was so popular with families hungry for a kid-friendly restaurant that outposts popped up in other states, including in Colorado in 1974. While its sister restaurants shuttered over the decades, the Lakewood Casa Bonita remained the last standing... barely.

Long the butt of a running joke about nearly inedible food — not to mention tucked away in a suburban West Colfax strip mall — Casa Bonita wasn’t exactly thriving going into the COVID-19 pandemic. With diners reluctant or unable to visit restaurants in person, Casa Bonita’s woes mounted. In April 2021, longtime owner Summit Family Restaurants filed for Chapter 11 bankruptcy.

What happened next was what Coloradans and *South Park* fans hoped for, but what seemed too preposterous — that someone, in this case Parker and Stone, would swoop in and save the gloriously campy Casa Bonita, preserving it for generations to come.

“Only people as rich and silly as Trey and I would do this,” Stone said in an interview with Denver’s *S280* magazine published in July. “This is definitely an indulgence. We want to do it for the state of Colorado. The businesspeople would say ‘no’ to something like this — and they did.”

When the sale became official in summer 2021, Parker and Stone promised to “change nothing and improve everything.” But would they Hollywood it out? Would they price out the neighborhood and families that kept the restaurant afloat for so long? Would they



Trey Parker, right, and Matt Stone, left, relaunched Casa Bonita with Dana Rodriguez, center.

finally do something about the food? Would they destroy Black Bart's Cave?!

It took two years, but in June we finally got our answers. That's when Casa Bonita reopened to the public. Kind of.

To score the toughest reservation in town, you have to sign up for the restaurant's email list, where they randomly selected lucky diners to come in for the soft opening. (As of press time, this is still the only way to get into Casa Bonita.) While the prolonged soft opening has annoyed some, it makes sense. This is a restaurant that can seat 700 people at a time, after all, so going from zero to 700, especially for first-time restaurant owners, is a challenge.

As people have trickled in, though, the verdict on the Parker and Stone-owned Casa Bonita 2.0 has become clear to restaurant reviewers, food influencers and the public — the beloved Mexican restaurant is the same, only better.

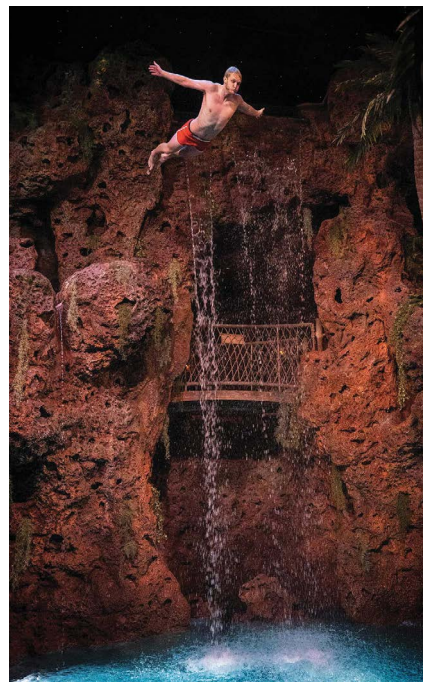
The plunge pool is pristine (and safer, thanks to removing ledges that divers previously had to skillfully avoid), the furniture isn't caked with years of sopaipilla crumbs and Black Bart's Cave doesn't smell. The whole place looks and feels exactly the same — just shinier and cleaner.

One thing that isn't the same: the food. Parker and Stone knew that this was the one area that really did need to change, so they wisely tapped James Beard award-nominated chef Dana Rodriguez to helm the kitchen. Interestingly, Rodriguez applied to Casa Bonita when she moved to Denver from Mexico City in 1998. They never got back to her.

Now the kitchen staff cooks everything from scratch in the rebuilt kitchen, from tortillas for enchiladas to slow-simmered pork for carnitas tacos. The food is good, meaning no more jokes about eating before heading to Casa Bonita.

It's all very unlikely — that Casa Bonita could exist for nearly five decades, that two hometown boys-gone-Hollywood would come back to sink their fortunes into it, and that these two CU Boulder film students would hit it big in the first place with swearing cartoon kids. But that's the kind of restaurant Casa Bonita is, and the kind of guys Parker and Stone are.

Maybe it's not so unlikely of a coupling after all.



CU in the Mountains

Just over eight miles north of Nederland, Colorado, and nestled off the Peak to Peak Scenic Byway lies a serene area dotted with tiny cabins, peaceful walking trails and ample forest land. And while the setting is very different from the bustle of CU Boulder's main campus, the amount of groundbreaking work happening there is the same.

CU Boulder's Mountain Research Station, located 25 miles from campus, is an interdisciplinary facility associated with the Institute of Arctic and Alpine Research, which serves students and scientists interested in mountain-based study. The scope of projects is wide — ranging from arthropods to micro-plastics to weather — and as many as 80 people can be studying at the station at once.

“The Mountain Research Station is a place where, for over 100 years, scientists, students and the public have come together to advance our understanding and appreciation for mountains, which are inspiring, formidable and increasingly at risk,” said Scott Taylor, director of the station.

SHORT INTERPRETIVE TRAILS OPEN TO THE PUBLIC



25-45

STUDENTS CONDUCTING RESEARCH, DEPENDING ON THE SUMMER

LOCATED AT

9,500 ft

CU OWNS

190 ACRES WITH AN ADJACENT 1,775

ACRES OF U.S. FOREST SERVICE DESIGNATED RESEARCH LAND



75

STUDENTS IN COURSES OVER A YEAR

33

SEASONAL CABINS



LABS ON THE PROPERTY

6

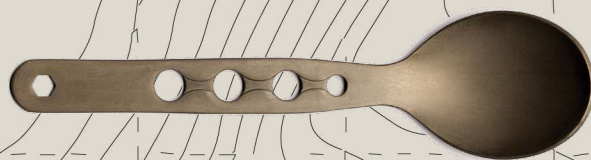


COURSES

- Art and Environment
- Forest and Fire Ecology
- Field Ornithology
- Field Methods in Vegetation Ecology

RESEARCH

- Microplastics in Mountain Ecosystems of the Colorado Front Range
- Temporal dynamics of plant-pollinator networks
- Scaling the consequences of extended summers to arthropod communities at Niwot Ridge
- Causes for the hybridization of black-capped and mountain chickadees in areas disturbed by humans
- Spectroscopic measurements of chemical composition of organic aerosol particles collected at urban and rural locations



LARGEST NUMBER FED IN DINING HALL AT ONCE

110

1920

1930

1940

1950

1960

1970

1980

1990

Mountain Research Station established in its current location (1920)

Five professors taught 80 students (1947)

Former director John Marr founded the Institute of Arctic and Alpine Research (INSTAAR), now the oldest institute at CU Boulder (1953)

National Science Foundation starts its Long-Term Ecological Research (LTER) Network, which funded the Niwot Ridge LTER (1980)



Astrophysicist **Erin Macdonald** (Math, Phys'09) has a way of explaining things. As a graduate student and postdoctoral candidate teaching introductory physics and astronomy classes, Macdonald realized she enjoyed the challenge of distilling complex topics, often without using math or equations, into easier-to-digest information for her students.

“Seeing how that resonated with people and how much more accessible it made science to them was what sparked that passion in me,” said Macdonald, who, in addition to her CU Boulder degrees, received a doctorate in gravitational astrophysics from the University of Glasgow.

Macdonald’s talent and expertise led her career to an unexpected destination: Hollywood.

Since 2019, Macdonald has been the science advisor for the *Star Trek* franchise. In the role, she helps creators figure out how to portray scientific topics on screen and use real and fictional STEM concepts to heighten plot lines. For instance, the first assignment she was given for the TV show *Star Trek: Discovery* was to write canons (fundamental

know the position and speed of particles with perfect accuracy — so you can’t move and rebuild them somewhere else at the transporter’s level of precision.

But in *Star Trek*, the transporter is equipped with a component called the Heisenberg compensator, which counteracts any problems caused by the uncertainty principle.

“We don’t know how it works. But it works very well,” she said. “And it’s really an example of acknowledging that we’re breaking physics but letting it slide anyway.”

While working as a science advisor is her dream job, Macdonald, who hails from Fort Collins, had other gigs before she landed the role, including working as an educator at the Denver Museum of Nature & Science. She began honing her speaking skills at science conventions and eventually moved to Los Angeles. Then she began presenting at conferences, breaking down the science behind science fiction and its interconnectivity with pop culture, which led to gigs as a science consultant and eventually breaking into the TV industry.

ERIN MACDONALD, STAR TREK'S SCIENCE GURU, SOUNDS OFF ON LANDING THE ROLE

BEHIND THE SCI-FI

OF A LIFETIME AND WHAT YOU DON'T SEE ON SCREEN. BY PATTY KAOWTHUMRONG

principles) for dilithium, a made-up material that has existed in the series since the 1960s.

“Dilithium is totally fictional, but we were using it as a major plot point,” she said. “And so I had to, ‘Yes, and’ all the past stuff that we knew about dilithium and create new fictional science for it that now exists in that universe.”

While there are a lot of people behind movies and TV shows (including herself) who want the science featured to be accurate, there are more challenges to making that happen than figuring out where to draw the line between fact and fiction. From the set dressing to the visual effects budget and the on-screen time available to explain something, the film crew must consider many behind-the-scenes factors, Macdonald said.

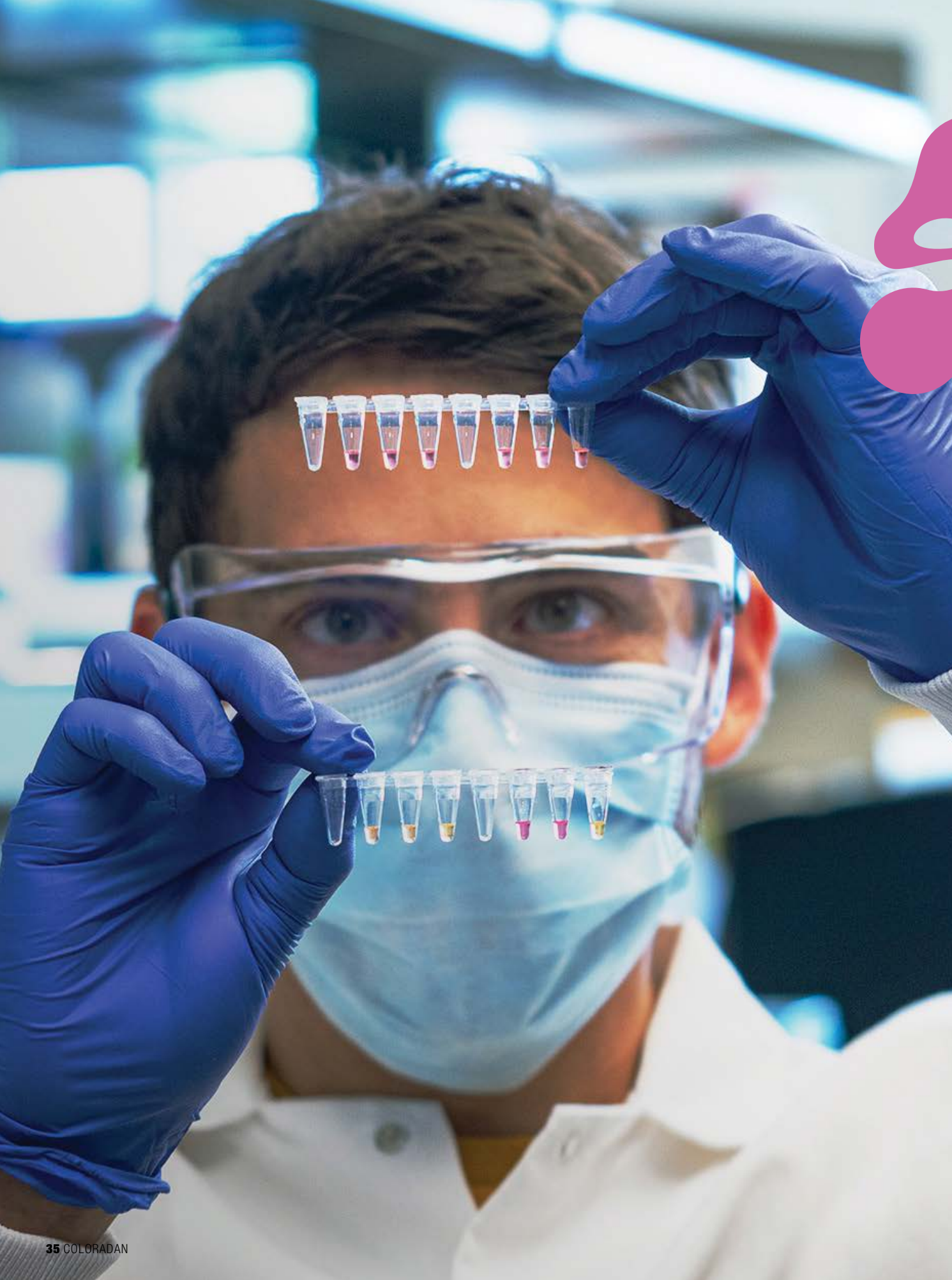
One of her favorite examples of letting accuracy slide is *Star Trek*'s transporter, the iconic, fictional machine that teleports people and objects. In the real world, Macdonald said, it could not work because of Heisenberg’s uncertainty principle, which states that you cannot

“What got me to the position I have now was just looking for all those little opportunities, taking those risks and continuing to perform as best I could,” she said.

