Five questions for Balaji Rajagopalan

The walls of Balaji Rajagopalan’s office are covered with maps of the world and the United States. He is fascinated by the physical, climatological and cultural diversity represented by those illustrations, and that inspires him.

“It motivates me to learn more about them and their interconnections. It exhorts us to think and raise above our parochial and petty minuta of daily lives and provides a humbling space-time perspective on life,” said Rajagopalan, professor and chair of the CU Boulder Department of Civil, Environmental and Architectural Engineering and a Fellow at the Cooperative Institute for Research in Environmental Sciences (CIRES).

Recently, he was honored as a 2018 Fellow of the American Geophysical Union (AGU) in recognition for his research involving climate variability and its effects on the planet’s water sources, including Indian monsoon rainfall variability.

In 2000, he joined CU Boulder, which he says is an attractive environment because of its renowned researchers in diverse areas across the campus as well as nearby federal agencies such as National Oceanic and Atmospheric Administration (NOAA) and National Center for Atmospheric Research (NCAR).

1. Your research focuses on sustainable water quality and quantity for a growing population stressed by climate variability. What has your study found and what impacts or potential influence has it had?

Competition for freshwater resources, the basic necessity of life, is intense as global populations increase given the spatial and temporal variability of the resource. That is exacerbated by climate change. Ensuring that we have a safe and reliable water supply for the burgeoning global population is the defining challenge of our times.

My research is broadly in three interconnected themes: (i) understanding the large-scale climate drivers of year-to-year, multidecadal and multicentury scale variability of regional hydroclimatology (i.e., precipitation, temperature, streamflow, etc.) and extremes; (ii) developing stochastic forecasting and simulation methods of hydroclimatology, incorporating the large-scale climate drivers, and (iii) coupling the forecasts and simulations with efficient management and planning of resources.

Working with colleagues at CU, our research has proven to be of immense value in the operations, management and planning of water resources in the semi-arid river basins of the western U.S., especially the Colorado River system. This system, with all its history, culture, legal and climate constraints, offers a fascinating and multidisciplinary research problem, one that is highly relevant to our water sustainability.

Understanding the variability of flows in the Colorado River under global warming, and placing it in the context of past variability, is one of my current areas of pursuit.

2. Another area of your research deals with Indian monsoons in both contemporary times and during the Holocene. How do you conduct your research?

Uncovering the variability of the Indian monsoon at contemporary and paleo time scales is a labor of love. This understanding will potentially have a positive impact on the socio-economic health of more than a billion denizens of the Indian subcontinent. Because I grew up in India with water shortages due to the vagaries of the monsoon rainfall, this research has a special personal meaning.

Variability of monsoon during the Holocene has had significant impact in the rise and fall of civilizations in the Indian subcontinent, which offers unique lessons for modern societies experiencing warming climate variability due to climate change.
change. Collaborating with renowned paleoclimate experts at CU, in particular professor Peter Molnar of Geological Sciences and CIRES, has been highly rewarding and fulfilling.

The recent research with Peter led to quantitative reconstruction of Indian monsoon rainfall and tropical Pacific Ocean temperatures during Holocene, which offered new insights into physical mechanisms for monsoon variability during this period. We are also working together to try to apply similar methods to reconstruct and understand the variability of the monsoon during the Pliocene. During the Pliocene, the planet was much warmer than it is today and there were no polar ice caps, thus offering an analog to the warmer climate that we might enter going forward.

The monsoon research journey has been fascinating to me. As I mentioned, it is a labor of love, with no formal grant funding resulting in impactful insights. A lesson here that I take away is that sometimes not having funding liberates you to pursue creative ideas purely for the joy of discovery. Of course, a good part of it is my good fortune of crossing paths with top-notch research collaborators and colleagues.

3. Are there other areas of climate and water studies that you are pursuing?

A recent area of my research working with colleagues across CU (CU Boulder, CU Denver and the School of Medicine at the CU Anschutz Medical Campus) involves understanding and modeling climate extremes and the links to public health, especially in tropical countries. This will be a major crisis facing all of us, but it will be a critical issue for developing countries and will have global implications. Several climate extremes influence health. The most obvious is heat waves. If you are in North America or in the developed world, climate impacts are mitigated to a large extent by infrastructure. When it gets hot here, we have access to safe and reliable drinking water and air conditioning, which we take for granted. In Africa or India or Central America, however, these resources are not readily available.

