

A Celebration of Faculty Achievement

Fall 2017



University of Colorado
Boulder

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ONE OF THE GREATEST PROFESSIONAL

ACHIEVEMENTS any of us can receive is when our colleagues recognize our teaching and scholarly work as being of the highest quality. Across the various colleges, departments, fields, theoretical frameworks and generations, we seek the approval of our peers within the academy. The faculty colleagues named in this publication not only have expanded our collective understanding of how the world operates, but have done so in ways that will continue to be impactful for years or decades.

As faculty, two of our primary duties are the creation and dissemination of new knowledge.

To do this properly, we must be afforded the opportunity to ask questions and seek answers. Often, these questions may challenge the status quo, require us to rethink the way we've always operated or even push society into uncomfortable situations. That said, it is my firm belief that not asking those questions and allowing potential solutions to remain unknown is more dangerous than pursuing difficult areas of inquiry.

If we were to list the academic achievements of all of our faculty members at CU Boulder, it would fill volumes while still omitting the daily work we all do to improve the lives of individual students and our community. Only a small portion of our faculty are named in this specific publication, but we all should be proud of the work described. Because while we all may not have spent hours looking through microscopes, writing and rewriting chapters, creating and perfecting new performances or artistic expressions, coding and analyzing data or developing novel scientific techniques, we all can celebrate the work of our peers.

National and International CU Faculty Recognition

- 5 Nobel laureates
- 5 National Medal of Science winners
- 9 MacArthur fellows
- 26 members of the National Academy of Engineering
- 30 members of the American Academy of Arts and Sciences
- 34 members of the National Academy of Sciences

I want to congratulate everyone named in this publication. Whether you earned tenure or promotion to the rank of full professor, received fellowships or academic prizes, have been designated as CU Boulder Distinguished Faculty or have been recognized as a member of national academic societies, you are vital contributors to the university, the state of Colorado and the nation. Thank you and congratulations.

Russell Moore

Provost and Executive Vice Chancellor for Academic Affairs

FACULTY TENURE AND PROMOTION

Tenure Recipients

(effective August 2017)

Holly Barnard, Geography

Tiffany Beechy, English

David Brain, Astrophysical and
Planetary Sciences

Bor-Yuh Evan Chang, Computer Science

Matthew Chellis, College of Music

Ming Chen, University of Colorado Law School

Nikolaus Correll, Computer Science

Robin Dowell, Molecular, Cellular and
Developmental Biology

Joel Eaves, Chemistry and Biochemistry

Holly Gayley, Religious Studies

Juliet Gopinath, Electrical, Computer and
Energy Engineering

Noah Gordon, English

Adam Hosein, Philosophy

Jonathan Hughes, Economics

Jerry Jacka, Anthropology

Stefanie Johnson, Leeds School of Business

Joel Kaar, Chemical and Biological Engineering

Kwangmin Kim, History

Monique LeBourgeois, Integrative Physiology

Tania Martuscelli, Spanish and Portuguese

Paul McKee, College of Music

Valerie McKenzie, Ecology and
Evolutionary Biology

Paul Romatschke, Physics

Stacey Smith, Ecology and Evolutionary Biology

Mike Womack, Art and Art History

Masano Yamashita, French and Italian

Jeffrey York, Leeds School of Business

Promotions to Full Professor

(effective August 2017)

Dennis Akos, Aerospace Engineering Sciences

Andy Baker, Political Science

Meredith Betterton, Physics

Adam Bradley, English

Stephanie Bryant, Chemical and Biological Engineering

Andrew Cain, Classics

Jennifer Cha, Chemical and Biological Engineering

Lee Chambers, History

Juan Dabove, Spanish and Portuguese

Jaelyn Eberle, Geological Sciences

Mileidis Gort, School of Education

Nils Halverson, Astrophysical and Planetary Sciences

R. Keller Kimbrough, Asian Languages and
Civilizations

Benjamin Kirshner, School of Education

Laura Kornish, Leeds School of Business

Stefanie Mollborn, Sociology

Tobin Munsat, Physics

Greg Odorizzi, Molecular, Cellular and Developmental
Biology

Deborah Palmer, School of Education

Jonathan Rogers, Leeds School of Business

Brenda Romero, College of Music

Scott Savage, Economics

Nicholas Schneider, Astrophysical and Planetary
Sciences

Andrew Schwartz, University of Colorado Law School

Carol Shiue, Economics

Daniel Silver, College of Music

Ivan Smalyukh, Physics

Gia Voeltz, Molecular, Cellular and Developmental
Biology

Jeffrey Weiss, Atmospheric and Oceanic Sciences

Marcia Yonemoto, History

CU BOULDER DISTINGUISHED PROFESSORS

The University of Colorado extends the title Distinguished Professor to recognize the outstanding contributions of CU faculty members to their academic disciplines. Candidates nominated for a distinguished professorship must demonstrate accomplishments in accordance with universitywide criteria.

Bernard Amadei

Professor, Civil, Environmental and Architectural Engineering



When Bernard Amadei took a group of students to a village in Belize to install a water pump in 2001, he had no intention of founding Engineers Without Borders USA or developing at CU Boulder a curriculum for engineering in developing communities. But his students' enthusiasm catalyzed both programs. In the years since, Amadei has become renowned for his expertise in developmental engineering, having presented a TedX talk on the subject and authored *Engineering for Sustainable Human Development: A Guide to Successful Small-Scale Community Projects*. A member of the National Academy of Engineering and the recipient of numerous prestigious awards, he has provided consulting services to various engineering companies and organizations around the

world, including the U.S. Department of State.

Faculty co-director of CU's Mortenson Center in Engineering for Developing Communities, Professor Amadei is at work on a book about how humans must think of water, energy, land and food as intertwined systems if they are to continue to prosper. His research explores the new field of peace engineering, which charges engineers with putting their skills to work mitigating international conflicts and building global peace. Their technological expertise particularly suits them to engaging with today's problems.