Macdonald said finding her voice and learning how to express herself authentically — which was challenging for her as a woman working in traditionally male-dominated STEM fields — was also key to her success. In 2022, her experiences and passion for filmmaking inspired her to establish Spacetime Productions, a company dedicated to elevating marginalized talent in front of and behind the camera. It released its first short film, *Every Morning*, last year and another, *Identiteaze*, is scheduled to be released in early 2024.

Founding Spacetime Productions taught Macdonald that individuals are sometimes more capable of achieving their goals than they think, whether that means writing a book, starting a company — or making a film.

“Just do it,” she said. “You’ll figure it out, learn along the way and make a lot of mistakes. But it’s fun.”



TURNING SCIENCE INTO TARTUPS

CU Boulder launched 20 startups in 2021, pushing CU to fifth in the nation for startup creation.

BY ALEXANDER GELFAND

Ask Dana Anderson, professor of physics at CU Boulder and founder of Inflection, a quantum-technology startup, what role the university played in getting his company off the ground, and he doesn't mince words.

"They didn't get in my way," said Anderson, who launched Inflection under the name ColdQuanta in 2007.

Unlike many universities, said Anderson, CU Boulder views "getting technology out the door" as part of its mission. So while Venture Partners, CU Boulder's commercialization arm, did not yet exist and the university could not offer Anderson the wealth of resources it now makes available to aspiring founders, the university smoothed out his path.

The Technology Transfer Office (TTO), as it was then known, helped Anderson draw up a conflict management plan. When he needed lab space to work on his quantum devices — Inflection leverages Anderson's research into the quantum properties of atoms to develop everything from atomic clocks to quantum sensors and computers — CU worked out a facilities use agreement with him. And when the company was in danger of going under, the university gave him the time he needed to pull it back from the brink.

Inflection's technology can now be found in orbit aboard the International

Space Station and in labs around the world. The company employs more than 200 people, has raised nearly \$200 million and is preparing to sell atomic clocks and quantum sensors at a commercial scale — all because CU was willing to invest in a scientist who, as he admitted, was “not a business guy.”

“I’m very, very grateful for that,” Anderson said.

He is not alone. According to the latest report from the Association of University Technology Managers, which assessed startup creation by universities in 2021, CU ranked fifth nationwide, ahead of Stanford and MIT. CU Boulder produced 20 startups that year and has spun out 179 companies to date. The pace of startup formation is surging, having nearly doubled in recent years.

That increase is no accident. When Anderson formed his company, the TTO was focused on filing and licensing patents. While protecting intellectual property (IP) remains crucial to launching companies based on scientific and technological innovations, CU Boulder now takes a more holistic approach to helping researchers successfully lead such “deep-tech” startups.

“Venture Partners spends the majority of its resources and energy developing and growing innovators: teaching folks entrepreneurial skill sets, partnering with investors, running startup accelerators and other programs,” said Bryn Rees, associate vice chancellor for research and innovation and managing director of Venture Partners.

The principal goal is to translate discoveries by CU Boulder researchers into products and services that benefit society while contributing to local, state and national economies. But maintaining a strong startup ecosystem confers other advantages as well, like expanding research funding opportunities and attracting innovative faculty and students.

ENTREPRENEUR ACADEMY

Venture Partners, which launched in 2019, has developed a suite of programs designed to shepherd researchers through the process of founding a startup, from licensing patents and identifying markets to courting investors. Aspiring founders



Johnny Hergert and Camila Uzcategui of Vitro3D

are free to pick and choose among them; but many, like **Camila Uzcategui** (MMatSci’18; PhD’21) and **Johnny Hergert** (MMatSci’18; PhD’21), co-founders of the biomedical startup Vitro3D, follow the entire sequence.

As soon as they realized the rapid 3D-printing technology they developed as PhD students in the laboratory of materials scientist Robert McLeod had potential commercial applications, Uzcategui and Hergert disclosed their invention to the university. By 2020 the two were in discussions with Venture Partners, which helped them secure exclusive licensing for a variety of patents from the McLeod lab.

A slow, difficult or expensive licensing process can stymie a budding entre-

preneur and make it harder to attract funding. But Venture Partners’ Licensing with EASE program offers quick pre-negotiated terms that are attractive to founders and investors alike.

“With these licensing terms, you can go out and talk to venture capitalists and raise money,” Uzcategui said.

Uzcategui and Hergert quickly enrolled in Venture Partners programs — funded in part by NSF — such as Starting Blocks and Research-to-Market, which help founders identify markets for their inventions. They originally envisioned using their 3D-printing technology to aid drug discovery, but after speaking with potential customers, they shifted to producing dental aligners instead.

The opportunities kept coming. The pair enrolled in the New Venture Launch class, which offers mentoring and pitch coaching from entrepreneurs and venture capitalists; won \$125,000 in the Lab Venture Challenge (LVC) pitch competition and another \$30,000 in the New Venture Challenge (NVC); and participated in the Ascent Deep Tech Accelerator.

“We kind of never stopped,” Uzcategui said.

Vitro3D then attracted \$1.3 million in seed financing with Buff Gold Ventures, a venture capital fund co-created by Venture Partners that invests exclusively in CU Boulder startups.

NETWORK EFFECTS

The CU Boulder ecosystem played a similarly important role for Nick Meyerson, cofounder and CEO of the diagnostic testing startup Darwin Biosciences.

As a postdoctoral researcher in the laboratory of CU Boulder virologist Sara Sawyer, Meyerson discovered a novel means of analyzing a person’s saliva to determine whether they were carrying an infectious disease even before they developed symptoms. The Department of Defense (DoD), which funded the research, suggested he form a company to develop a handheld diagnostic device. Meyerson went to Rees and Venture Partners for advice. After submitting a patent application, Meyerson began taking Venture Partner workshops and entering pitch competitions, and in March 2020, Darwin Biosciences was born.

Because of his existing relationship

with the DoD — and also because he used his technology to develop one of the nation’s first rapid saliva-based COVID-19 tests — Meyerson didn’t need accelerator support or help figuring out who his potential customers were.

But CU Boulder was still there for him. When the pandemic hit, the university gave Meyerson lab space to develop his COVID test. It also introduced him to Boulder’s rich network of experienced entrepreneurs and investors: Meyerson met his first CEO at the Lab Venture Challenge and his current director of operations through Venture Partners.

“Most of the heavy hitters that I know in the area are because of connections that I’ve made through [Venture Partners],” said Meyerson.

Darwin Biosciences is now on the verge of entering the commercial market. The company is developing a phase-two prototype of its testing device and pursuing FDA approval with the goal of developing a diagnostic platform that can be used for everything from at-home infectious disease testing to early cancer screening.

NEXT STEPS

The purpose of all these support structures is to help as many CU innovators as possible unlock the social and economic benefits of their discoveries. And as Vitro3D and Darwin Biosciences illustrate, the system is working.

But not every researcher wants to found their own company, which helps explain why many of the approximately 150 promising inventions produced at CU Boulder every year never make it to market.

Venture Partners therefore established the Embark Deep Tech Startup Creator, funded by CU Boulder and the Colorado Office of Economic Development and International Trade, which gives outside entrepreneurs the opportunity to form startups around university-owned technology. Ten startups launched this past August, and each company enjoys access to CU’s startup programs and up to \$100,000 for technology development.

“This is something that other universities really have not done,” said Rees, who believes that Embark will fuel more growth for CU as a startup hub. “We’re trying to craft a new model.”

ARTificial Intelligence

Some CU MFA students embrace AI programs in their work. Others stay far away. By CHRISTIE SOUNART

Artist **Hannah Purvis** (MFA'25) began using artificial intelligence (AI) programs in her paintings and drawings only last fall. Now, she uses them regularly.

She may upload a rough sketch into a deep learning model like Stable Diffusion to prompt the program to create similar imagery which she'll then paint by hand, re-upload and create animation frames for interactivity. Other times, she'll ask AI to purposefully manipulate one of her prints so she can respond to the new image by painting over it.

"This back-and-forth process explores interactive art and uses physical and digital space simultaneously," said Purvis, who came to CU from Houston, Texas. "In a way, I'm trying to be a computer, and the computer is trying to be a painter."

Art students at CU Boulder are experiencing a new era firsthand.

"As with the general public, the student population's response to AI is mixed: Some think of it as just another tool to be used in the creation of new works of art and creative writing," said CU art and art history professor Mark Amerika, who has worked with AI for four years and integrates it into his teaching. "Others are suspicious of the way AI has appropriated the work of others and prefer to imagine that the only real way to be an artist is to create something supposedly original."

Amerika — who has his AI-influenced art published in two solo exhibitions this year in Barcelona, Spain, and Porto, Portugal — plans to integrate more AI art techniques into the classroom and his creative practice. Students are following suit.



Since 2018, **Ryze Xu** (MFA'24) has been experimenting with the ways public AI programs use language to produce an output. Then he started using these programs in his art.

As a ceramicist, who turned to clay after eschewing a career path as a fashion designer, he likens his process with AI to using the kiln.

"I view AI as a form of machinery, a tool that, at its core, operates on basic principles akin to all kinds of our daily technology," said Xu. "The kiln is where we input clay and heat and we end up with fired ceramics, but you can't see what is happening inside the kiln...With AI we input the world, but we can't see what's happening with the AI, and there is unpredictability with this process," he said.

Xu is in favor of embracing AI and has digitized photos of some of his ceramics to train AI programs like Stable Diffusion to produce more art like his.

"I find gratification in comprehending AI's capabilities and limitations," said Xu.



"This nuanced engagement allows me to offer a different perspective on how we interact with technology and how it influences our artistic expressions.

Eileen Roscina (MFA'23) chooses not to use AI in her work as a filmmaker and multimedia artist.

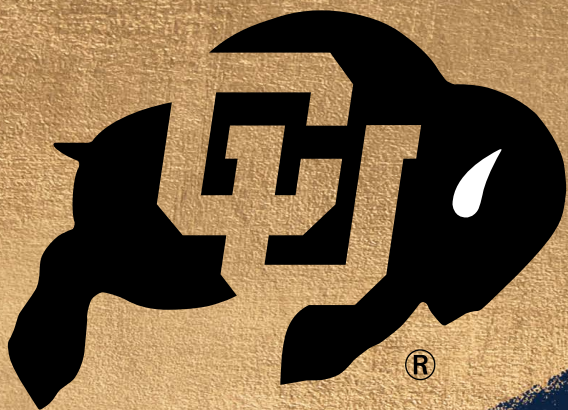
"It's very troubling to me," she said. "So much of it is an illusion — an illusion of connection."

Roscina uses natural materials in her art, like creating works with pressed flowers. She's drawn to the ephemeral nature of them, she explained, and the fact that they don't last.

"Art brings the potential for a deeply human connection," she said. "I want people to realize the beauty of not recording everything."

Regardless of their views on AI, all three students agree that it's too new to make predictions yet.

"We've only really been talking about this for a year," said Purvis. "Just like in art history when the camera was invented and people were really resistant to the change it brought, I think AI can be seen as a new tool in the same way."



CERVEZA
Modelo
THE FIGHTING SPIRIT OF
COLORADO



Drink responsibly.
Modelo Especial® Beer. Imported by Crown Imports, Chicago, IL.



Your gift matters — are you *all in*?

Bufs
ALL IN!
3.6.2024



Join fellow Bufs and donate to advance research, bolster student success or support Ralphie!

Scan the QR code to learn more about CU Boulder's giving day.

Bufs Hiring Bufs

An online alumni connection led to a job offer.

For **Alexandra Lemlein** (Comm, Soc'09), Bufs come first. As a student she helped coordinate events for the CU Boulder Alumni Association, was a member of the Sigma Rho Lambda sorority and played intramural volleyball. After graduation, she moved to New York City and became vice president of the area's Forever Bufs alumni chapter for six years.

Soon, she began expanding her professional network with Bufs by serving as a student mentor and participating in the Bufs Hire Bufs recruiting reception.

"Having something in common with someone such as being an alum of CU Boulder is a natural way to start a conversation and connect," said Lemlein. "I love networking with people and especially helping fellow alums with their job search. I've had many people help me over the years and it's important to help others and pay it forward."

Now she's helped a young alumna get a job.