In addition, in tropical countries, there are several infectious diseases such as malaria, dengue, typhoid, etc., which are climate-sensitive and influenced by the monsoonal rains. Warmer climate will make these diseases spread to northern latitudes, which will be a major public health crisis. We already see this with incidences of West Nile Virus extending to the northern parts of the United States, even in Colorado at 6,000 feet in elevation. Higher latitude and altitude will not be a robust protection as climate warms.

In this era, research problems that are intellectually challenging, exciting and have contemporary relevance reside at the intersection of disciplines. Intellectual restlessness, curiosity and willingness to learn new topics are imperative for pushing the boundaries of knowledge and have societal impact.

4. You’ve won many awards and had many achievements, including the recent AGU award. What does this award – and others – mean to you?

Being elected a Fellow of AGU by my peers is a significant milestone. Reflecting on my modest beginnings and being the first in my family to attend college, this honor is especially rewarding to me. No more than 0.01 percent of the total AGU membership is recognized for this honor. The fact that my monsoon research is highlighted in this recognition is joyful.

Two other awards that I am proud of are the Norbert Gerbier – MUMM International Award given by the World Meteorological Organization (WMO). It is awarded each year for the best paper in climate science, and we won it for our paper in Science in 2009. We uncovered flavors of the El Nin?o phenomena influencing the occurrence of droughts over India. These flavors are now used in understanding the seasonal climate variability over several parts of the globe.

The other is the Partners in Conservation Award from the Department of the Interior (DOI), which was given to a group of researchers and stakeholders who played a key role in the adoption of innovative, new operational guidelines for managing the Colorado River during drought years. Stochastic streamflow methods developed in collaboration with colleagues, in particular with my colleague professor Edie Zagona and several students, some of whom are working for
DOI, were used in the guidelines. This award was presented to the group by the Secretary of the Interior in Washington, D.C., in May 2009.

The Indian Monsoon and Colorado River are close to my heart, and being recognized for my research in both is of great personal and professional satisfaction. I have been fortunate to have great mentors, collaborators and students over the years since my time in graduate school. They continue to inspire and lead me to new frontiers to explore. They share in this recognition as much as I do.

5. What are some hobbies or leisure activities you enjoy outside of work?

Reading nonfiction and listening to all varieties of Indian and Western classical music keeps me occupied outside of work. I am also learning to play the North Indian classical percussion instrument, the tabla, for it soothes my mind. I have always been interested in Indian classical percussion, but never had the opportunity to learn an instrument formally. Last year I turned 50, and I decided to learn something new and, with the discovery of an excellent teacher in the vicinity, began learning tabla. The instrument offers more opportunities to be creative, a lot like jazz, which also made it attractive to me.

Paid parental leave policy expanded to include classified staff

In response to University of Colorado employees' requests for a paid parental leave benefit for classified staff, the university will deliver this benefit beginning Nov. 1.

Classified staff will be eligible to take 160 hours of paid parental leave. Eligible employees can take four consecutive weeks of paid leave within one year of the birth, adoption or foster placement of a child.

“We’re happy to announce the expansion of paid parental leave to our classified staff members,” said Felicity O’Herron, chief human resources officer and assistant vice president of Employee Services. “Paid parental leave is something our employees identified as a benefit needed to support themselves as they grow their families, and this expansion shows our commitment to their well-being.”

The policy expansion to classified staff was advocated by CU’s Staff Council and Faculty Council after paid parental leave was approved and expanded to include university staff this summer. CU administrators worked to balance the needs of the state classified system against the unique aspects of the CU workforce.

Ultimately, President Bruce Benson and the university decided it was most important to treat all CU employees equally, to the greatest extent possible. Accordingly, the university policy on paid parental leave was amended to extend this benefit to CU classified staff.

The Office of Policy and Efficiency (OPE) today posted full details on the revisions to APS5019-PARENTAL LEAVE BENEFITS FOR FACULTY AND STAFF. As usual, the proposed changes were reviewed by the campus chancellors and approved by President Benson. More information is available at https://www.cu.edu/ope/aps/latest-changes. More details on system policies are at http://www.cu.edu/ope.

Paid parental leave basics

Classified staff may take 13 weeks of unpaid family medical leave, as governed by state of Colorado personnel rules,
receiving pay using a combination of paid parental leave, vacation, sick leave and – in the case of birth parents only – short-term disability.