CU BOULDER DISTINGUISHED PROFESSORS

Active Distinguished Professors

Robert S. Anderson, Geological Sciences; Institute of Arctic and Alpine Research

Kristi S. Anseth, Chemical and Biological Engineering

Daniel N. Baker, Astrophysical and Planetary Sciences; Laboratory for Atmospheric and Space Physics

Christopher Bowman, Chemical and Biological Engineering

Marvin H. Caruthers, Chemistry and Biochemistry

Thomas R. Cech, Chemistry and Biochemistry

James T. Hynes, Chemistry and Biochemistry

Leslie Anne Leinwand, Molecular, Cellular and Developmental Biology

William Carl Lineberger, Chemistry and Biochemistry

Steven F. Maier, Psychology and Neuroscience

James R. Markusen, Economics

Jane A. Menken, Sociology; Institute of Behavioral Sciences

Margaret Murnane, Physics

Zoya Popovic, Electrical, Computer and Energy Engineering

Daniel J. Scheeres, Aerospace Engineering Sciences

Pierre J. Schlag, University of Colorado Law School

Lorrie Shepard, School of Education

Margaret A. Tolbert, Chemistry and Biochemistry; Cooperative Institute for Research in Environmental Sciences

Linda R. Watkins, Psychology and Neuroscience

Carl E. Wieman, Physics; JILA

Charles F. Wilkinson, University of Colorado Law School

Retired Distinguished Professors

Frank Stephenson Barnes, Electrical, Computer and Energy Engineering

Roger G. Barry, Geography; Cooperative Institute for Research in Environmental Sciences

Andrzej Ehrenfeucht, Computer Science

Margaret A. Eisenhart, School of Education

Delbert S. Elliott, Sociology; Institute of Behavioral Science

Barbara Alpern Engel, History

Fred W. Glover, Leeds School of Business

Kris Gutiérrez, School of Education

Richard Jessor, Psychology and Neuroscience; Institute of Behavioral Science

Richard McCray, Astrophysical and Planetary Sciences

J. Richard McIntosh, Molecular, Cellular and Developmental Biology

Marjorie K. McIntosh, History

Allan McMurray, College of Music

Norman R. Pace, Molecular, Cellular and Developmental Biology

Wolfgang Schmidt, Mathematics

William B. Wood, Molecular, Cellular and Developmental Biology

Deceased Distinguished Professors

Hazel E. Barnes, Philosophy

George Born, Aerospace Engineering Sciences

Kenneth Boulding, Economics

James S. (Stan) Brakhage, Film Studies

Stuart Cook, Psychology and Neuroscience; Institute of Behavioral Science

Stanley Cristol, Chemistry and Biochemistry

Stephen Fischer-Galati, History

David Hawkins, Philosophy

Robert L. Linn, School of Education

Keith R. Porter, Molecular, Cellular and Developmental Biology

David Prescott, Molecular, Cellular and Developmental Biology

Gilbert White, Geography



PRESIDENT'S TEACHING SCHOLARS AT CU BOULDER

This program, established in 1989 as a University of Colorado presidential initiative, honors faculty members who have excelled in teaching and scholarship, creative work or research, and who promote teaching excellence throughout the university. President's Teaching Scholars are chosen for their capacity to improve education and increase its possibilities across the university. They serve as ambassadors for teaching, as well as for research focused on improving teaching and learning.

Elizabeth Bradley

Professor, Computer Science



Liz Bradley is a member of the task force for CU Boulder's BioFrontiers Institute, a multidisciplinary organization uncovering new knowledge at the frontiers of science, which works with industry to develop exciting discoveries into practical tools for remaking the world. Her current research focuses on nonlinear dynamics and chaos, scientific computation and artificial intelligence, and fluid dynamics and flow control. She is the recipient of a National Young Investigator award, a Packard Fellowship and a Radcliffe Institute Fellowship. Her pedagogy's effectiveness and ingenuity are widely recognized, and in 1999 she was awarded the John and Mercedes Peebles Innovation in Teaching Award by CU's College of Engineering. This honor was

determined based on student votes; indeed, in written assessments, students consistently rate professor Bradley's teaching highly. Her pedagogical influence extends beyond CU as well: She has worked with the Santa Fe Institute to develop digital strategies for teaching nonlinear dynamics in massive open online courses.

Professor Bradley did her undergraduate and graduate work at MIT and has been with the Department of Computer Science at CU Boulder since 1993. She holds appointments and affiliations with the Department of Electrical and Computer Engineering and the Department of Applied Mathematics. She has written 80-plus journal and refereed conference papers and book chapters, as well as two edited books.

Matthew Hallowell

Associate Professor, Civil, Environmental and Architectural Engineering



Matt Hallowell joined CU Boulder in 2008 after earning his PhD from Oregon State University. He directs the Colorado Construction Safety Laboratory, housed within the construction engineering and management program at CU Boulder. A specialist on construction safety, he promotes the lab's mission to conduct innovative and rigorous research that improves hazard risk management in the construction industry by integrating hazard identification, assessment and response into all facets of civil engineering education. He has published widely on construction safety and strategic safety management practices. Public engagement is an important part of Professor Hallowell's scholarship, and he has overseen and participated in projects for the Colorado Department

of Transportation, the Construction Industry Institute and the National Institute for Occupational Safety and Health, among others.

Hallowell is a regular recipient of university honors for his skill and commitment to teaching. In 2012 the College of Engineering and Applied Science awarded him the John and Mercedes Peebles Innovation in Teaching Award, and in 2013 he received the Outstanding Advisor Award. He is, in addition, director of the President's Teaching and Learning Collaborative on the Boulder campus. The collaborative is a systemwide initiative that encourages faculty across CU to conduct research on teaching and learning, intended for refereed publication; it arises from a commitment to improving the theory and practice of teaching.

PRESIDENT’S TEACHING SCHOLARS AT CU BOULDER

Active Scholars

Brian Argrow, Aerospace Engineering Sciences

Daniel Barth, Psychology and Neuroscience

Martin Bickman, English

Lee V. Chambers, History

Diane Atnally Conlin, Art and Art History; Classics

Alexander Cruz, Ecology and Evolutionary Biology

James H. Curry, Applied Mathematics

Scot Douglass, Engineering; Herbst Humanities

Elsbeth Dusinberre, Classics

Michael Eisenberg, Computer Science

John L. Falconer, Chemical and Biological Engineering

Noah Finkelstein, Physics

David Klaus, Aerospace Engineering Sciences

Clayton Lewis, Computer Science

Andrew Martin, Ecology and Evolutionary Biology

Roseanna Neupauer, Civil, Environmental and Architectural Engineering

Helen Norton, University of Colorado Law School

Valerie Otero, School of Education

Steven J. Pollock, Physics

Harihar Rajaram, Civil, Environmental and Architectural Engineering

Ed Rivers, English

Harvey Segur, Applied Mathematics

J. Michael Shull, Astrophysical and Planetary Sciences

Diane Sieber, Herbst Humanities

Eric Stade, Mathematics

Linda R. Watkins, Psychology and Neuroscience

Carl Wieman, Physics

Retired Scholars

Douglas Burger, English

Anne Costain, Political Science

Stanley A. Deetz, Communication

Michael Grant, Ecology and Evolutionary Biology

Jack Kelso, Anthropology

William Krantz, Chemical Engineering

Ronald Melicher, Leeds School of Business

Dale Meyer, Leeds School of Business

Wesley Morriston, Philosophy

James Palmer, Film Studies

Norton Steuben, University of Colorado Law School

James Symons, Theatre and Dance

John R. Taylor, Physics

Dennis Van Gerven, Anthropology

Marianne Wesson, University of Colorado Law School

Deceased Scholars

Nancy K. Hill, Humanities

Robert Pois, History

David M. Prescott, Molecular, Cellular and Developmental Biology

Klaus Timmerhaus, Chemical Engineering

Shelby Wolf, School of Education

CU BOULDER FACULTY AWARDS

2017 Provost's Faculty Achievement Awards

These annual awards are presented to faculty members who have recently offered significant publications or creative contributions in their academic fields. Awardees receive a research grant and a plaque recognizing their achievement.