Lemlein is a senior B2B marketing manager for Tubi, a streaming service owned by Fox Corporation. In January 2023, she met **Cayla Seligman** (Bus, Mktg'19) on the Forever Bufs Network while looking to meet more Bufs. The network, which functions like a LinkedIn for CU Boulder alumni, helps students and alumni connect over their shared CU experiences and seek professional advice.

Within a couple of weeks, she recommended Seligman for a TV specialist position at Tubi.

"Cayla reached out to me and we chatted on the phone," said Lemlein. "I was impressed with her eagerness. I understood what it's like to want to move to NYC and start a great career."

Tubi hired her in March, and Seligman moved to New York City from Portland, Oregon.

"Find an advocate who keeps you in mind for new opportunities," Seligman said earlier this year. "They immediately think of your name first."

Join the Forever Bufs Network at foreverbufsnetwork.com.

Cayla Seligman (top) and Alexandra Lemlein (bottom)



Bufs, Recognized

As the lead anchor of Denver's 9News broadcast, **Kim Christiansen** (Jour'84) has earned a reputation as a trusted source for news.

"Kim Christiansen's superpower is her empathy... She cares about people," said 9News colleague **Chris Vanderveen** (Jour'96).

Kim also is a huge CU Boulder supporter. As a journalism student in the 1980s, she credits the foundational writing and reporting skills she gained at CU with helping her land her first job at 9News. She's also a parent to her son and recent graduate **Tanner Feith** (Mktg'23). Since 2016, the nine-time Emmy Award winner has dedicated hours of her time to CU Boulder's annual Alumni Awards Ceremony as emcee and video narrator.

For her efforts, the Alumni Association gave her the Alumni Recognition Award during the 94th awards ceremony Nov. 2. Eight other alumni also received awards at the ceremony, which kicked off Homecoming Weekend, Nov. 2-4.

See videos of all Alumni Award winners, plus other Homecoming 2023 highlights, at colorado.edu/homecoming.

VOLUNTEER WITH THE ALUMNI ASSOCIATION

Celebrate CU Boulder, its people and accomplishments through engaging experiences that educate, inspire and build pride by volunteering with the Alumni Association. As a Forever Bufs volunteer, you have the opportunity to make a difference, build connections and share your CU pride. Get involved in Commencement, Homecoming, the mentorship program, scholarship application reading and Bufs Give Back — the Forever Bufs day of volunteering. *Fill out the volunteer form to learn more at colorado.edu/alumni/programs/volunteer/start.*

BUFS ALL IN

CU Boulder's second giving day, Bufs All In, is March 6, 2024. Give

to CU departments, funds and scholarships that are meaningful to you — many with donor matches — on one philanthropy-focused day. *Find out more at bufsallin.cu.edu.*

JOIN THE ALUMNI BOARD

The Forever Bufs Advisory Board gives CU Boulder alumni the opportunity to take part in helping to set the strategic direction for the Alumni Association. During a three-year term that meets in Boulder three times annually, volunteer members serve with other enthusiastic Forever Bufs working to further the mission of the Alumni Association and the university. Applications open in January. *Learn more at colorado.edu/alumniboard.*

2024 TRIPS



Treasures of Peru
May 27–June 6, 2024



Circumnavigating Iceland
June 7–15, 2024



Classic Safari
Sept. 8–23, 2024



Romance of the Douro River
Sept. 20–Oct. 1, 2024



Iconic Destinations by Plane
Oct. 29–Nov. 18, 2024

For more information about the Roaming Bufs travel program, email roamingbufstravel@colorado.edu, call 303-492-8484 or visit www.colorado.edu/alumni/roamingbufs.



CU Boulder's Century Plants

In the mid-1990s, longtime CU faculty member **Allan Taylor** (IntlAF'53; MAnth'04) planted three agave plants outside of the ecology and evolutionary biology department's greenhouse on CU Boulder's East Campus just off 30th Street.

In May 2023, less than one year after Taylor died, two of the plants bloomed for the first and only time. By the end of July, stalks from the plants towered as tall as 15 feet and sprouted bright yellow flowers.

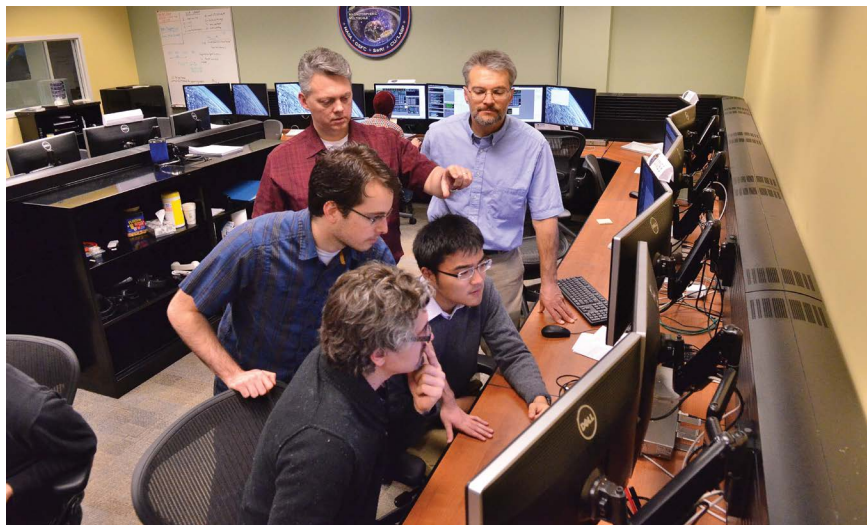
The agave plants — which are sometimes called “century plants” because of their long life cycles — attracted more than 1,500 visitors from all over the state during the weeks the blooms were visible, said greenhouse director John Clark.

“Seeing a plant that has been maturing for decades to flower is exciting to witness,” said Clark, who has held his position at CU for four years. “This is something that doesn't happen often in Colorado, especially Boulder. It is a once-in-a-lifetime experience, both for the plant and the observer.”

Clark climbed on a ladder three times to pollinate each agave. His team also harvested seeds from the plants and germinated them in the greenhouse this fall.

As for the agave plants themselves, they will die now that they've bloomed, but their offshoots will replace the original plants and bring joy to the next wave of visitors — some 30 years from now.

Two CU agave plants bloomed this summer, growing as tall as 15 feet.



Making AI a Tool for Good



Philip P.
DiStefano

As developments in artificial intelligence make headlines every week, I often find myself with more questions than answers on the topic.

What are the capabilities and limitations of AI, and how will they evolve as the technology matures? How can students and educators leverage these powerful tools to benefit learning and critical thinking? What happens when individuals use artificial intelligence for nefarious purposes?

It's easy to default to hesitancy or fear when facing such expansive questions. But during my career in higher education, I have determined that it's far better to embrace technological change — warts and all — than to resist it. The way we respond to and interact with emerging technologies, in large part, will determine whether they ultimately help or harm.

It's exciting to consider how artificial intelligence is already changing the way we teach, learn and innovate. CU Boulder faculty, staff and students are at the forefront of this work, harnessing AI to improve autonomous vehicles, enhance K-12 education and create never-before-seen works of art.

Perhaps most exciting, from an educator's perspective, is that using and developing artificial intelligence is inherently interdisciplinary, requiring perspectives from science, engineering, humanities, business and more. It fosters the kind of freewheeling, unfettered and creative

thinking that CU Boulder graduates need for successful professional careers.

Because the potential uses of AI are so broad, CU Boulder's Center for Teaching and Learning offers training and support for faculty as they consider whether and how to employ AI tools in their curriculum.

The advent of generative AI tools like ChatGPT — which has been known to churn out biased, racist and inaccurate responses to queries — also illuminates the importance of deepening our university's commitment to diversity, equity and inclusion as we integrate AI into our educational practices.

Now more than ever, we need students, faculty and staff whose backgrounds and perspectives reflect the full spectrum of our society so the technologies that AI underpins are as accessible, equitable and trustworthy as possible. Fighting against bias and misinformation while supporting fact-finding and truth-telling is a critical part of a university's role in sustaining democracy and developing ethical leaders, whether we're using AI or not.

AI may be the newest tool disrupting our society, but it certainly won't be the last. And it will take all of us, working together across disciplines, to ensure that it becomes a tool for good.

PHILIP P. DISTEFANO IS THE 11TH CHANCELLOR OF CU BOULDER. HE IS THE QUIGG AND VIRGINIA S. NEWTON ENDOWED CHAIR IN LEADERSHIP, OVERSEEING CU BOULDER'S LEADERSHIP PROGRAMS.



Master of Arts in Corporate Communication

Amplify Your Professional Impact

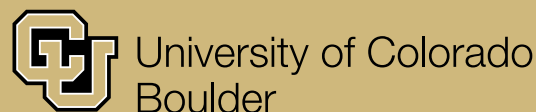
Gain a competitive advantage with higher earning potential, new skills and enhanced professional confidence. Designed for working adults, this flexible online degree program pairs rigorous coursework with professional development and networking opportunities.

- 7-week classes create a seminar-like experience
- Degree completion in as little as 19 months
- Taught by industry-leading communication experts
- Faculty and peers with a vast range of experience and connections

Enhance your understanding of the power of public relations in today's world and build a portfolio of work that demonstrates your abilities.

Now Accepting Applications

colorado.edu/program/macc



SPORTSnews

By **Andrew Daigle** (PhDEngl'16)



Baseball Earns Trip to World Series

The club sport received its highest ranking last season.

CU Boulder club baseball capped a historic 2023 season with a post-season run to the National Club Baseball (NCBA) World Series May 26–June 1 in Alton, Illinois. In the double-elimination World Series tournament, the Buffs lost their opener 0-3 to defending national champion Florida State on May 27. CU rebounded the next day to defeat No. 1 seed Utah State 4-3 before being eliminated 1-4 on May 29 in a rematch against Florida State.

Colorado finished with a Mid-America West conference record of 11-1.

The Buffs earned the No. 2 seed in the Mid-America Regionals May 12–14 in Kearney, Nebraska. They won the double-elimination tournament and a World Series ticket by defeating Nebraska twice and then No. 1 seed Iowa State in back-to-back, same-day elimination games.

“We focus on winning but still having fun,” said All-American Third Team catcher **Blake Carey** (BusAd'24).

Baseball is a club sport at CU. It doesn't receive funding like varsity sports. Student recreation fees, player dues and donations support the team. Players organize practices and travel, as well as recruiting teammates and coaches.

“I love the relaxed vibe,” said second baseman **Mac Padilla** (CTD'24). “But still, our seniors developed a culture to be the best team possible, not just a club of friends.”

The Buffs scored several all-time feats: first regional championship, first NCBA World Series appearance and win, and highest-ever final ranking — No. 6 in the NCBA D1 Top 20.

In a season of highlights, multiple players recalled a single moment at the World Series. Shortstop **Cameron Scheuer** (Comm'23) won the 2023 Easton Baseball Longball Challenge on May 28.

“Watching Cam win the home run derby was incredible,” said first baseman **Andrew Garcia** (BusAna'25). “The entire team and their families were cheering him on.”

CU club baseball notched its first World Series win in 2023.

Prime Era Debuts

Colorado football opened the 2023 season — the “Coach Prime” era — with unprecedented national attention and an undefeated nonconference schedule. Deion “Coach Prime” Sanders was named head football coach on Dec. 3, 2022.

CU opened on the road Sept. 2 at No. 17-ranked TCU. The Buffaloes defeated the Horned Frogs, last year's national runner-up and a 21-point favorite, 45-42. Colorado went on to beat Nebraska 36-14 Sept. 9 in Boulder before a double-overtime 43-35 victory over Colorado State Sept. 16 at Folsom Field.

“We did some things that showed we were resilient. We showed that we would fight, we showed that we had no surrender or give up in us,” Coach Prime said after the thriller over CSU.

Colorado finished its nonconference schedule ranked No. 19 in the nation. All three non-conference games were televised nationally, with Fox's Big Noon Kickoff pregame show on campus Sept. 9 and ESPN's College GameDay on campus Sept. 16.

Buff Bits

On July 27, the CU Board of Regents unanimously approved CU Boulder's move to the Big 12 Conference effective for the 2024-25 school year. ... Four women's track standouts earned All-American honors at the 2023 NCAA Outdoor Championships; **Abbey Glynn** (LeadCommEngmt, Psych'24) raced a school record 55.94 seconds in the 400-meter hurdles semifinals on her way to a First Team All American finish. **Avery McMullen** (IntPhys, Psych'24) earned Second Team in the heptathlon, and **Ella Baran** (MEnv'24) and **India Johnson** (MTech-MedSoc'24) earned honorable mention in the 5,000 and 10,000 meters respectively. ... Women's soccer closed out its nonconference schedule at 8-1 and ranked No. 22 in the nation. **Shyra James** (MediaSt'24) led the Buffs with seven goals in nine games, and goalkeeper **Jordan Nytes** (Soc'26) was named National Player of the Week by Top Drawer Soccer on Aug. 29.