These employees must have worked for 12 consecutive months in a 50 percent or greater appointment prior to the child’s arrival to qualify for paid parental leave. Paid parental leave must be taken as part of the Family Medical Leave Act (FMLA).

Paid parental leave will be based on an employee’s base salary and has no cash value if the employee is terminated or leaves the university. It is prorated for percent of time appointments; for example, an employee who works 32 hours weekly would receive 128 hours of leave.

Who to contact

Campus human resources offices will administer all aspects of the policy, and should be contacted with questions. CU Boulder: 303-492-6475, option 0 UCCS: 719-255-3372 or HRhelp@uccs.edu CU Denver, CU Anschutz Medical Campus: HR.ParentalLeave@ucdenver.edu CU system: 303-860-4200, option 0, or systemhr@cu.edu

New social climate survey might launch in early 2019

A follow-up to the 2014 social climate survey led by the CU Board of Regents could launch as early as the first quarter of 2019, the Faculty Council heard at its Oct. 25 meeting at 1800 Grant St.

Patrick O’Rourke, vice president, university counsel and secretary of the board, spoke by phone during the meeting, summarizing recommendations he’s making to the regents and asking for faculty input.

While regents, administration and faculty found the earlier survey’s findings useful, in terms of identifying positives and areas where improvement is possible, O’Rourke said leadership later determined the survey had limitations that could be improved upon. The survey did not identify who engages in prejudicial or discriminatory conduct, where it occurs – nor what constitutes such conduct. The survey – which was distributed to all students, faculty and staff – also was too long, he said, requiring 30 minutes or more to complete.

For the next survey, O’Rourke is suggesting that the Diversity Engagement Survey, developed in part by the Association of American Medical Colleges, be considered as a model.

O’Rourke has recommended that the regents’ governance committee appoint a working group that includes regents, senior administrators and faculty representatives to review the past survey and consider alternatives for the next one.

Faculty Council Chair Joanne Addison said the governance group will continue to work with leadership on the matter in hopes of achieving “actionable results in the spring.”

In other business at last week’s Faculty Council meeting:

The council heard an update on the Faculty Housing Assistance Program, in which the university has backed 444 loans for $31.2 million since January 2004. The benefit consists of two loan programs available to tenure and tenure-track faculty: one is a shared-appreciation loan (up to 30 years) of up to $80,000, which is essentially an interest-free loan; a share of the house appreciation is due back to the university at sell, employee departure, decision to retire second mortgage, or other disposition for these loans; the other is a loan guarantee, where the CU Foundation acts as an additional party in a loan from lender to home buyer, guaranteeing the loan. Dan Wilson, CU treasurer, chief investment officer and associate vice president for budget and finance, said leadership is considering increasing the $80,000 cap, which has been in place for a decade. Also being considered is the offering of a home equity line of credit through Elevations FCU, the program’s loan provider, for participating FHAP faculty homeowners based on their assessment of the need and homeowner credit factors.
Addison noted that the Board of Regents last week chose not to expand its Presidential Search Committee, nor did it appoint a campus-based Chief Diversity Officer to the committee, as the council and its Ethnic and Minority Affairs Committee had requested\[22\]. "I still think our memo was really valuable," she said. "When I took it to the search committee chairs, it led to a really good conversation about our priorities and what we’d like to see in the next president." Addison is among the faculty members named to the search committee\[23\].

University of Colorado among tops in charitable support\[24\]

A new national ranking of institutions bolstered by charitable support recognizes the University of Colorado’s popularity among donors.

America’s Favorite Charities, a list of 100 ranked by The Chronicle of Philanthropy\[25\], places CU at No. 59.

The rankings are based on a group’s cash support in 2017 — the total value of money and stock it received as gifts from individuals, corporations and foundations. The tallies exclude government grants, donated products, and contributions to donor-advised funds.


CU is one of only three Colorado-based entities to make the list. Among the 20 public universities to be ranked nationally, CU is No. 11.

The report also tracks a decade’s worth of private support for CU, which grew 8.8 percent from 2016 to 2017 and 157.8 percent over the decade. Both percentage changes are adjusted for inflation.

By focusing solely on the fundraising of cause-driven nonprofits, the Chronicle’s new ranking provides insights into the trends affecting donations by individuals from all walks of life and the growing importance of foundation gifts to charities. It also offers a more detailed financial picture of the organizations that are the best at fundraising.