Pre-Tenure

Alexia Brunet Marks, University of Colorado
Law School

Austin Okigbo, College of Music

Elias Sacks, Religious Studies

Leah Sprain, Communication

Tenured

Nabil Echchaibi, Media Studies

Noah Fierer, Ecology and Evolutionary Biology

Mahmoud Hussein, Aerospace Engineering Sciences

Carter Pann, College of Music

Sean Shaheen, Electrical, Computer and Energy
Engineering

Deborah Whitehead, Religious Studies

Rui Yi, Molecular, Cellular and Developmental Biology

College of Arts and Sciences Professor of Distinction

The honorary title Professor of Distinction is reserved for scholars and artists of national and international distinction who are recognized by their peers as teachers and colleagues of exceptional talent. Appointments to this title are made from those holding the rank of professor in the College of Arts and Sciences.

Mark Amerika

Professor, Art and Art History; Intermedia Art, Writing and Performance



Mark Amerika has exhibited his interdisciplinary artwork in venues ranging from the Whitney Biennial and the Denver Art Museum to the Institute of Contemporary Arts in London and the Istanbul Biennale. A cult novelist, media theorist, web publisher and live audio/visual artist who has performed internationally, he is the author of many books of fiction and nonfiction, including *remixthebook* (2011), and a large collection of artist writings titled *META/DATA: A Digital Poetics* (2009).

In 2009–10, the National Museum of Contemporary Art in Athens, Greece, featured Amerika's comprehensive retrospective exhibition *UNREALTIME*, which included his groundbreaking works of Internet art, *Grammatron* and *Filmtxt*, as well as his feature-length work of mobile cinema, *Immobilité*. His transmedia narrative, Museum of Glitch Aesthetics, is a multiplatform net artwork commissioned by Abandon Normal Devices in conjunction with the London 2012 Olympic and Paralympic Games.

A frequent keynote speaker, Amerika has presented his art and contemporary art theories to audiences around the world. Events he has keynoted include the Disrupting Narratives symposium at the Tate Modern, the Digital Interconnections festival in Tokyo, the Ciber@rt Bilbao festival in Spain and the Seminário Internacional de Cinema e Audiovisual in Salvador, Brazil.

CU BOULDER FACULTY AWARDS

Martha Palmer

Professor, Linguistics; Computer Science



For more than 20 years Martha Palmer has been researching natural language processing, exploring how humans communicate knowledge. While doing graduate work at the University of Edinburgh in the 1980s, she contributed to the semantic interpretation process that formed the basis for the text processing system Pundit, a program funded by the U.S. Department of Defense and built at Unisys. This system integrated semantic and pragmatic processing in innovative ways that enabled sophisticated reference resolution and temporal analysis, and led to insights into the use of computational semantics that have continued to inform Palmer's research.

Professor Palmer is co-editor of the *Journal of Natural Language Engineering and LiLT: Linguistic Issues in Language Technology*, and is a 2010 recipient of the Boulder Faculty Assembly Research Award. She is co-director of CU Boulder's Center for Computational Language and Education Research (CLEAR), a multidisciplinary effort that works to advance human language technology and apply it to personalized learning for diverse populations.

Mark Serreze

Professor, Geography; Cooperative Institute for Research in Environmental Sciences



Mark Serreze's upbringing amid Maine's snowy winters inspired him to study ice. He earned his PhD from CU Boulder in 1989 and became director of the university's National Snow and Ice Data Center, a project of the Cooperative Institute for Research in Environmental Sciences (CIRES), in 2009.

Many scholars esteem Serreze's expertise in Arctic Sea decline: shrinking sea ice, rapidly rising temperatures and thawing permafrost result from global warming, and studying these conditions leads Serreze to express serious concern about the dangers of climate change. He is very active in science outreach

and education, and he argues that "Today, more than ever, it is important that scientists reach out and make science more accessible and relevant to society." His recent research addresses the predictability of Arctic sea ice conditions on seasonal time scales, with the aim of being able to predict winds, currents and related conditions months in advance. This capacity to forecast Arctic weather patterns is invaluable because the Arctic has become such a busy place for marine shipping, oil and natural gas exploration, tourism and other activities.

CU BOULDER FACULTY AWARDS

Distinguished Research Lectureship

The Distinguished Research Lectureship is among the highest honors bestowed by the faculty upon its members at CU Boulder. It honors tenured faculty members widely recognized for a distinguished body of academic or creative achievement as well as for contributions to the educational and service missions of CU Boulder. Each awardee receives an honorarium and presents a lecture on his or her research to the wider university community. More than 100 CU Boulder faculty members have been selected for this honor.

Christopher Bowman

Distinguished Professor, Chemical and Biological Engineering



Christopher Bowman's research combines engineering and material science with organic chemistry to, in his words, "address problems that couldn't be addressed otherwise." As co-director of the National Science Foundation I/UCRC (Industry–University Cooperative Research Centers) Program on Fundamentals and Applications of Photopolymerizations, housed jointly at CU Boulder and the University of Iowa, Bowman heads research that has led to the development of new polymer materials and mechanisms. Many of these new materials are dental restoratives, like cavity fillings and teeth sealants. His lab also works on so-called smart materials that respond when exposed to light or when heated, as well as on substances that solidify faster or are stronger than today's available industrial components. These innovations could prove useful for micro- and nanotechnology applications in wound healing.

Bowman, who has been awarded more than a dozen patents, is a fellow of the National Academy of Inventors. In addition to heading the Materials Science and Engineering Program at CU Boulder, he is a clinical professor of dentistry at the University of Colorado Health Sciences Center.