Coach Talk

“WE HAVE A LOT OF COMPETITORS HERE. THERE ARE A LOT OF PEOPLE STILL FIGHTING FOR SPOTS, FIGHTING FOR MINUTES AND FIGHTING FOR ROLES.”

—Women's soccer head coach Danny Sanchez after the start of the season. The Buffs' overhauled roster has 14 newcomers joining 14 returning players.

STATS

One

Match play hole difference that eliminated men's golfer's **Dylan McDermott** (Mktg'25) at the 123rd U.S. Amateur

1st–4th

Women's cross-country individual places at Sept. 1 kick-off races in Boulder

3.154

Spring 2023 GPA of CU's 369 student-athletes, the highest term GPA ever recorded

Five

Volleyball consecutive wins without dropping a set, Aug. 26–Sept. 2, a streak the Buffs hadn't accomplished since 1993

100th

Season at Folsom Field began when CU kicked off against Nebraska Sept. 9

510

School record passing yards for football's **Shdeur Sanders** (Soc'25) in debut win at No. 17 TCU

“I’m Excited to Face Them All”

Shooting guard for women’s basketball **Frida Formann** (EnvSt’24) talks about expectations after last season’s Sweet 16 run, growing up playing basketball in Denmark and developing a holistic perspective for her game.

When you think about last season’s success, what comes to mind?

Excitement. Pride. When you’ve worked for something for so long and then see the fruits of all the work you’ve put in. I was super happy about what we achieved last season and am super excited to have this team back with a good core group.

What was it like to beat Duke on their home court last postseason?

It was amazing. We were up and then down, and then we went to overtime. It was a showcase of our resilience, of the whole season, of being able to take a couple hits but still be strong enough to get back on our feet.

Fans see you, Jaylyn Sherrod (Soc’22, MSOL’23) and Quay Miller (Soc’23) returning and have high expectations for this season. How do you stay motivated?

High expectations don’t change the fact that you need to put just as much work in or play with a mentality that anyone can beat you on any given night. But it’s nice to earn that respect of having expectations and pressure.

What was your off-season schedule?

At the end of the spring semester, I went home to Denmark for a month and a half, and I also traveled with the Danish national team. This year [we played] friendly games against Japan — going to Japan was cool. The national team reconnects me to my Danish basketball roots and people I’ve grown up playing with. I came back to Colorado at the end of June, and we’ve been practicing since.

How is Danish basketball different from the NCAA?

Not a lot of people play basketball in Denmark. You only play if your parents did or if you know someone who does. My parents played and met in a basketball gym, and my mom coached me. I dragged all my friends from school with me — that’s how you get a team when you’re young. With Danish basketball, everyone is a volunteer, all the coaches — no one gets paid. People do it because they love it. You have to create a good environment or no one’s going to play.

Is there something you must do when you’re back in Denmark? See friends and family. And I go swimming because there’s

lots of water. Our beach house is my sanctuary.

What was the recruiting process like? Why did you choose CU?

International students usually get recruited through the national team. That’s like our AAU [Amateur Athletic Union]. Some coaches look for Europeans, some don’t. I had a set of schools I liked, but then I asked a coach to send out my stuff one last time going into senior year of high school. Head coach JR Payne texted me that CU was interested. They came to Denmark to see me. I took my visits and loved Boulder. The coaching staff has created a culture of hard work, but also [emphasizes] having fun and being a whole person.

Can you share something you’ve learned from Coach Payne?

I’ve struggled with being a perfectionist. It’s hard to come over here [to the U.S.]. There are a thousand things to do: weight room, conditioning, basketball, school, friendships. Coach Payne has taught me to have confidence that I’ll figure it out along the way. Even when I’ve had games that weren’t very good or periods when I wasn’t shooting well, she helped me understand how I bring



value in different aspects. She emphasizes the whole perspective, so I don’t get fixated on mistakes.

What do you love most about basketball? I love how diverse the sport is. There are many ways to be a good player. Different skill sets and mindsets. I love that magic when you put the right pieces together — that combination of skills, craftsmanship and teamwork. You need that chemistry.

Is there a team you cannot wait to face this season? I’m excited

to face LSU in our first game. It’s the most well-known team — them or Iowa — and I love the growth and engagement in women’s basketball that they’ve helped make. And I wouldn’t mind running into Iowa again. We played some of the best defense on them that anyone did throughout the tournament. With the Pac-12, there are so many good teams. I’m excited to face them all.

What’s one thing Buffs fans would be surprised to learn about you? I’m a very emotional person. I never think I have it all together. Every

time a fan comes up to me and tells me something positive, it means the world to me.

What do you want to do after you graduate? I want to play professionally and help qualify Denmark for its first EuroBasket tournament. That’s been on our list since we got the Women’s National Team reestablished in 2018. We didn’t have a national team the whole time I was growing up. I know how big of a deal that is for girls in Denmark and Danish basketball. INTERVIEW BY ANDREW DAIGLE.



Blaze Your Trail in the Outdoor Industry Fully Online

The online Outdoor Recreation Economy program at CU Boulder is designed to help you:

- Pivot your career by breaking into the outdoor industry
- Deepen your professional knowledge for a job you love
- Customize your education to fit your interests and needs
- Advance your career, no matter where you are

Explore the newest program offering:

Inclusivity in the Outdoor Recreation Economy Certificate

colorado.edu/program/ore



Outdoor Recreation Economy
UNIVERSITY OF COLORADO BOULDER



COLORADO BASKETBALL



KJ SIMPSON

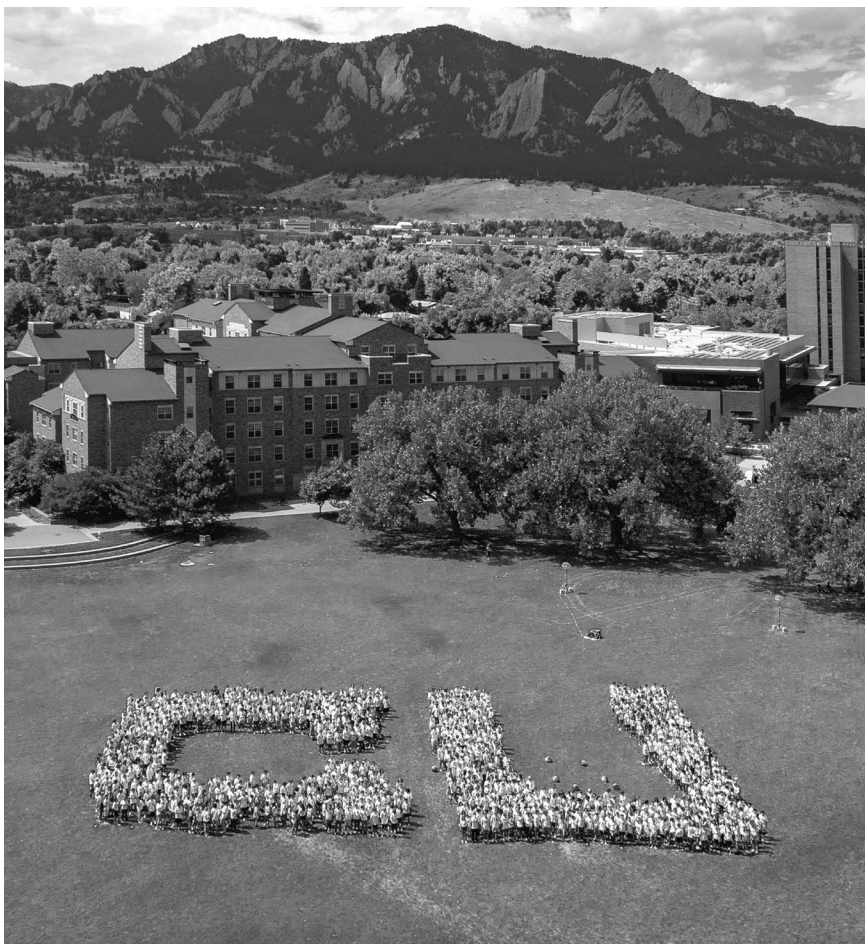
JAYLYN SHERROD

BUFFS BASKETBALL TAKES THE COURT



CUBUFFS.COM/TICKETS | 303-492-8282

CLASSnotes



CU Boulder welcomed about 7,500 first-year students to campus this August.

'53 Nancy Pike Hause (Jour'53) is retired from the journalism faculty at Kansas State University (KSU). Last year, the university's College of Education published her illustrated book about the original KSU 500-pound school bell, which was relocated on campus in honor of her husband **Richard Hause** (EdD'67) when he retired from the faculty after 30 years of teaching. Nancy lives in Estes Park, Colorado.

READ THE OTHER
DECADES OF CLASS
NOTES ONLINE AT
COLORADO.EDU/COLORADAN

'69 After completing two degrees at CU, **Joyce Earickson** (Ital'69; MA'71) returned to her hometown of San Diego and earned a second bachelor's degree in English at San Diego State University. While teaching high school English, she started the first high school Italian language program in San Diego County. Joyce is now working with special education children at the elementary level in North San Diego County and visits Italy every few years. She wrote, "I am so grateful for the Italian language that I learned in Boulder!"

'71 Sheila Slocum Hollis (Jour'71) is the recipient of the 2023 American Bar Association Lifetime Achievement Award. The award recognizes the accomplishments of major practitioners who have demonstrated achievement or leadership in developing environmental, energy or resources law and policy in the U.S.

'72 Betty Arkell (MPolSci'72; Law'75) and **David Arkell** (Law'73) are both attorneys. Betty is a shareholder and corporate attorney at Buchalter's Denver office, where

she guides companies through the entire corporate lifecycle. David is a partner at Moye White, where he specializes in construction law. Beyond the courtroom, they participate in pro bono work and community outreach. The couple lives in Denver.

In September, **George Pierce** (Psych'72) joined New York-based law firm Zeichner Ellman & Krause as special counsel. He previously served as general counsel and chief legal officer of Toyota Tsusho America, and has experience in providing legal services related to complex litigation, corporate governance, labor and employment, bankruptcy, international trade, regulatory compliance and cyber security matters.

For their 50th wedding anniversary, **Robert Taunt** (PolSci'72) and **Leanna Olson-Taunt** (Psych'73) took a nostalgic trip to the CU Boulder campus in May 2023. They visited their old residence, Kittredge Commons, where they met during their time at CU. "There are so many changes, yet the old campus feeling was still there," Robert wrote. Leanna is retired from teaching psychology and serving as the general studies department head at Western Technical College in La Crosse, Wisconsin, where the couple lives. In 2022, Robert published a two-volume book, *The War Eagle Years, Steamboating on the Upper Mississippi River 1854-1870*, which tells the history of the steamboat "War Eagle,"

a well-known boat of the 1860s that burned and sank in 1870 and still lies on the river bottom in La Crosse. Robert retired in 2014 as county personnel director with La Crosse County after 30 years.

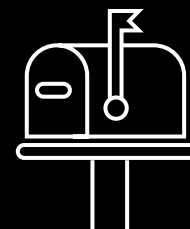
'73 Artist Marc Castelli (BFA'73) is still painting and drawing. For 30 years, his main subjects have been the watermen of the Chesapeake Bay, where he spends two to three days a week working alongside them through various seafood harvests. He has been giving the watermen his photographs and watercolors of them at work for many years. Marc has his own tidal fishery license and brings a quota to the boat as a small favor of thanks for their time with him. See his work at massoniart.com/castelli.

David Wilsey (EPO-Bio'73) and **Naomi Yanaga Wilsey** (BFA'74) celebrated their 50th anniversary in May. This included a visit to Japan to visit some of Naomi's Japanese relatives. The couple lives in Needham, Massachusetts, and has two adult children, one living in San Francisco and the other in Rensselaer, New York.

'75 Composer Robert Fleisher (Mus'75) received two New York City premieres. His "Six Little Piano Pieces" was performed by Max Lifchitz in 2022 at the National Opera Center's Scorca Hall and his piano trio, "Dumkyana," was performed in 2023 by the Trio Casals at

WE WANT
YOUR NEWS!

Write the editors at
Koenig Alumni Center,
Boulder, CO 80309, or
editor@colorado.edu.



Carnegie Hall's Weill Recital Hall. Also in 2023, his electroacoustic composition, "Parallel," was heard during the VU Symposium in Park City, Utah, and during 13 National Association of Composers USA concerts in Alabama, Georgia and North Carolina. Most recently, Robert produced the album *Composing Israel: The First Three Generations* (Neuma Records), comprising 10 works by nine composers, eight of whom were profiled in his 1997 book, *Twenty Israeli Composers*. Performers include nine members of the Israel Philharmonic Orchestra conducted by music director Lahav Shani, additional Israeli artists and Northern Illinois University School of Music faculty and graduate students.

'77 Author and historian **Gregory Hinton** (Bus'77) won the Society for American Archivists 2023 Diversity Award for his reading of "A Sissy in Wyoming," a story based on the

life of Larry “Sissy” Goodwin, a prominent activist and cross-dresser from Wyoming.