Colleges and hospitals account for 49 of the groups on the debut list. Charitable support of such institutions climbed 44 percent from 2007 through 2017, even after adjusting for inflation.

The full list is posted at philanthropy.com/AFC2018\[26\].

New gene-therapy eases chronic pain in dogs; human trials underway \[27\]

Colorado Shakespeare Festival announces 2019 season with critically acclaimed regional premiere \[28\]
Dunn talks midterm elections in first Downtown Speaker Series

Symposium takes on 21st-century challenges

CU researchers join Broncos, A-list stars to support Global Down Syndrome Foundation

The future is now: Virtual talent for virtually everyone

Technology, innovation drives work of new dean McDonald

García begins term as NACAS president

Burger named chair of Orthopedics

Goodman named co-chair of NCI Gastrointestinal Cancer Steering Committee

Election preview: What candidates for Board of Regents want you to know

In the Nov. 6 election, voters across the state will choose three members of the University of Colorado Board of
One of those races features an incumbent, Regent Glen Gallegos, R-Grand Junction, in the 3rd Congressional District. In two other contests, the winners will take over for two regents who are term limited and will depart the board after 12 years: Regent Kyle Hybl, R-Colorado Springs, in the 5th Congressional District; and Regent Stephen Ludwig, D-Denver, whose at-large seat is elected by voters statewide.

Those who win election to the nine-member board will begin serving their six-year terms in January.

CU Connections invited each candidate to respond to this request:

Please tell the faculty and staff of the University of Colorado system why you wish to serve on the Board of Regents.

(The question to Gallegos, an incumbent, is, “Why do you wish to continue serving?”)

We asked that they limit their written responses to roughly 250 words.

All six major-party candidates who are registered with the state responded to our request; three other candidates did not. Here are the answers we received:

**AT LARGE**

**Lesley Smith, D-Boulder** - https://www.lesleyforcu.org

I came to CU Boulder in 1989 on a Visiting Scientist Fellowship with the Cooperative Institute for Research in Environmental Studies (CIRES) and cherished my 29 years as an educator and research scientist. I love CU, and I have a passion for education.

As a longtime faculty member and a recent CU mom, I've not only witnessed CU's problems firsthand, but I have the experience to tackle them. CU is strong in many respects but it faces big challenges: Public funding has been cut dramatically while tuitions are through the roof; Coloradans living outside the Front Range feel excluded from CU; and there are persistent gaps in enrollment and graduation rates for black and Latinx students. Decreasing state funding for the university has also meant lower wages and benefits for faculty and graduate students, making it difficult to compete with our peer institutions for top-tier teaching and research talent.

Managing an underfunded university system as large and complex as CU will be challenging, but I held a similar position to regent as a Boulder Valley School Board member for eight years, overseeing a $400 million budget, managing the superintendent with 3,500 employees, and serving 30,000 students, all during the 2008 recession when schools faced devastating funding cuts.

Finally, the nine-member Board of Regents is lacking in one critical aspect: None of the current members have faculty experience. If elected, I will be a voice for faculty as we choose our new president and bring CU into the next decade.

Please feel free to contact me with your questions and concerns, up through and after Election Day, at Info@LesleyforCU.org.

**Ken Montera, R-Colorado Springs** - http://monteraforcuregent.com

I am running for CU regent at large because the University of Colorado changed my life. It not only built the foundation for my career but the framework for how I’ve lived my life, and now I want to give back to my alma mater and the state I love!
I am a third-generation Coloradan whose grandparents immigrated to Pueblo in the early 1900s. I come from two generations of steelworkers and farmers, a blue-collar family with a working mother where I learned independence and self-reliance at a very early age. I was the first in my family to go to a university thanks to the Presidents Leadership Scholarship offered by CU in conjunction with state civic and business leaders.

I graduated from the Leeds School of Business, studying marketing and international finance. My time at CU, my scholarship mentors and my time in Boulder significantly expanded my vision well-beyond my degree, exploding the possibilities that existed.

That vision launched a 33-year-career where I worked in increasing levels of responsibility for four Fortune 200 companies including Johnson & Johnson, Baxter Healthcare, PepsiCo and LBrands, the parent company of Victoria’s Secret and Bath & Body Works, where I was EVP of retail operations, having responsibility for roughly 40,000 associates and a multi-billion-dollar operating budget. For over 20 years, I have successfully set strategy, established and managed large budgets, selected and developed senior executives and created and fostered highly diverse and collaborative cultures.