Elsbeth Dusingberre

Professor, Classics



Elsbeth Dusingberre primarily teaches Greek and Near Eastern archaeology at CU Boulder. She is a President's Teaching Scholar and has been awarded 12 University of Colorado teaching awards, including the Boulder Faculty Assembly Award for Excellence in Teaching (2005).

Professor Dusingberre studies cultural interactions in Anatolia (Asian Turkey), particularly investigating how the Achaemenid Persian Empire (ca. 550–330 BCE) affected local social structures and was, in return, changed by those interactions. She is currently scrutinizing the seal impressions on the Aramaic tablets of the Persepolis Fortification Archive (dating ca. 500 BCE) and the cremation burials from Gordion, the capital city of ancient Phrygia. She has worked at Sardis, Gordion and Kerkenes Dag in Turkey, as well as at sites elsewhere in the eastern Mediterranean.

She is author of three books and one co-edited volume, along with numerous journal articles. Dusingberre's book *Empire, Authority and Autonomy in Achaemenid Anatolia* received the James R. Wiseman Award from the Archaeological Institute of America in 2015.

CU BOULDER FACULTY AWARDS

Hazel Barnes Prize

The \$20,000 Hazel Barnes Prize is the most prestigious honor awarded to a faculty member by the university, and it recognizes the enriching relationship between teaching and research. It was established in 1991 by former chancellor James Corbridge in honor of CU Boulder philosophy professor emerita Hazel Barnes, who taught at CU Boulder from 1943 to 1986 and was noted for her interpretations of the works of French philosopher Jean-Paul Sartre. Nominees are tenured faculty members who not only are outstanding teachers but also have distinguished records in research and scholarship.

Michele Moses (awarded October 2016)

Professor, School of Education



Associate dean for graduate studies in the School of Education, Michele Moses is a philosopher of education concerned with education policy. Her research focuses on how democracy, equality and race intertwine in education.

Professor Moses integrates student mentorship into her research, which is one reason she was awarded the Hazel Barnes Prize. In 2008 she invited graduate students to collaborate with a diverse group of scholars on a two-year research project examining a statewide ban on affirmative action that Colorado voters rejected. “It was an opportunity for mentoring and collaborating with my students, while integrating my discipline of philosophy into survey analysis, community dialogues and interviews of study participants,” she says. Moses emphasizes that this sort of collaboration allows her students “to experience a research project from inception to completion—including funding, researching, presenting and publishing.”

In the true spirit of the Hazel Barnes Prize, Moses’s recently published book, *Living with Moral Disagreement: The Enduring Controversy about Affirmative Action* (2016), includes a chapter that she co-wrote with two CU Boulder doctoral students, Lauren Saenz and Amy Farley Lobue.

Thomas R. Cech (awarded March 2017)

Distinguished Professor, Chemistry and Biochemistry



Colorado’s first Nobel Prize winner, Thomas R. Cech directs CU’s BioFrontiers Institute, which draws upon resources and talents from across the university system to develop technological solutions to human health problems that transcend traditional academic and institutional boundaries. He shared the 1989 Nobel Prize in chemistry for his discovery that RNA in living cells not only encodes information but also can function as a catalyst. His discovery laid the foundation for advances in molecular genetics and gave rise to an expanding appreciation of the roles of RNA in biology.

Cech’s role in teaching is equally impressive. He routinely teaches general chemistry to freshmen, using “clickers” and in-class demonstrations to encourage student interaction. He engages undergraduate learning assistants to help fellow students master the material while also honing their own teaching skills. And he has led the development of an innovative graduate student education program at BioFrontiers called the Interdisciplinary Quantitative Biology (IQ Biology) PhD certificate program. The IQ Biology program currently has 38 active doctoral students, who can choose to work with mentors in 13 departments.

CU SYSTEM FACULTY AWARDS

Kayden Book Award

Named for Eugene M. Kayden, a 1912 CU Boulder alumnus who went on to a distinguished career as a scholar and teacher of economics, this award is open to faculty members in the humanities. Awardees receive a research stipend, and their departments receive grants to organize a one-day, author-meets-critics symposium on their award-winning books.

Andrew Cain

Professor, Classics



The Greek Historia Monachorum in Aegypto: Monastic Hagiography in the Late Fourth Century (Oxford University Press, 2016) details one of the most widely read and disseminated Greek hagiographic texts of Late Antiquity and the Middle Ages. Offering accounts of the lives of the Desert Fathers, the monachorum continues to be a core primary source for fourth-century Egyptian monasticism as well as one of the most fascinating, yet perplexing, pieces of monastic hagiography to survive from the entire patristic period. Cain has taken a cross-disciplinary approach, incorporating insights from source criticism, stylistic and rhetorical analysis, literary criticism and historical, geographical and theological

studies to challenge scholarly orthodoxy about a broad range of the text's interpretive issues and problems. Passages under discussion are presented in their original Greek (and Latin) and accompanied by a new English translation.

Professor Cain specializes in late antique Greek and Latin literature but studies and teaches Latin literature from the Classical period to the Renaissance. He is the author of over two dozen articles and six books, including four on Saint Jerome of Striden (347–420 AD), and co-editor of two books. He is associate editor of the *Journal of Late Antiquity* and serves on the editorial board of two book series, *Fathers of the Church* (Catholic University of America Press) and *Writings from the Greco-Roman World* (Brill).

Kayden Book Award—Honorable Mention

Terry Kleeman

Professor, Asian Languages and Civilizations; Religious Studies

History and Ritual in Early Daoist Communities (Harvard University Press, 2016)

CU SYSTEM FACULTY AWARDS

Robert L. Stearns Award

The Stearns Award was initiated in 1953, the year of the resignation of Robert L. Stearns (A&S'14), who, as the sixth president of the university, had presided over CU since 1939. Given by the CU Boulder Alumni Association, the award recognizes members of the faculty and staff for extraordinary achievement or service in any one or combination of the following areas: teaching, service to the university, work with students, research or off-campus service.

Robert H. Davis

Professor, Chemical and Biological Engineering



From 2002 to June 2017, Robert Davis was dean of the College of Engineering and Applied Science. He holds the Tisone Endowed Chair and has been on the CU Boulder faculty for 33 years. As dean, Davis was instrumental in launching programs that have increased quality and diversity, including the Broadening Opportunities through Leadership and Diversity (BOLD) Center, the Engineering Honors Program, the Engineering Leadership Program and three Residential Academic Programs (RAPs). Davis also championed the creation of eight undergraduate and graduate degree programs and worked to have the ATLAS Institute join the college. His launch

of the strategic plan Engineering 2020 has the college on a path to be ranked among the top 20 U.S. engineering programs. The national reputation of the college's research also advanced under his tenure.