For his Wyoming tour readings of “A Sissy in Wyoming,” Gregory also won the 2023 Award of Excellence by the American Association for State and Local History. In 2009 Gregory created an educational program called “Out West,” which taught the history and culture of LGBTQ+ in the American West, a theme that has been a continual focus of his work.

'80 Frank McElvain (EIngr'80) wrote *SFC: A Poor Man's Battle*, which highlights the life of Frank's father, John McElvain, including his military service in World War II and Vietnam and many family secrets. The book was inspired by letters found after Frank's father passed away and is available on Amazon. Frank lives in Morgan Hill, California.

'81 In January, author and photographer **Robert “Bob” Crifasi** (Geol'81; MS'88; MEnvSci'96) published *Western Water A to Z: The History, Nature, and Culture of a Vanishing Resource*. The book is the first field guide to Western water. In June, he hosted a Q&A about the book at the Boulder Book Store on the Pearl Street Mall. Bob works in water management and planning and is an environmental scientist with more than 25 years

of experience. He has worked as an environmental planner with Denver Water and served as the water resources administrator for the City of Boulder's Open Space and Mountain Parks Department.

Vernon Norviel (ChemEngr'81), a partner at law firm Wilson Sonsini Goodrich & Rosati, is at the forefront of a pro bono initiative aimed at bolstering biodiversity and safeguarding an endangered species. His work with Revive & Restore provides guidance on vaccine testing of a synthetic alternative to blood cells extracted from endangered horseshoe crabs. Horseshoe crabs are often harvested for their blood, which contains a protein used in vaccines and other injectable pharmaceuticals. Vern has three decades of experience formulating successful strategies for life science companies and helping them develop intellectual property programs.

'87 Courtney Harris Coffee (Engl'87) serves as a research development associate for the University

of Arizona, specializing in education and diversity-focused proposals. She wrote that helping individuals or teams create compelling and clear narratives through intensive editing is a particular highlight of her work. She lives in Tucson, Arizona.

'89 The Nelson Institute at the University of Wisconsin–Madison awarded **Martha Goodell** (EnvDes'89) its 2023 Distinguished Alumni Award. Martha is director of strategic finance at Aircapture, a startup that captures climate-changing carbon dioxide from the air and supplies it to customers to use in their production processes. Martha has spent her career in technology innovation and natural resources, focusing on policies to support decarbonization and climate resilience. She lives in Emeryville, California.

In 2021, **Adam Kenny** (PolSci'89) left his long-time firm, Weiner Law Group, and joined Kennedys Law in its Basking Ridge, New Jersey, office as special counsel. In May, he became a partner of the firm, where he is a member of the defense group.

VERNON NORVIEL (CHEMENGR'81), A PARTNER AT LAW FIRM WILSON SONSINI GOODRICH & ROSATI, IS AT THE FOREFRONT OF A PRO BONO INITIATIVE AIMED AT BOLSTERING BIODIVERSITY AND SAFEGUARDING AN ENDANGERED SPECIES.

FIVE QUESTIONS



Treasure Hunter

William Blackwell (Advert'73) of Zephyr Cove, Nevada, hunts for Spanish treasure in the eastern mountain ranges of Arizona. He began hunting after 32 years of practicing entertainment law in Los Angeles, California. Decades after hearing tales from his father about the lost gold in the Superstition Mountain Range, Blackwell joined a group expedition featured in the documentary *Lust for Gold: A Race Against Time*, now streaming on Apple TV.

How did you get involved in this expedition? Seven years ago, I read online about [treasure hunter] Robert Kesselring, who thought he had found the Lost Dutchman Gold Mine, one of the holy grails of treasure hunting. At the end of the article, he said, ‘I’m looking for an attorney to do some pro bono work for me to try and get digging permits and everything.’ Instantly, I emailed him back and wrote, ‘I’m your guy.’

How did the documentary come about? Kesselring took me out to some sites, and I said, ‘Robert, this

would make a great documentary because we know where the goods are.’ Having been in LA for a while, I knew people. I contacted Hollywood producers Robert May and Bob Brown. They liked the idea, and we put it together within five months.

In the documentary, there were pipe bombs found around a dig site. What happened? Pipe bombs were all over the place, so we stopped and contacted the sheriff's department. The man who'd placed them had left a backpack there with his name and number on it. The FBI

interviewed him.

That put the kibosh on the things we wanted to do in the documentary — digging down eight feet and bringing out gold bars. We'll go back out there, though.

Do you know the history tied to the gold mine? The film takes place in the middle of the Superstition Mountains. The Spanish started exploring in the 1580s, coming up into Arizona, New Mexico, Colorado, Utah and western Kansas, mining for gold and smelting it into bars. In the 1840s, the prominent Paralta mining family were in the Superstition Mountain Range, making gold bars and caching them in order to take them back to Mexico. Story has it that the Mexican government was going to use some of that gold in an attempt to buy some of the territories of New Mexico and Arizona from the U.S.

An extraction team recovered gold bars from a number of sites. But in 1848, the Apaches killed all of the miners except for a couple who escaped back to Mexico. That's why the bars are still there today.

So what's next? This is an Indiana Jones adventure. I've become a full-on treasure hunter. Now I'm digging on a Spanish treasure vault that's been there for 350 years. No one has ever set foot in it. A few guys in their 70s are not going to break through in a short period of time though — it'll be a work in progress. INTERVIEW BY KIARA DEMARE (JOUR'24)

CLASSnotes



About 7,500 first-year students came to CU Boulder this fall.

'91 Christine Mahoney (Jour'91) is assistant director of employer engagement at the University of Nevada at Las Vegas. Prior to accepting this position, Christine was a journalism professor and spokesperson for CU Boulder and managed the CMCI internship program. Christine has also worked as a journalist in Las Vegas, Denver, Sacramento and Flint, Michigan. Contact her at her new email, Christine.Mahoney@unlv.edu.

Sage Martin (Comm'91) serves as executive director of the Mountainfilm Festival, the longest-continuously-running documentary film festival in the U.S. The festival began in 1979. Sage manages a nine-person staff, including **Laura Hoover** (Anth'19) and **Shae**

LaPlace (Advert'18). The festival highlights film and art centered around adventure as well as cultural, social and environmental justice. "The common thread is the celebration of indomitable spirit," Sage wrote. Guests have included Oprah, mountaineer Jimmy Chin and *Wild* author Cheryl Strayed. The next festival is May 23–27, 2024, in Telluride, Colorado.

'93 Author and screenwriter, **Heather Hach Hearne** (Advert'93) released her first adult novel, *The Trouble with Drowning*, in October. The book is a psychological thriller about mental health. Heather was a screenwriter on the movies *Freaky Friday* and *What to Expect When You're Expecting*. She also was a librettist for *Legally Blonde The Musical*, which was nominated for a Tony award.

In July **Peter Lindstrom** (Engl, Soc'93) was named the vice

president of academic affairs and provost at the Community College of Denver (CCD). In this position, Peter oversees all educational affairs and activities. Prior to accepting this promotion, Peter worked at CCD to increase student participation for minority students in STEM programs. He has also worked to improve online student success rates by 10 percent over three years. He lives in Denver.

'94 Jason Scheunemann (Psych'94) is a professional photographer and has been featured in several magazines and films. His latest work from Guillermo Del Toro's *Pinocchio* movie hung in the Museum of Modern Art in New York this spring. See his work at mandraketheblack.de.

'96 In May, **David Collins** (Mktg'96) took the role of chief marketing officer for Store Space, a corporation that operates self-storage facilities across the nation. Prior, David served as vice president and head of marketing for Public Storage.

'00 This summer, **Jayme Ritchie** (Phil'00) was named to law firm Brownstein Hyatt Farber Schreck's new pro bono leadership team as director of pro bono and community impact. In this role, she manages the firm's philanthropy and community involvement

programs, including sponsorships and donations, board placements, pro bono services and volunteer opportunities. Jayme lives in Denver.

'01 Lawyer **Allison Zinn** (IntlAf, PolSci'01) received regional honors in the 2023 directory for Chambers High Net Worth, which ranks the best legal talent for international private wealth. She is a partner at the Lathrop GPM law firm in Denver and is a trial attorney focused on trust and estate litigation and elder law.

'02 Jonathan Boord (Law'02) is CEO of Native Roots Cannabis Co. Upon Jonathan's arrival with the company, Native Roots had one retail store. Now, the company has 21 locations. Under his leadership, Native Roots has supported scientific research to better understand the effects of cannabis and cannabinoids. Additionally, under Jonathan, the company earned a spot on the Civic 50, a list that details the most community-minded companies throughout Colorado.

This spring, **Michael Colón** (EthnSt'02) joined the Hawaiian impact investment firm Ulupono Initiative as director of energy. In his role, he oversees the energy sector investing and helps lead projects that focus on clean energy for Hawaii. "Empowering communities through sustainable energy solutions is not just a job, it's a passion," Michael said on the

firm's website. He lives in Honolulu.

Luke Glisan (Mgmt'02) joined the Denver office of the Brownstein Hyatt Farber Schreck law firm as a shareholder in the corporate and business department. In this position, Luke is responsible for issues relating to employment law, such as mergers and acquisitions, hiring and promotions. Prior to this position, he worked in the field of law in New York, Chicago and Washington, D.C. in positions ranging from in-house employment counsel and employee relations teams to a law firm partner.

After previous postings in Lebanon, Russia, Georgia, Armenia and Zimbabwe, **Shombi Sharp** (MEcon'02) is the United Nations resident coordinator based in New Delhi, where he is also head of the U.N. system in India. He writes that he would be happy to be in touch with any Forever Buffs planning to visit the area. Email him at shombi.sharp@un.org.

'03 After starting as an intern for the City of Boulder in 2001, **Cris Jones** (EnvDes'03) is now director of community vitality for the city. Cris intends to use his expertise in this new role to lead the advancement of the department in support of cultural vibrancy, district vitality and access for all throughout the city and within Boulder's key economic centers. Cris also serves as the ex-officio executive director of

the Downtown Boulder Business Improvement District, University Hill General Improvement District and Boulder Junction Access General Improvement District.

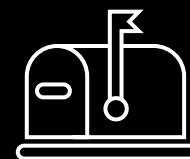
Since 2014, **Matt Seefeldt** (MChemEngr'03; PhD'04) has served as executive director of the Gates Biomanufacturing Facility (GBF), a research organization advancing cell and gene therapy research. After graduating from CU, Matt later returned to work at the CU Anschutz medical campus to help develop protein and cell biological therapies. In June 2023, he gave a tour of GBF to Senator and former Colorado Gov. John Hickenlooper and Federal Drug Administration Commissioner Robert Califf. Matt also is cited as a world expert in protein refolding.

'04 This spring, Colorado Gov. Jared Polis appointed **Michelle A. Chostner** (Anth, Psych'04) to the 10th Judicial District Court of Pueblo, Colorado. She was sworn

READ THE OTHER DECADES OF CLASS NOTES ONLINE AT COLORADO.EDU/COLORADAN

WE WANT YOUR NEWS!

Write the editors at Koenig Alumni Center, Boulder, CO 80309, or editor@colorado.edu.



in by the chief judge of the district in April. In 2017, the Colorado District Attorneys Council selected her as the outstanding prosecutor of the year. Michelle is married and has three children. She and her family live in Pueblo.

Robert Coombs (Comm, MA'04) is CEO and founder of Baton Health, a healthcare technology company. The company, which focuses on healthcare credentialing, has generated just under \$9 million since its founding in October 2022. Robert lives in New York City.

Joe Franco (PolSci'04) is a public affairs and advocacy expert. He was appointed vice president of programs and development for The Washington Campus, where he will design and lead graduate-level courses in public policy for MBA students from around the world. He was also appointed by Maryland Gov. Wes Moore to serve on the Maryland Thoroughbred Racetrack Operating Authority, serving a four-year term to provide oversight over the Preakness and other key horse racing operations in the state of Maryland.

'05 Andrew Geller (Psych'05) and Vincent Mangiere (Fin'13) met in 2020 and were engaged in November 2022. Andrew has had a successful career in dentistry and Vincent in finance. The couple plans to wed in Aspen in March 2024. They live in the West Village of New York.

Ari Gerzon-Kessler (MEdu'05) published *On the Same Team:*

Bringing Educators and Underrepresented Families Together. The book offers research and classroom examples to guide school and district leaders in building Families and Educators Together (FET) teams, which can help foster a culture of inclusion and support for underrepresented groups. Ari is the coordinator of family partnerships for Colorado's Boulder Valley School District and previously served 16 years as a principal, assistant principal and bilingual teacher. He lives in Longmont.