I want a future where all Colorado students have the same opportunities I had. I believe every child has the right to fulfill their dreams regardless of where they started in life. Having lived that dream, I now want to help lead those dreams.

DISTRICT 3
Alvin Rivera, D-Pueblo - http://alvinforcu.com

As a third-generation Coloradan, I understand the critical role that CU plays in our state. As the first in my family to earn a college degree, I am a proud alumnus of four Colorado colleges, including Trinidad State, CSU Fort Collins, the University of Denver, and CU Boulder, where I received a Ph.D. in higher education administration. I worked in Washington, D.C., for 23 years before returning to Colorado, serving in two presidential administrations and the National Academy of Sciences.

I was selected the first CU Advocate of Year (2013) from among 2,300 advocates. I will continue this advocacy as regent, bringing my knowledge of CU’s strengths, resources and challenges to ensure that CU remains a state and national leader in higher education.

My top priorities will include (1) stabilizing/lowering student cost of attendance by collaborating with the universities to ensure that every CU student can graduate with manageable debt; (2) improving outreach to recruit students from rural communities to increase CU’s impact throughout the state; and (3) encouraging CU’s leadership through its research mission and ongoing collaboration with other Colorado colleges and businesses.

I have come to understand the challenges facing university systems. As one of only 50 Hispanic students among 14,000 students enrolled at CSU Fort Collins in 1966, I understood some of the issues in ensuring that campus environments are welcoming to all students and faculty. As a regent, I will expect accountability on each of the campuses in terms of recruitment, retention and openness/fairness to diverse ideas and opinions.

Glen Gallegos, R-Grand Junction - http://glengallegosforcuregent.com

During the last six years, I have been part of a great team that has included regents, administration, faculty, staff and students. The result of collaborating and working together has been great success for students, staff and the state of Colorado.
Never has the CU brand been more recognized.

With my unique skill set of education and business experience, representing rural Colorado and the minority communities, I will continue to provide continuity and leadership as we work together to meet the challenges of serving our students and the state.

I am looking forward to a second term and toward building “A University for the Future.”

DISTRICT 5

I am a high school, community college and university faculty member with 28 years’ experience in the classroom. I hold a Ph.D. (education), an M.Ed. (counseling), J.D., and both an M.A. and B.S. in International Affairs. As you can tell, I love education and teaching means a great deal to me.

Over the years, I have experienced many challenges and successes with my students, as well as interacted with remarkable administrators and staff who are just as committed to my students. I want to bring this experience to the Board of Regents, so their management of a $4 billion budget, 66,000 students and over 30,000 faculty and staff is grounded in real-world academia.

Regents need to match the significant responsibility and trust earned by the remarkable CU personnel every day with appropriate salaries and benefits. The relentlessly escalating tuition and fees endured by our students is also making CU only available to the wealthy and those students willing to take on crushing debt. As a working-class veteran and teacher, I know that I can reorient the focus of the Board of Regents to improve these and many areas where we are falling short under the current regents and CU president.


I am running for CU Regent for a few reasons:

First, I believe that universities should promote intellectual diversity and free speech to prepare graduates for the real world. The CU system should continue to improve in this respect. Regents can maintain this trajectory by appointing administrative leaders who emphasize all forms of diversity. Regents also should set policy that enhances academic freedom and encourages a learning environment that exposes students to a broad array of perspectives.

Second, I think it is imperative that we evaluate bureaucracy across the CU system to help reduce costs that contribute to higher tuition and enormous student debt upon graduation. Rising costs and the prospect of such debt result in some students failing to complete their degrees. The Board of Regents must appoint senior administrators who recognize the importance of this issue and must foster public-private partnerships to reduce costs as much as possible. As a CU regent, I believe that I will have a moral and fiduciary obligation to ensure the CU system’s fiscal health and viability, and I will bring that mentality into the boardroom.

Third, I recognize how important the CU system is to the long-term vitality of our state’s economy and future workforce. The regents oversee the third-largest employer in the state with an annual $12 billion impact on our state’s economy. Those who care about Colorado must care about the continued success of the CU system, and I hope to serve that cause.

Related reading: Election-year reminder: There are do’s and don’ts of campaign activity