Professor Davis's research and teaching interests are in biotechnology, complex fluids and membrane separations, with more than 200 reviewed publications in these fields, plus six publications on teaching and mentoring. He has supervised over 60 graduate students, 12 postdoctoral associates and 150 undergraduate students on related research projects.



CU SYSTEM FACULTY AWARDS

Chase Corporation Faculty Community Service Award

The Chase Corporation endows this award, which the Office of Academic Affairs administers. The award honors a CU faculty member who volunteers exceptional service to the community in excess of his or her contracted university responsibilities. Awardees have demonstrated a deep commitment to service, education, humanitarianism and civic responsibility.

Benjamin R. Kirshner

Professor, School of Education



When Ben Kirshner was working as an educator for the San Francisco Conservation Corps, he witnessed how poignant education can be when it takes place in the streets, public parks and community centers. He noticed that students who performed poorly in school often blossomed in a public setting, using critical thinking and complex planning to undertake community work projects. In the years since, his research has focused on expanding this insight into a fully developed pedagogy of public participation. Kirshner investigates how organized outside-of-school learning, including tutoring programs and youth groups, can improve students' educational outcomes, especially for disadvantaged and

minority communities. He is especially attentive to educational scenarios in which students work with adults to address systemic inequalities in their own communities. He puts this research into practice as the faculty director for CU Engage, the Center for Community-Based Learning and Research, by working to establish stronger relationships between the university and local community partners to meet public challenges.

Professor Kirshner recently completed an international study of youth organizing, looking at cases in South Africa, Ireland and the United States. His book *Youth Activism in an Era of Education Inequality* received the 2016 Best Authored Book award from the Society for Research on Adolescence.

CU SYSTEM FACULTY AWARDS

President's Diversity Award

Given by the president of the University of Colorado statewide system, this award can be presented to faculty, students, staff, academic or administrative units that have contributed to maintaining CU as a diverse scholarly community, and one that is welcoming and nurturing to myriad perspectives. There may be up to four awards per year.

Lecia Barker

Associate Professor, Information Science



Lecia Barker studies the social contexts and educational strategies best suited to achieving information literacy in our rapidly digitizing society. In addition to investigating best practices for information technology pedagogy, Barker researches the ideologies and cultural assumptions that structure computer education and the technology industry. For instance, she has written about how to achieve gender parity in computer education, which could remedy the gender disparity in the tech industry and correct its often criticized hiring and pay practices. A consistent concern in her research is improving women's representation in the industry, and she serves as a senior research scientist for the National Center for Women and Information Technology.

Professor Barker has published academic articles in numerous peer-reviewed books and journals and has secured competitive research grants from the National Science Foundation and the National Institutes of Health, among other organizations. She has served as an advisor for many organizations, including the College Board, CSNYC, Harvard, Harvey Mudd and a Georgia Tech/University of Massachusetts partnership. In addition, she works to influence and educate technology professionals about her research by writing public-facing articles.



BOULDER FACULTY ASSEMBLY AWARDS

Excellence in Leadership and Service

Kirk Ambrose

Professor, Art and Art History



After earning his PhD at the University of Michigan in 1999, Kirk Ambrose began teaching in the Department of Art and Art History, which he currently chairs. In addition to many articles and book chapters, he is the author of two books on late antique and medieval sculpture, and is a co-editor of *Current Directions of Romanesque Sculpture Studies* (2010). His translations include “A Medieval Food List from the Monastery of Cluny” (originally in Latin), published in the journal *Gastronomica* in 2006. He is currently at work on, among other projects, a volume on Portuguese Romanesque sculpture. In 2015 he presented “Pioneers: Women Artists in Boulder, 1890–1950” as part of CU Boulder’s “CU on the Weekend” continuing education program. He further serves as editor-in-chief of *The Art Bulletin*, the journal of record for art historians in the United States.

Virginia Anderson

Professor, History



Virginia Anderson specializes in the history of Colonial and Revolutionary America. Her book *Creatures of Empire: How Domestic Animals Transformed Early America* (2004) combined ethnohistorical and environmental history approaches to examine the impact of imported livestock on Anglo-Indian relations in the North American colonies. More recently she turned her focus to the 18th century, exploring the history and public memory of the American Revolution. The resulting book, *The Martyr and the Traitor: Nathan Hale, Moses Dunbar, and the American Revolution* (2017), offers a rare joint biography of both a patriot and a loyalist. Anderson is also co-author of a U.S. history textbook, *The*

American Journey, and is a longtime leader in her department. One colleague noted that she is a “top-notch scholar” who also has “enormous competence, administrative acumen and good will,” pays attention to details and works “without drama or complaint.”

Anderson, who earned her PhD at Harvard University and joined the CU Boulder history department in 1985, was awarded a Fellowship for University Teachers through the National Endowment for the Humanities. She is an elected member of the American Antiquarian Society and the Society of American Historians.

BOULDER FACULTY ASSEMBLY AWARDS

Brian Catlos

Professor, Religious Studies



Brian Catlos studies the social, economic and cultural interaction of ethno-religious groups in the Medieval Mediterranean, focusing especially on Christians, Muslims and Jews in Iberia. He has been a member of the Religious Studies faculty at CU Boulder since 2010 and is also affiliated with the history department and the Humanities and Jewish Studies programs. He directs the University of Colorado Mediterranean Studies Group and co-directs the Mediterranean Seminar, an international forum for scholarly collaboration in the field of Mediterranean studies. His book *Muslims of Latin Christendom* was awarded the Albert Hourani Book Prize by the Middle East Studies Association, and his book *Infidel Kings and Unholy Warriors* received an honorable mention in the PROSE Awards.

Professor Catlos is known for his ability to bring faculty together in productive conversations. He regularly delivers lectures, talks and conference papers in North America and Europe. Catlos has traveled extensively on five continents (once hitch-hiking from London to Istanbul and back) and has lived, worked and studied in North America, Europe, the Middle East and Latin America. He also writes, contributes to and consults for travel publications, and is involved in documentary film.

Cora Randall

Professor, Atmospheric and Oceanic Sciences; Laboratory for Atmospheric and Space Physics



Cora Randall earned her PhD in chemistry from the University of California at Santa Cruz in 1985. After an initial research career investigating the optical characteristics of proteins, she joined the University of Colorado in 1989 to work on the Hubble space telescope. In 1993 she began studying the Earth's nearer atmosphere more intensely. Her main area of expertise is satellite remote sensing of the Earth's middle atmosphere, particularly surrounding the polar regions. She investigates processes related to stratospheric ozone depletion, among other interests.