'06 Insurance brokerage Sterling Seacrest Protchard hired Chad Angell (Engl'06) as a client advisor. Chad is working in the firm's Atlanta office, where he provides risk management and employee benefits solutions for technology companies, law firms and nonprofits. He previously focused on SaaS sales with tech company Proliant. Chad has served with many nonprofits and churches in the Atlanta area, including City of Refuge, a nonprofit that helps families and individuals transition out of crisis.

'08 Actor and entrepreneur Ben Whitehair (PolSci, Thtr'08) is executive vice president of SAG-AFTRA. In his role, Ben speaks about combining his passion for the arts with his desire for social justice. This summer and early fall, Ben supported his union as part of the committee that negotiat-

ed TV, film and streaming contracts during the SAG-AFTRA strike. "The entertainment industry adds a massive financial, social and political value to our country and to the world. ... We would much rather be working," he told the *Coloradan* during the fall strike. While at CU Boulder, Ben helped develop and implement the Colorado Creed. Read the *Coloradan's* online exclusive article about Ben at colorado.edu/coloradan.

'09 Senior manager at Ernst & Young, Diego Baca (Acct, MS'09) is serving as chair of the Colorado Society of Certified Public Accountants until April 2024. In his role, Diego hopes to re-engage accounting professionals to grow the accounting pipeline and draw more diversity into the profession. Diego has worked for Ernst & Young since 2009, and he also has served as an active recruiter for the Leeds business school for seven years.

Andrew Keesee (Film'09) is vice president of the Boulder-based venture capital firm Trailhead Capital. The firm closed a \$50 million investment fund to invest in regenerative agriculture startup companies to help address climate change, tackle biodiversity collapse and address human health maladies all tied to our current food system. **Mark Lewis** (MBA'11) and **William "Tripp" Wall** (Phil'97) also serve as managing partners at the firm.

FIVE QUESTIONS

The Bull Riding Manager

Tina Battock (Jour'90) is the general manager of the Nashville Stampede Bull Riding Team, one of eight teams that comprise the Professional Bull Riders league. In 2022, she became the league's only female general manager (GM). In early 2023, she was named GM of the year by her fellow GMs and coaches, and *Vogue* magazine featured her in January 2023.

How did you become GM of the Nashville Stampede? I started at an advertising agency and then went into media sales. I worked my way up to a publisher position and ultimately an executive role. The company that I currently manage, Morris Communications, has media in the western lifestyle space and, through that, we acquired a professional bull riding team and the Nashville Stampede was born. I decided to go for the GM position because it was an opportunity to learn and develop new skills and connections. After 30 years in the same business, it's exciting to accept new challenges.

How did your time at CU Boulder prepare you for a career that may have seemed unexpected to your college self? My time at CU Boulder taught me



to be creative, resourceful and curious. I walked away with the tools, experience and foundation to be confident to try different areas of media. It made me brave enough to say "yes" to things that I never thought of doing.

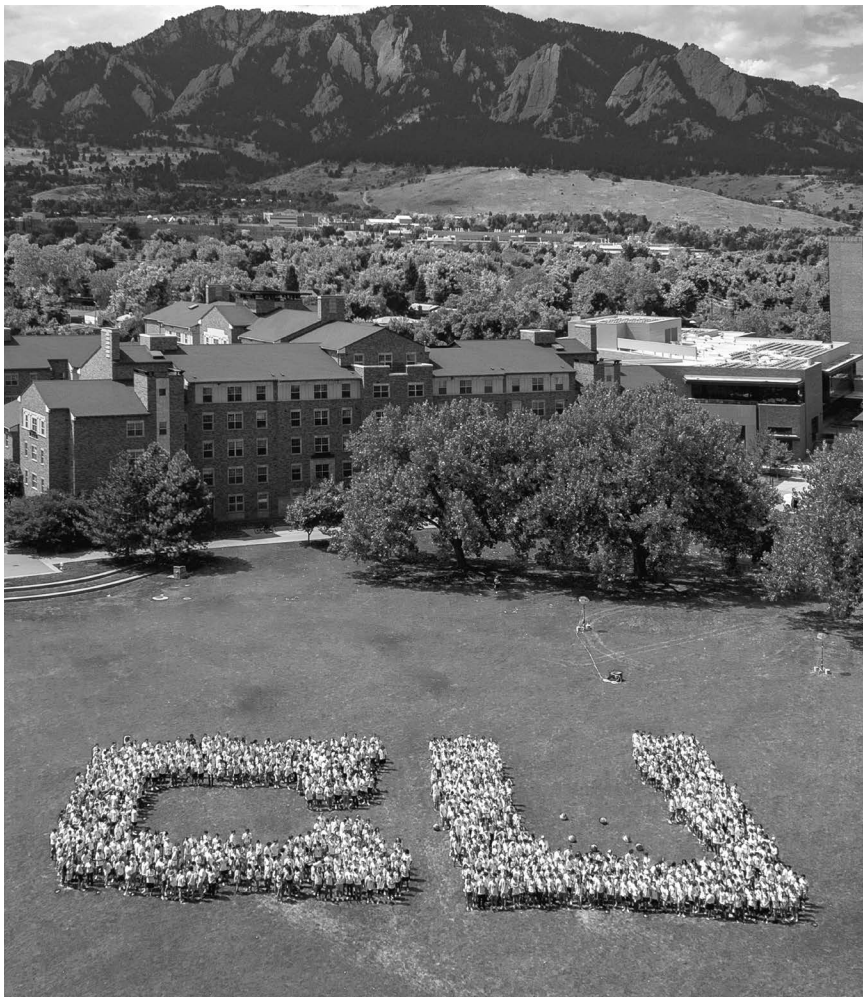
You've said you aren't in the business of being the best female in your profession, rather, just the best. Do you ever feel you have to work harder to prove this as a woman? I don't think I have to work harder — sometimes I have to work differently but that goes both ways. I've been afforded opportunities because I am a female, like the *Vogue* article. There are seven other GMs that are just as accomplished and probably have more interesting lives, but they wanted to talk with me because I'm the outlier as a female. I work hard and hustle and I think that's noticed and respected by the people that work with me. Any

preconceptions others may have quickly fall away when you demonstrate your competence.

What are your plans for your career moving forward? I'm at a place in my career where I want to keep building and growing businesses that I'm passionate about. The Stampede has been an incredible amount of work, but it has been one of the most rewarding things I've ever done professionally. It's a reminder to chase things that are exciting — whatever that is. You do better when your work is interesting to you.

Your team went from a last-place standing to first place — all in one season. What do you think allowed your team to make such a big change? We didn't quit. Persistence, focus and teamwork made it happen. It was magical. INTERVIEW BY JESSICA SACHS (JOUR, POLSCI'26)

CLASSnotes



CU Boulder welcomed about 7,500 first-year students to campus this August.

'11 An associate professor at the University of Tennessee, Knoxville, **Daniel Costinett** (EICompEngr'11; MEIEngr'11; PhD'13) received the 2022 Richard M. Bass Outstanding Young Power Electronics Engineer Award from the Institute of Electrical and Electronics Engineers (IEEE) Power Electronics Society. Awards from the IEEE are among the high-

est honors bestowed on technical engineers worldwide, recognizing early-career engineers who have made outstanding contributions to the field of power electronics. Daniel's research focuses on the detailed modeling, control and optimization of power electronics. He pushes the limits of charging efficiency to improve electric cars, medical devices and airplanes and to lower renewable energy costs.

Anne Trujillo Kalush (Jour'11) is the longest-running eve-

ning news anchor in the Denver television market. She will retire in November after nearly four decades at KMGH/Denver7. "I decided it is time to move into a new phase of my life, enjoying time with my family, pursuing personal interests and exploring even more opportunities to engage with my Colorado community in new and deeper ways," she said. In 2019, Trujillo was inducted into the Denver Press Club Hall of Fame; she's received multiple Emmy Awards and is a member of the National

READ THE OTHER
DECADES OF CLASS
NOTES ONLINE AT
COLORADO.EDU/COLORADAN

Academy of Television Arts & Sciences Silver Circles.

'13 Vincent Mangiere (Fin'13) and **Andrew Geller** (Psych'05) met in 2020 and were engaged in November 2022. Vincent has had a successful career in finance and Andrew in dentistry. The couple plans to wed in Aspen in March 2024. They live in the West Village of New York.

Emily Higgins Rippeteau (MBA'13) is owner and founder of Rippeteau Consulting, which helps small craft breweries and distilleries with their day-to-day accounting needs. Her clients have expanded beyond Boulder to as far as Alaska and have included Ratio Beerworks and Crystal Springs Brewing Company. Emily lives in Longmont.

'15 Rachel Irons (EnvSt, EPOBio'15) is co-founder of Nude Foods Market, a Boulder grocery store that opened in 2020 and eschews single-use containers by selling food and body care items in bulk, which are then

packaged in reusable containers. Customers return the containers to be used again. Rachel and her team are opening another store at 44th and Lowell in Denver this fall.

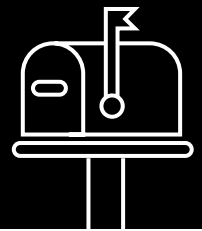
In 2019, former SpaceX engineer **Zeke Brechtel** (MAeroEngr'15) co-founded the technology company Prewitt Ridge. Zeke now serves as CTO of the company, which announced this fall it had closed on \$4.1 million in seed funding to accelerate the growth of its digital engineering platform, Verve. Verve, which Zeke helped build, helps product-building teams move faster and collaborate more effectively across tools, and improve data connectivity while accelerating the time to build a model from months to hours.

'16 Author and finance professional **Darius Ebrahimi's** (Econ'16) first book, *Till Myth Do Us Part*, received the 2023 Indie Reader Discovery Award for a fantasy novel. He released a second book, *Detective Death* in May 2023. Each novel is the

RACHEL IRONS (ENVST, EPOBIO'15) RUNS NUDE FOODS MARKET, A ZERO-WASTE GROCERY STORE THAT SELLS BULK PRODUCTS IN REUSABLE CONTAINERS.

WE WANT
YOUR NEWS!

Write the editors at
Koenig Alumni Center,
Boulder, CO 80309, or
editor@colorado.edu.



first book in a four-part series. He lives in Boulder.

'17 Comedian **Morgan Gallo** (StComm'17) is the creator, producer and editor of the *Let's Fight About It* podcast, which features comedians and artists debating topics such as McDonald's versus Wendy's, the worst type of pants or time travel. She took her comedy on tour this fall. Morgan is based in Denver.

Matt Isola (Advert'17; MStComm'18) started the nonprofit Generation Exchange while he was still a CU student. Generation Exchange is a program that links together young adults and elders to swap knowledge, advice and stories. Matt came up with the idea after being assigned a project at CU to fix a social issue. He helped his grandfather's friend set up a new iPad and gained a close friend out of the experience. "I unlocked a mentor that day," Matt said in an article written by **Sarah McKinney Gibson** (Mktg'98) for PBS's Next

Avenue. “I thought I was going over there to help him, but he helped me 10 times more with life.” More than 2,000 people have participated in Generation Exchange workshops.

After winning the Vuelta a España in September and becoming the first American in a decade to win a Grand Tour in cycling, **Sepp Kuss** (Advert’17) planned a celebration of his win in his hometown of Durango, Colorado, Oct. 17. Sepp and his wife live in Andorra.

In September **Phillip Lindsay** (Comm’17) joined the weekday afternoon show lineup at the 104.3 The Fan radio station in Denver. His show, “The Drive with Zach Bye and Denver, Colorado’s own Phillip Lindsay,” airs from 2–6 p.m. Phillip is a former Denver Bronco and Pro Bowl running back. He most recently played football for the

ANNE TRUJILLO KALUSH (JOUR’11) IS THE LONGEST-RUNNING EVENING NEWS ANCHOR IN THE DENVER TELEVISION MARKET. SHE WILL RETIRE IN NOVEMBER AFTER NEARLY FOUR DECADES AT KMGH/DENVER7.

XFL’s Seattle Sea Dragons. At CU, he was team captain for the Buffs and was the all-time leader in all-purpose yards and yards from scrimmage.

’22 Ryan Burbary (Acct, Fin’22) is owner of Velociti Tennis, a company that has developed the world’s first completely biodegradable and synthetic tennis string. Ryan also helps produce eco-friendly versions of tennis grips and other accessories. Velociti was founded in Boulder. Read more about Ryan and the company on page 58.

’23 Cliff Weems (MAeroEngr’23) is a human systems integrator and test engineer for NASA’s Orion spacecraft, which is built to take humans far into space on Artemis missions. He serves on the Lockheed Martin Human Systems Integration team for NASA’s upcoming Artemis II mission around the moon, which could launch as early as November 2024. Cliff participated in CU’s bioastronautics program and completed a Mars mission simulation in a class called “Medicine in Space and Surface Environments.”



This fall, more than 30,700 undergraduate students were enrolled at CU Boulder.