Professor Randall teaches courses in chemistry, climate, radiative transfer and remote sensing. She is a current or past member of numerous international satellite science teams and is principal investigator on the Cloud Imaging and Particle Size (CIPS) experiment of the NASA Aeronomy of Ice in the Mesosphere (AIM) satellite mission. She has published more than 100 papers in refereed scientific journals.

In addition to chairing her department, Randall recently co-led efforts on behalf of the College of Arts and Sciences to revise its core curriculum.

BOULDER FACULTY ASSEMBLY AWARDS

Excellence in Research, Scholarly and Creative Work

Michelle Ellsworth

Professor, Theatre and Dance



Michelle Ellsworth is unique among the dance faculty for teaching dance, theater and Arts & Sciences “special courses” that boldly combine dance, theater, science, music and film.

Ellsworth creates solo performance work, performable websites, drawings and videos. She uses her expansive definition of dance, as well as video, text, performance, sculpture and the Internet, to explore topics ranging from pharmaceutical art to experimental surveillance, often with a sense of absurdity and humor. Consistently commingling technology with commonplace objects, her recent works were highlighted in the *New York Times* article “Best

Dance of 2015” under the heading Dances with Gadgets.

Ellsworth is associate director of the ATLAS Institute’s Center for Media, Arts and Performance (CMAP). In 2015 she won an \$80,000 Doris Duke Impact Award—one of 100 artists recognized by the foundation for their work in the fields of music, theater and dance. She is a 2013 Creative Capital Grantee and a 2011 United States Artists Knight Fellow, and she was named a Guggenheim Fellow in 2016.

Graeme Forbes

Professor, Philosophy



A well-respected expert in the field of linguistic intensionality, Graeme Forbes works mainly in semantics, metaphysics and logic. His book *Attitude Problems* (2006) presents an original account of the power of intensional transitive verbs such as “want,” “seek,” “imagine” and “worship” to structure human beings’ mental lives. Forbes offers a theory of how such verbs work that draws on ideas from natural language semantics, the philosophy of language and aesthetics.

Professor Forbes is also the author of a widely used logic textbook, *Modern Logic* (first edition 1994), which has been called a “rigorous but accessible” introduction to elementary logic. He has held research fellowships at New College, Oxford, and Edinburgh University.

BOULDER FACULTY ASSEMBLY AWARDS

Reiland Rabaka

Professor, Ethnic Studies



A distinguished scholar as well as a poet, spoken-word artist and jazz musician, Reiland Rabaka is an award-winning professor of Africana studies. He is affiliated with CU's Women and Gender Studies and Humanities Programs as well as the Graduate Program in Critical Theory, the School of Education, the College of Music and the College of Media, Communication and Information.

Professor Rabaka is the author of more than 50 scholarly articles and book chapters, as well as a dozen books, including a trilogy about the hip-hop movement. His research has been recognized with funding awards from the National Endowment for the Humanities, the National Endowment for the Arts, the National Science Foundation, the National Museum of African American History and Culture, the National Museum of American History, and the Smithsonian Institution. He has conducted archival research and lectured extensively nationally and internationally, and has received numerous community service citations, teaching awards and research fellowships. Rabaka's cultural criticism, social commentary and political analysis have been featured in print and on radio, television and online media venues.

Excellence in Teaching and Pedagogy

Paul Strom

Senior Instructor, Honors Residential Academic Program (RAP)



Paul Strom has a deep and long-nurtured commitment to teaching at CU Boulder. He ventured from New Mexico to attend CU in 1967, earning a BA in mathematics and physics. He participated in the first CU Study Abroad program at the University of Lancaster, England, during the turmoil of the Vietnam War era and eventually earned a PhD in religion and social change from the University of Denver and the Iliff School of Theology.

Soon after completing his doctorate he was invited to teach a course for the Kittredge Honors Program called "The Ethics of Ambition." Not only has Strom been teaching a version of this course ever since, but this teaching opportunity led to an invitation to direct the Kittredge Honors Program in 1999. The program moved and changed its name to the Honors Residential Academic Program (RAP), but Strom has continued to teach honors seminars, including "Nonviolence and the Ethics of Social Action," that reflect his personal, research and writing interests in the strategies of nonviolent social transformation. He is also the Faculty in Residence for Honors at Smith Hall.

ADDITIONAL ACADEMIC ACHIEVEMENTS

Each year, faculty members at CU Boulder receive many honors and recognitions from beyond campus. They range from the local to the international and honor the work of faculty in teaching, research and service. The following are some of the most prestigious awards. They serve as a sample of the much larger list of recognitions garnered by our faculty.

American Academy of Arts and Sciences

Founded in 1780, the American Academy of Arts and Sciences is an international learned society composed of the world's leading scientists, scholars, artists, business people and public leaders. The academy is renowned for providing reasoned commentary on matters of public policy, governance and education.

Active Members

Thomas Blumenthal, Molecular, Cellular and Developmental Biology (2010)

Marvin H. Caruthers, Chemistry and Biochemistry (1994)

Thomas R. Cech, Chemistry and Biochemistry (1988)

Eric Cornell, Physics; JILA (2005)

Lawrence Gold, Molecular, Cellular and Developmental Biology (1993)

James T. Hynes, Chemistry and Biochemistry (2008)

Alison M. Jaggard, Women and Gender Studies (2017)

Leslie Anne Leinwand, Molecular, Cellular and Developmental Biology (2014)

William Carl Lineberger, Chemistry and Biochemistry; JILA (1995)

Karolin Luger, Chemistry and Biochemistry (2017)

Jane A. Menken, Sociology; Institute of Behavioral Science (1990)

Josef Michl, Chemistry and Biochemistry (1999)

Margaret Murnane, Physics (2006)

David Nesbitt, Chemistry and Biochemistry; Physics (2014)

Roy Robert Parker, Chemistry and Biochemistry (2010)

Veronica Vaida, Chemistry and Biochemistry (2012)

Carl E. Wieman, Center for Science Education (1998)

David Wineland, Physics (2014)

Retired Members

J. Richard McIntosh, Molecular, Cellular and Developmental Biology (1999)

Robert F. Nagel, University of Colorado Law School (2003)

Norman R. Pace, Molecular, Cellular and Developmental Biology (1991)

Wolfgang Schmidt, Mathematics (1994)

Noboru Sueoka, Molecular, Cellular and Developmental Biology (1969)

William B. Wood, Molecular, Cellular and Developmental Biology (1976)

Deceased Members

Linda S. Cordell, Anthropology (2008)

Charles H. DePuy, Chemistry and Biochemistry (2003)

Deborah Jin, Physics; JILA; National Institute of Standards and Technology (2007)

David M. Prescott, Molecular, Cellular and Developmental Biology (1970)

Walter Orr Roberts, Astro-geophysics (1960)

Gilbert White, Geography (1969)

ADDITIONAL ACADEMIC ACHIEVEMENTS

American Association for the Advancement of Science

Founded in 1848, the American Association for the Advancement of Science is the world's largest general scientific society and publisher of the journal *Science*. Fellows of the association are elected by their peers in recognition of their scientifically or socially distinguished efforts to advance science or its applications.