FIVE QUESTIONS



Making Tennis Sustainable

Ryan Burbary (Acct, Fin’22) is owner of Velociti Tennis, a Boulder-based company committed to limiting single-use plastics and incorporating biodegradable technologies for products. In 2022, Burbary created the world’s first fully biodegradable synthetic tennis string, which he hopes will reduce the thousands of pounds of tennis string that end up in landfills each year.

Why did you choose to work in the tennis industry?

My dad owns tennis retail stores, so I grew up around tennis my whole life. I’ve seen the waste that happens. Whether it’s cutting out strings, putting a new grip on a racket or throwing tennis balls away, I knew there had to be a better way. Biodegradability seemed to be the best way to do it. People realistically won’t completely change their buying habits for sustainability. But if it’s an added benefit to the products they already enjoy, there is a better chance of making a difference.

What was the process of making the string like?

Growing up, I accumulated knowledge on the materials used to create tennis products. During this time, I found an additive in other manufacturing industries that makes their products biodegradable. I made the connection that this additive could be used in the tennis industry. Once our factory implemented the additive to our tennis string, I immediately sent it for testing with the United States Racquet Stringers Association to do a full play test. None of the testers knew it was biodegradable, and it scored highly on performance.

How would you like to influence the future of sports equipment? The biodegradable technology we utilize in our products can easily be implemented in industries beyond tennis. One local string brand may make a small impact in terms of sustainability, but if I get a national sports retailer to implement this technology, it would make a huge difference. Most tennis strings sit in the landfill for hundreds of years, but the string I created would biodegrade in just three to five years.

What are your future goals?

First, I’d like to expand our current line to create more sustainable products. Second, I’ve always wanted to do my own thing as an entrepreneur. I am currently working a finance job that I enjoy, but I would one day love to make Velociti my full-time job.

What advice do you have for recent graduates looking to be entrepreneurs?

The hardest thing for me is having patience. It’s easy to want and expect the things you want to get done quickly, but you have to remind yourself that things take time. And find some good mentors you can bounce ideas off of. I have a great one, CD Bodam (PE’69), a family friend in the tennis industry. Having him as a mentor has made a huge impact on my time in this industry.

BY CHRISTINA FANG (PSYCH, SOC’21)

INmemoriam

1940s

George A. Hood (CivEngr'44)
Mary Jane Griffith Conger (Ger'45)
Lola Dixon Gaudreau
(MedTech'45)
Connie M. Fox (BFA'47)
Norman F. Dahm (CivEngr'48;
MEdu'85)
Caroline Rose Malde (Engl'48;
MFA'85)
Stanley E. Stephenson (EIEngr'48)
Robert O. Birkle (MechEngr'49)
Rene F. Dufour (Chem'49)
David J. Gudeman (MechEngr,
Mgmt'49)
Pieter Hondius (Fin'49)
Marjorie Danielson Kowalski
(DistSt'49)

1950s

William L. Chronic (MechEngr'50)
Marjorie Schoder Dunmire
(BFA'50)
Thomas A. Gelvin (Econ'50)
Martin K. Gill (DistSt'50)
Clarence "Clancy" A. Herbst Jr.
(ChemEngr'50; HonDocHum'95)
Ernest W. Johnson Jr.
(MechEngr'50)
Stanley R. Joy (MechEngr'50)
James G. Shull Jr. (AeroEngr'50)
Malcolm K. Wallen (Pharm'50)
Russell N. Wheeler (A&S'50)
Patricia Beeley Lebsack (A&S'51)
Martha McDonald Taggart
(BFA'51)
Josephine Weber Tickel (A&S'51)
W. Read Vawter Jr. (Mktg'51)
Yvonne Burkett Carroll (A&S'52)
James D. Childress (Jour'52)
Joseph A. Feehan (A&S'52)
Anne Frohberg Jacobsen
(A&S'52)
Walter R. McKinstry Jr. (Jour'52)
Audre Roos Porterfield (Engl'52)
Virigina Nelson Price (MA&S
ex'52)
Robert Robles (Pharm'52)
Relda Finger Hoffer (A&S ex'53)
Donald L. Meloche (Mgmt'53;
Law'56)
Gerald W. Miller (Bus ex'53)
Beth Murphy (MBio'53)
Donald O. Ross (Mgmt'53)
Stuart L. Sax (Bus'53)
Marilyn Nelson Sprinkle (Mus'53)
Ruth Holme Webster (Edu'53)
John B. Wilcox (A&S'53)
Donna Lien Zeman (MusEdu'53)
James C. Askew (A&S'54)
Barbara Lundquist Crosson
(Nurs'54)
John H. Herath (Pharm'54)
Robert L. Lammers (Pharm'54)
Daniel B. McAlpine (Mgmt'54)
Joyce Thompson Murphy
(Engl'54; MA'57)
David M. Noyes (Fin'54)
Lawrence J. Rose (ChemEngr'54;
MS'61)

Charles A. Ross (Geol'54)
Willard L. Talbert Jr. (Phys'54)
Barbara Browne (Jour'55)
Charles A. Decker (Pharm'55)
Elaine A. Hahn (Nurs'55; MS'62)
Gloria Hutchings Huber (A&S'55)
Ronald L. Johnson (EIEngr'55;
MEIEngr'56)
Gene M. Pettingill (ChemEngr'55)
Phyllis Gaines Reinen (Nurs'55)
Elizabeth Beil Watts (Zool'55;
MedTech'56)
Paul H. Brown (EIEngr'56)
Sallie Laney Keirns Duvall
(Bus'56)
Ann Farrell Gruppe (Nurs'56)
Myrene Evans Hoge (Engl'56)
James L. Stein (A&S'56)
Leon A. Steinert (MPhys'56;
PhD'62)
Kathryn A. Vergeer (A&S'56)
John G. Budd (A&S ex'57)
William H. Emory (CivEngr'57)
Harold W. Fischbeck
(MPerServ'57)
Patsy Yeager Hinchey (A&S'57)
Richard J. Ingalls (MechEngr'57)
Dorothy Winn Long (A&S'57)
Marilyn Smith Mars (A&S'57)
Roland W. Miller (CivEngr,
Mgmt'57)
Arlene Lesoing Mowder
(PhysTher'57)
Dale L. Young (MechEngr'57)
Rita Anker (A&S ex'58)
Charles V. Cable (Mktg'58)
Reginald C. Darley (Engl'58)
Dan R. Lee (MechEngr, Mgmt'58)
Stephen J. Lemmers (Jour'58)
Judith Stenzel Liebman (Phys'58)
Edward H. Wachs (A&S ex'58)
Katie Cawley Ashmore
(PhysTher'59)
Paula Brooke (A&S'59)
Susan Vankat Bruce (Edu'59)
Rosemary Coughlin Campbell
(HomeEcon'59)
John W. Edie (MA&S ex'59)
Kathleen Murphy Farley (Hist'59)
James H. Fletcher (A&S'59)
Norma Ohlson Gress (Edu'59)
Lynn Smith Heitman (Edu'59)
Ramon Jesch (EIEngr'59)
Ann D. Kay (A&S ex'59)
Jack E. Layne (CivEngr'59)
Ronald G. Lorenzo (Pharm'59)
John R. Murphy (Geol'59)
Richard P. Osborne (A&S'59)
Sidner J. Scott (A&S'59)
Edward E. Wassemler (Geol'59)
Peter D. Wolf (Engr ex'59)

1960s

David E. Clapp (CivEngr'60)
Nelson B. Crick (A&S'60; MA'62;
PhD'67)
Marie Olson Dinwoodie (A&S'60)
Sandra J. Drissen (A&S'60)
Carleen Robinson Ellis (MNurs'60)
Margaret Grider Johnson (Edu'60)

J. Perry Kelley (MusEdu'60)
Roy E. Kelly (MPerServ'60)
Donna Lively-Brancy (A&S ex'60)
Careen Carmichael Porter
(Edu'60)
Sherie Dilly Purcell (DistSt'60)
Marjoe Webb Richards (A&S'60)
Albert H. Schmidt Jr. (EIEngr'60)
Patricia Fosdick Thinger
(DistSt'60)
Jane Zeller Weiss (A&S'60)
David A. Borden (A&S'61)
Donald E. Burroughs (Engr ex'61)
Kathleen Goddard Hanlon
(Edu'61)
Robert C. Lucas (A&S'61; Law'64)
Douglas C. McPherson (Acct'61)
Linda Reini Noel (Engl'61)
Lawrence R. Oliver (Acct'61)
Frank R. Robinson (A&S ex'61)
Jerry L. Beaber (A&S'62)
Patricia J. Bonner (MA&S ex'62)
D. Ralph Clock (CivEngr'62)
Allen H. Davis Jr. (Zool'62)
Beverly Howard Ford (Nurs'62)
Glenn A. Hearne (A&S'62)
Allan C. Jacobson III (Engr ex'62)
Donald W. Marks (EIEngr'62)
Terry R. Reynolds (Anth'62)
Natalie Geissler Stroh (Nurs'62;
MS'65)
Hiroyasu Takao (MAeroEngr'62)
Toba J. Gold Cohen (Advert'63)
William R. Lennartz (Fin'63)
Rollen L. Powell (IntIAf'63)
William Robards (A&S ex'63)
Annette Maynard Bigalk (A&S'64)
Hilda Grantham Fisher (A&S'64)
William A. Moore (Mgmt'64)
James W. Mulholland (Geol'64)
Lucinda Porter (A&S'64)
John E. Roberts (IntIAf'64)
Samuel W. Scott (MGeog'64)
Dean W. Stoakes (PhDEdu'64)
Charles A. Wright (Hist'64)
Richard L. Armstrong (A&S'65;
MGeog'76; PhD'85)
Eva Maria E. Carne (MA&S'65;
PhD'68)
John R. Ingram (Chem'65)
Peder J. Johnson (A&S'65)
Robert R. Marshall Jr. (A&S'65;
Law'68)
Harold R. Thyfault (MA&S'65)
David D. Vanderhoofven
(CivEngr'65)
John G. Arriza (A&S'66)
Edward J. Beck (CivEngr'66;
MTeleComm'74)
Frances Stephens Brown
(Math'66; MBASci'71)
David L. Covin (MA&S'66)
Kenneth A. Dahlberg
(PhDPolSci'66)
Ting-Sun Huang (MCivEngr'66;
PhD'71)
Vincent A. Pedotto Jr.
(MechEngr'66)
Edward L. Post (A&S'66; MD'70)
David L. Salberg (A&S'66)

Roger E. Allen (Math'67)
M. L. Dick Heimann (Ger'67)
Kathleen Horrigan Hybl (A&S'67)
LaRae Washington Kemp
(PhysTher'67; MD'75)
Steven D. Sidwell (PolSci'67)
John G. Wilkinson (Mktg'67)
George V. Fewson (Law'68)
Jimmy M. Forbes Jr.
(AeroEngr'68)
Christopher S. Hansen-Murray
(PolSci'68; MA'69)
Ann Enterline Kurz (Fren'68)
Donna F. Maronde (Fren'68)
Franklin E. Rogers (Pharm'68)
Bradley J. Snyder (PhDGer'68)
Sima Chappell Bayless (Phil'69;
MCommThr'73)
Dennis N. Carnes (A&S'69)
Elayne Meyer Donahue
(PhDEdu'69)
Charles W. Green (Jour'69)
Jon P. Inglis (Engl'69)
Mary E. Johnson (Edu'69)
Jacqueline M. Miller (Acct'69)
Gerald P. Patch (EIEngr'69)
Ronald R. Smisek (MEIEngr'69)
Judith Stein (Psych'69)
Donald A. Waknin (Mktg'69)

1970s

Kathleen McCarty Johnson
(Jour'70)
James J. Kuhn (Acct'70)
Fernie Baca Moore (MA&S'70;
PhDEdu'76)
Robert M. Newton (Engl'70)
R. Scott Tegtmeyer (EIEngr'70;
MS'79)
Barbara Parisi Thompson
(A&S'70)
Edward Dale Toland III (Engl'70)
Gilbert Walker (EIEngr'70)
Linda Proctor Anderson (Anth'71)
Ruby D. Burleson (MA&S ex'71)
Lee L. Lehman (Span'71)
John S. Ott (ArtHist'71)
Ellen Peacock (MusEdu'71)
Scott M. Balcomb (Law'72)
Loren J. Hess (RealEs'72)
David Iden (Engr ex'72)
Stephen P. Jackson (MBA'72)
Gregory B. Jenkins (PolSci'72)
Charles R. Lyman (A&S ex'72)
John F. Millitello (MCommThr'72)
Robert E. Miller
(PhDBusCivEngr'72)
Brian L. Milton (OrgMgmt'72)
Paula Michaud Sister (MEdu'72)
Paul S. Hesselink (DMus'73)
Steven J. Hill (AeroEngr'73;
MS'74)
Thomas D. Koeneke (Fin'73)
Diana Johnstone Lopez (A&S
ex'73)
Mark A. Cunningham
(MEnvDes'74)
Ralph E. Dunsdon (A&S ex'74)
Anita Vigil Mayoral (A&S ex'74)
Robert H. Ard (Engr ex'75)

To report a death, email advancement.data
management@cu.edu or write Data Management,
1800 Grant St., Suite 215, Denver, CO 80203.
Please include date of death and other
relevant information.