Owen Mason

Research Associate, Institute of Arctic and Alpine Research



Owen Mason received his PhD from the University of Alaska in 1990, and the area's rich natural and human history have continued to captivate his attention during his time as a research associate for CU's Institute for Arctic and Alpine Research. Mason studies coastal geomorphology, geoarchaeology and the prehistory of northwest Alaska. He was part of a National Science Foundation-funded project that discovered the first prehistoric bronze artifact ever found in Alaska, which likely originated in Asia. This research is part of Mason's larger project to study how humans have responded to drastic climatological shifts during previous eras. By turning to the past, he hopes we can better respond to our own future of

climate insecurity. Professor Mason's research shows us that the harsh conditions of inhospitable environments profoundly shape human life. He has published scholarly articles in journals such as the *Journal of Archaeological Science*, *American Antiquity* and *Evolutionary Anthropology*.

Markus B. Raschke

Professor, Physics



Markus Raschke joined the physics department in 2010 and heads the Center for Ultrafast-Nano Optics. Using a combination of ultrafast and shaped laser pulses with scanning probe microscopy, he and his research team apply their techniques to develop new spectroscopy modalities with a broad range of uses. In 2016 the center announced a record-breaking new optical microscope that can capture images at both the ultrafast and the nano scales.

Professor Raschke sits on the editorial board of the journal *Progress in Surface Science*, is associate editor of *Science Advances* and is a guest editor of *Synchrotron Radiation News*. Author or co-author of more than 100 journal articles and papers, he holds several U.S. patents related to nano-optics and has partnered with the Lawrence Berkeley National Laboratory, the Pacific Northwest National Laboratory and private enterprises to develop infrared spectroscopy. Earlier this year he was awarded the Wilhelm Bessel Award from the Humboldt Foundation, given in recognition of lifetime achievements in research. Award winners are invited to conduct research projects of their choice in cooperation with colleagues in Germany, with the goal of promoting international scientific cooperation.

ADDITIONAL ACADEMIC ACHIEVEMENTS

American Council of Learned Societies Fellows

The American Council of Learned Societies is the leading private institution supporting scholars in the humanities and related social sciences at the doctoral and postdoctoral levels. In the 2016–17 competition year, the ACLS awarded more than \$18 million in fellowships and grants to individual scholars for excellence in research in the humanities and related social sciences.

Jill Harrison

Associate Professor, Sociology



As an acute investigator of social injustice, Jill Harrison has developed a reputation for incisive observations about why and how environmental and workplace inequalities persist in the United States today. Her book *Pesticide Drift and the Pursuit of Environmental Justice* (2011) studies the political conflicts concerning the movement of pesticides beyond their intended target zones in the state of California. From that focused study she identifies related problems of urgent concern throughout the United States and offers potential solutions. Harrison noticed that despite a massive state regulatory apparatus devoted to preserving public health, pesticide pollution and

the human illnesses associated with it still disproportionately afflict poor residential areas in California. She argues that this discrepancy arises from the fact that the agricultural industry, environmental regulators, and activists hold different and conflicting views about how to define “justice” in this case. In 2012 *Pesticide Drift* was honored with awards from two scholarly societies, the Rural Sociological Society and the Association of Humanist Sociology.

Professor Harrison’s scholarly vocation, seen in her many publications, also includes public outreach, and her research into recent immigration enforcement escalations in rural Wisconsin well prepared her to serve as a member of the Wisconsin Governor’s Council on Migrant Labor (2009–11) and a board member for the Wisconsin Migrant Coalition (2008–11). Her newest research project considers how government agencies go about institutionalizing the principles of environmental justice, what is lost in that transition and what, potentially, is gained.

ADDITIONAL ACADEMIC ACHIEVEMENTS

Previous CU Boulder ACLS Fellows

Virginia DeJohn Anderson, History (1999)

Thomas G. Andrews, History (2007)

Andrew Cowell, Linguistics; French and Italian (2009)

Elsbeth Dusinberre, Classics (2006)

Elizabeth Anne Fenn, History (2005)

David S. Ferris, Humanities (2002)

Paul Gordon, Humanities (1994)

Gerardo Gutiérrez, Anthropology (2016)

Arthur A. Joyce, Anthropology (2005)

Miriam L. Kadia, History (2014)

Terry F. Kleeman, Asian Languages and Civilization (2009)

Paul W. Kroll, Asian Languages and Civilization (1979, 1985, 1996)

Steve Lekson, University of Colorado Museum of Natural History (2003)

Anne E. Lester, History (2011)

Patricia N. Limerick, History (1989)

Rebecca Maloy, Musicology (2016)

Mithi Mukherjee, History (2016)

Robert C. Pasnau, Philosophy (2003)

Mark A. Pittenger, History (1994)

Erin Shay, Linguistics (2012)

William Wei, History (1979)

Timothy B. Weston, History (2005)

Phoebe S.K. Young, History (2009)

Retired

Marilyn Ruth Brown, Art and Art History (1988)

Deborah J. Haynes, Art and Art History (2002)

C. Nicholas Lee, Germanic and Slavic Languages (1975)

Marjorie K. McIntosh, History (1972)

Edward G. Ruestow, History (1977)

Rodney Leon Taylor, Religious Studies (1976)

Michael E. Zimmerman, Philosophy (1999)





ADDITIONAL ACADEMIC ACHIEVEMENTS

American Philosophical Society

An internationally esteemed scholarly organization, the American Philosophical Society promotes the creation of useful knowledge in the sciences and humanities, encouraging excellence in scholarly research by supporting professional meetings and publications, and by providing library resources and opportunities for community outreach. The country's first learned society, the APS has played an important role in American cultural and intellectual life for over 250 years.