Richard H. Cummings (EIEngr'75;
MS'81)
Ira Bornstein (Hist'75)
Mary Murphy Hastings (Pharm'75)
Judith Augustine Jordan
(EPOBio'75)
William H. McCleary (DEdu'75)
Mark A. Spinnato (Edu, PolSci'75)
David R. Allen (PolSci'76;
MPubAd'78)
Dale M. Armstrong (PolSci'76)
Betty W. S. Krahling (Rec'76)
John E. Morgan (MBA'76)
Robert T. Norman (Anth'76)
Charlotte Knuth Perillo (MNurs'76)
Beth Wolfgang (Fin'76)
Keith L. Bell (MCivEngr'77)
Theodore W. Brin (Fren'77)
David W. Brown (MechEngr'77)
Richard F. DeMong (DBus'77)
Thomas C. Johnson (EnvDes
ex'77)
Mike Spivey (A&S ex'77)
Marcia Liberatore Wruck
(MCDBio'77; MD'81)
Marc R. Peck (Thtr'78)
Mark R. F. Rentschler (A&S ex'78)
Bridget N. Shea (Soc'78)
Ellen G. Alires-Trujillo (Soc'79)
Mildred Rieke Beebe (Comm'79)
Brian D. Loney (PhDEdu'79)
Joy Zobel Schlichter (Thtr'79)
Eric W. Seppeler (MCDBio'79)

1980s

Jody Steiner Dutkiewicz-Coates
(PhDComm'80)
Karen Hakonson Love (Edu'80)
Theodore P. Teegarden (Econ'80;
Law'93)
Mark J. Carvalho (EnvCon,
EnvDes'81; MArch'87)
Stephen P. Deutch (Chem'81)
Charles L. Joseph (MAstro'81;
PhD'85)
Carolyn P. Schriber (MHist'81;
PhD'88)
Elenny Musgrave Striegnitz
(Jour'81)
Christine Kornegay Coldwell
(Mktg'82; MAcct'88)
Brigitte Curtis (Fren'82)
Ronald F. Farina (PhDBus'82)
Steven R. May (A&S ex'82)
Sheila P. Mullan (Jour'82)
Patrick J. Carrothers (MEngl'83)
Scott M. Wicker (Math'83; MA'87)
Patricia L. P. Branson (Mus'84)
Deborah Jovene Ritter
(CivEngr'84)
Robert L. Eaton (Law'85)
Nancy L. Newhouse (MJour'85)
Louis C. Olsen (Anth'85)
Eleanor D. F. Phillips (MEdu'85)
Christopher A. Sibilia (EnvDes'85;
MBA'90)
Garnet D. Stum (MTeleComm'85)
Joseph F. Bennett (Law'86)
Matthew J. Goldfain (Jour'86)
Dawn Hecht Golding (Psych'87)

Gordon E. Harvey
(CompSciEIEngr'87)
Kathryn Long Roberts (Engl'87)
Carey M. Hume (Jour'88)
Thomas F. Walsh III (Econ'89)
Gavin D. Writer (DistSt'89)

1990s

Craig J. Helm (CivEngr'90)
Sharon C. Henkel (MCDBio'90)
Jennifer L. Jorgensen
(EPOBio'90)
Warren E. Kuehner
(MCompSci'90)
Jo Ann Lusson Zender (MAcct'90)
Michael S. McKeivitt (Econ'91)
Samuel R. Klein (Engl'92)
George W. Holling (Psych'93)
Jack L. Killough (MBA'93)
Richard F. DeMong (Arch'93)
Jeffrey D. Meyer (MCDBio'94;
PhDPharmSci'01)
Daniel J. Foley (RealEs'95)
Matthew Gaffner (Comm ex'95)
Brett J. Carney (Mktg'96)
Bradley S. Dean (EPOBio'96)
Haskell L. Hipp III (MCDBio'96)
William J. Bensler (AeroEngr'97)
Lara E. Moss (Span'97)
David Y. Kim (ArchEngr'99)
Cat Horton Pennenga (BFA'99)

2000s

William K. Peters (BioChem'04;
MChem'08; PhD'13)
Palmer J. Hoyt (Fin'05)
Phillip H. Hanceford (Law'07)
Lauren E. Covert (Class'09)
Brandon L. Gilles (EIEngr, MS'09)

2010s

Mark J. Robbins (Geol'10)
John F. C. Arsenault (DistSt'11)
Matthew J. C. Favaro (Anth'12)
Ashley K. Boothby (Law'13)
Anna O'Brien (Law'14)
Janell E. Marotta
(SpchLanHearSci'16)
Kelly M. Shekiro (MChemEngr'17)
Brandon F. Spittler (CompSci,
Fin'17)
Nathaniel Z. Moore (MCDBio'18;
Law'22)
Bailee Mae Zuo Mulholland
(Chin'19)

2020s

Maura Goldberg (WomSt'20)
Benjamin Sapper (ApMath'22)
Mackenzie Nicole Myers
(MAud'23)
Jerson C. Sanchez (Econ ex'24)
Kai Anton Raydon (NeuroSci
ex'25)

Faculty, Staff and Friends

William Bradley, Geology
Patrick W. Holligan, Friend
Anna M. Sie, Friend

FEEDback

THANKS FOR THE COLORADAN ARTICLE ON NEW CU HEAD FOOTBALL COACH SANDERS. YOUR ARTICLE REALLY STRAIGHTENS OUT WHAT THE GENERAL MEDIA HAS BEEN SAYING.



“get in the game,” as the coach says. All of our players must feel comfortable in Boulder. Let’s all make that happen for them.
William Childers
(EPOBio’75)
Durango, Colorado

While everyone seems to be overjoyed that the obviously talented Deion Sanders has been hired, I have some questions regarding how this advances the educational mission of the university. His \$5 million per year salary and the other expenses of the football program are enormous. Do

any of the revenues to the football program go to academic programs or buildings or academic scholarships?

Peter Urone
(Phys’65; PhD’70)
El Dorado Hills,
California

[Editor’s Note: The CU Athletic Department operates its own budget

that is completely independent of CU Boulder’s operating budget. The department’s revenue is largely made up of media rights fees, ticket sales to events, sponsorships and donors. This revenue is in turn largely dedicated to student-athlete resources related to academics, mental health, nutrition and career services.]

Very impressive interview with Coach Prime. This was so much more meaningful than any other report in the local paper or other media. I wish we could have dinner together so he could meet a normal resident of Boulder who remembers his track coach with fondness and a recipe for life.

Spense Havlick
Boulder, Colorado

Thanks for the *Coloradan* article on new CU head football coach Sanders. Your article really straightens out what the general media has been saying. He is primarily a teacher, and that is good.

Geary Larrick
(DMus’84)
Glenview, Illinois

You are to be commended for your article “Prime Time in Boulder” featuring Deion Sanders. I am a graduate of CU who over the past few decades has become more disenchanted and ashamed of my alma mater. In the past few years the culture of the school has drifted more to the progressive left.

When I first picked up this recent copy of the *Coloradan* with Mr. Sanders on the front, I almost immediately went to trash it. However, something compelled me to read your article; and I can tell you that for the first time in years I felt proud of the direction the school seems to be headed. This is a man who truly has all of the attributes of a winner; and it is understandable why the school has been all abuzz.

I will be sending your article to my three sons, as well as numerous friends who will be bless-

ed by this man. Thank you so much for being a part of taking the school in a new and “winner” direction.

Rev. Samuel H. Shafer (A&S’63)
Oakland, California

Punch Cards

I read with interest the short article “CU Boulder Computing: Punch Cards to AI.” You’re mistaken in stating that classes were graduate level only. In 1972, a new A&S major was announced — mathematics with a computer science option. I was in those first classes graduating in fall 1973 with that degree.

We had no books and all our work was done with technical papers. I also worked in the computer center on the help desk with the punch cards and helping students review issues with their green bar results. I recently retired from a long career in

computer science and systems management that was made possible by that new degree option.

Gale Bridgeman
(Math’73)
Grand Prairie, Texas

I used punch cards in my business statistics class in 1967. I believe they were using an IBM computer. We punched the cards, stacked them in order and waited for the results on a printout the next day.

Joseph Gorski
(Fin, Mktg’69)
Conroe, Texas

The Sink ... And Clothes

Regarding your Sink story [Spring 2023 issue], I have many Sink memories, and some of them, strangely enough, center around clothes.

I am a member of a CU legacy family, the Garbarino-Miles clan featured in your Spring



Some Forever Buffs reminisce about the times they used punch cards in their computing.

Photo courtesy College of Engineering and Applied Science

2017 issue. I grew up in and around Boulder, and one of my earliest memories is being with my grandparents (James Pike and Alice Miles Pike) and parents for lunch at the Sunken Gardens after church. These seemingly very long lunches involved my staying in my starched, itchy church clothes the whole time.

Later, in the 1950s, as a CU student there were unwritten rules in lots of groups about what to wear on campus. But it was permissible on Friday nights to wear Levis (often with fraternity letters painted on the seat) to drink red beer at The Sink.

One night a group of us snuck out of the sorority house after hours. We were in our pajamas and went to The Sink to pick up snacks and then went to the Boulder Theater, still in pajamas, for the late movie. We got home safely via the fire escape. Being relatively law abiding and extremely chicken I never did anything like that again.

Nancy Pike Huse
(Jour'53) Estes Park, Colorado

The Roof of Old Main

Saw the article on the upcoming renovation of Old Main and wanted to share a couple photos [my friends and I] took just before we graduated in 1981. I don't even remember how we got access to the roof of Old Main, but somehow, that happened!

John Schwartz
(EnvDes'81)
Bellevue, Washington



Cameron Campbell (PolSci'81), Craig Schreiber (EnvDes'81) and John Schwartz (EnvDes'81)

Letters edited for length and clarity. Read more at colorado.edu/coloradan.

Courtesy of John Schwartz

Social Buffs



Lil Wayne shows the Buffs 'A Milli' type of love by performing at the Rocky Mountain Showdown @cubuffs football



Coach Parker is in his Prime era @official snowdog



Besties we never knew we needed: Terrell Owens and Peggy @cubuffs football and @terrel owens

Follow Us

Facebook [facebook.com/cuboulderalumni](https://www.facebook.com/cuboulderalumni)

Twitter @CUBoulderAlumni #foreverbuffs

Instagram @CUBoulderAlumni #foreverbuffs

LinkedIn University of Colorado Boulder Alumni

STAFFBOX

Coloradan

Volume 29, Number 1
Fall 2023

Coloradan aims to inform, inspire and foster community among alumni, friends and admirers of the University of Colorado Boulder, and to engage them in the life of the university. We strive to practice inclusive storytelling in every aspect of the publication. Our goal is to uplift and share stories that represent a wide range of CU Boulder experiences while working to develop a deeper sense of belonging for all involved with the university.

How to Reach Us

editor@colorado.edu; 303-492-8484
Koenig Alumni Center, University of Colorado, Boulder, CO 80309-0459

Update Your Address

advancement.datamanagement@cu.edu

Chancellor

Philip P. DiStefano

Vice Chancellor for Advancement

Katy Herbert Kotlarczyk

Assistant Vice Chancellor and Executive Director, Alumni Association

Ryan Christ (Kines'96; MPubAd'09)

Editor

Maria Kuntz

Senior Associate Editor

Christie Sounart (Jour'12)

Assistant Editor

Emily Wirtz

Editorial Assistants

Kiara Demare (Jour'24)
Jessica Sachs (Jour, PolSci'26)

Copy Editors

Michelle Starika Asakawa (Jour, Mktg'87), Kelsey Perry

Contributors

Glenn Asakawa (Jour'86), Patrick Campbell (EnvDes'11), Casey A. Cass, Ally Dever (StComm'19), Jessi Green, Erika Hanes, Lisa Marshall (Jour, PolSci'94), Allison Nitch, Tom Needy, Dakota Palomo, Julie Poppen (Engl'88), Thomas Sloan, Daniel Strain, Anna Tolette, Drea Torres, Matt Tyrrie

Design and Art Direction

Pentagram Austin

VISIT US AT

COLORADO.EDU/COLORADAN



THEN

1967-68

In 1968, **Sandy Hildner** (A&S'67) became CU's first woman Olympian after training with the men's ski team under coach Bob Beattie. In 1967, she won the Roch Cup downhill in Aspen, Colorado (pictured), and was the U.S. National Giant Slalom Champion before racing in the Olympic women's downhill event in Grenoble, France, the next year.

Hildner died in January 2019. On Aug. 27, 2023, she was inducted into the Colorado Snowsports Museum and Hall of Fame in Vail, Colorado.