Active Members

Thomas R. Cech, Chemistry and Biochemistry

Margaret Murnane, Physics

Deceased Members

Kenneth Boulding, Economics

Gilbert White, Geography



ADDITIONAL ACADEMIC ACHIEVEMENTS

Fulbright Fellows

The Fulbright program sends 800 U.S. faculty members and professionals abroad each year and is intended for candidates who wish to conduct research, teach or undertake a combination of both at an academic institution of their choice in a host country. Fellows lecture and conduct research in a wide variety of academic and professional fields. CU Boulder has had more than 100 Fulbright fellows since 1982.

Fredy Gonzalez

Assistant Professor, History



As part of this award, Fredy Gonzalez delved into the clandestine history of international secret societies maintained by Chinese immigrants during the late 19th century. As he attests, these organizations communicated surreptitiously across continents, members identifying themselves to each other through common oaths and rituals. While in Taipei for this Fulbright, Gonzalez hopes to assemble research that can debunk the popular racist myths about Chinese immigrants that grew out of the shadowy existence and sometimes violent actions of these societies. His larger research project focuses on the history of Chinese migration to Latin America. His new

book, *Paisanos Chinos: Transpacific Politics among Chinese Immigrants in Mexico*, based on his award-winning dissertation, is available from the University of California Press. A recently published article in the *Western Historical Quarterly*, “Chinese Dragon and Eagle of Anáhuac: The Local, National and International Implications of the Ensenada Anti-Chinese Campaign of 1934,” won the Bert M. Fireman Award from the Western History Association. This is Professor Gonzalez’s second Fulbright; for his first he traveled to Mexico City in 2012–13 to conduct research for his first book.

Rachel Lehr

Research Associate, Geography



Rachel Lehr’s investigation into the role that Afghan women’s social societies play in peace building is part of a larger cultural and linguistic study of Afghanistan. While in Norway for this Fulbright grant, Lehr will work in the University of Oslo’s Georg Morgenstierne archive. Morgenstierne was a linguist who studied the languages of the Indo-Afghan frontier, which feature prominently in Lehr’s research. Her work in the archive will expand upon research she began as a graduate student at the University of Chicago, where she wrote a descriptive grammar of Pashai, an Afghan minority language. Lehr is well-versed in the nuances of language: her translation from Tajik of *The Sands*

of Oxus: Boyhood Reminiscences of Sadriddin Aini with John R. Perry won the 2004 Lois Roth Endowment Persian Translation Prize. Her most recent book, *Carpetbaggers of Kabul: Gender and International Development Issues in Afghanistan*, co-written with CU associate professor Jennifer Fluri, explores the competing interests of the international organizations that rushed to Afghanistan to offer aid and development assistance in the wake of the 2001 U.S. invasion. Through their analysis, Lehr and Fluri bring the global geopolitical scale in more intimate contact with the everyday lives of people in Afghanistan.

ADDITIONAL ACADEMIC ACHIEVEMENTS

Andrew Schwartz

Professor, University of Colorado Law School



Andrew Schwartz came to CU Boulder following four years of corporate legal practice and two clerkships, one with the Ninth Circuit, Court of Appeals, and the other with the U.S. District Court, Southern District of New York. As a legal scholar, he researches corporate, securities and contract law. In particular, he investigates what it means when we say, within a legal framework, that corporations have “perpetual existence.” He also studies the methods and pitfalls of crowdfunding financial securities, which are the focus of his 2017 Fulbright research and lectureship at the University of Auckland, New Zealand. He believes New Zealand offers an especially fruitful research environment because it has been conducting securities crowdfunding since 2014.

Professor Schwartz has published in major journals such as the *UCLA Law Review*, the *Minnesota Law Review* and the *Notre Dame Law Review*, and has won national awards for his scholarship, including the AALS Scholarly Paper Competition and the Federalist Society Young Legal Scholars Paper Competition. In addition, he has received accolades from CU, including the Provost’s Award for Faculty Achievement (a research award) and the Outstanding New Faculty Award (an award for teaching).

CU Boulder Fulbright Fellows Since 2006

Len Ackland, College of Media, Communication and Information (2008)

Marie Banich, Institute of Cognitive Science (2006)

Alton C. Byers, Institute of Arctic and Alpine Research (2015)

Bud E. Coleman, Theatre and Dance (2009)

Richard B. Collins, University of Colorado Law School (2007)

Herbert H. Covert, Anthropology (2008)

Emmanuel A. David, Women and Gender Studies (2012)

Laura M. DeLuca, Residential Academic Program (2011, 2013)

Elizabeth Dunn, Geography (2008)

Clarence Ellis, Computer Science (2013)

William J. Emery, Aerospace Engineering Sciences (2014)

Paul M. Erhard, College of Music (2013)

Claire Joan Farago, Art and Art History (2011)

Jennifer L. Fitzgerald, Political Science (2007)

Nan Goodman, English (2013)

Eugene H. Hayworth, University Libraries (2009)

Douglas R. Johnson, Physics (2014)

Keith Kearnes, Mathematics (2010)

Alphonse Keasley, Diversity and Equity (2012)

John Jay Kineman, Cooperative Institute for Research in Environmental Sciences (2008)

John Patrick Kociolek, University of Colorado Museum of Natural History (2015)

Kim L. Kreutzer, Office of International Education (2010)

Kevin J. Krizek, Environmental Design (2013)

Kristine M. Larson, Aerospace Engineering Sciences (2013)

Thea L. Lindquist, University Libraries (2011)

Lauri McNown, Political Science (2013)

Robert F. McNown, Economics (2006, 2013)

Josef Michl, Chemistry and Biochemistry (2006)

Stephen J. Mojzsis, Geological Sciences (2007)

Keith Robert Molenaar, Civil, Environmental and Architectural Engineering (2006)

Lupita Del Carmen Montoya, Civil, Environmental and Architectural Engineering (2011, 2013)

Michele S. Moses, School of Education (2011)

Megan Elizabeth Mulligan, College of Media, Communication and Information (2013)

Roseanna Marie Neupauer, Civil, Environmental and Architectural Engineering (2015)

Astrid Elisabeth Ogilvie, Institute of Arctic and Alpine Research (2009)

Cecilia J. Pang, Libby Arts RAP (2009)

Richard A. Regueiro, Civil, Environmental and Architectural Engineering (2014)

George F. Rivera, Art and Art History (2013)

Brenda M. Romero, College of Music (2010)

Elisabeth Ann Sheffield, English (2013)

Jaroslav Tir, Political Science (2007)

Paul S. Voakes, Journalism (2011)

Mark W. Williams, Geography: Institute of Arctic and Alpine Research (2013)

James Daniel Winkler, Chemical and Biological Engineering (2015)

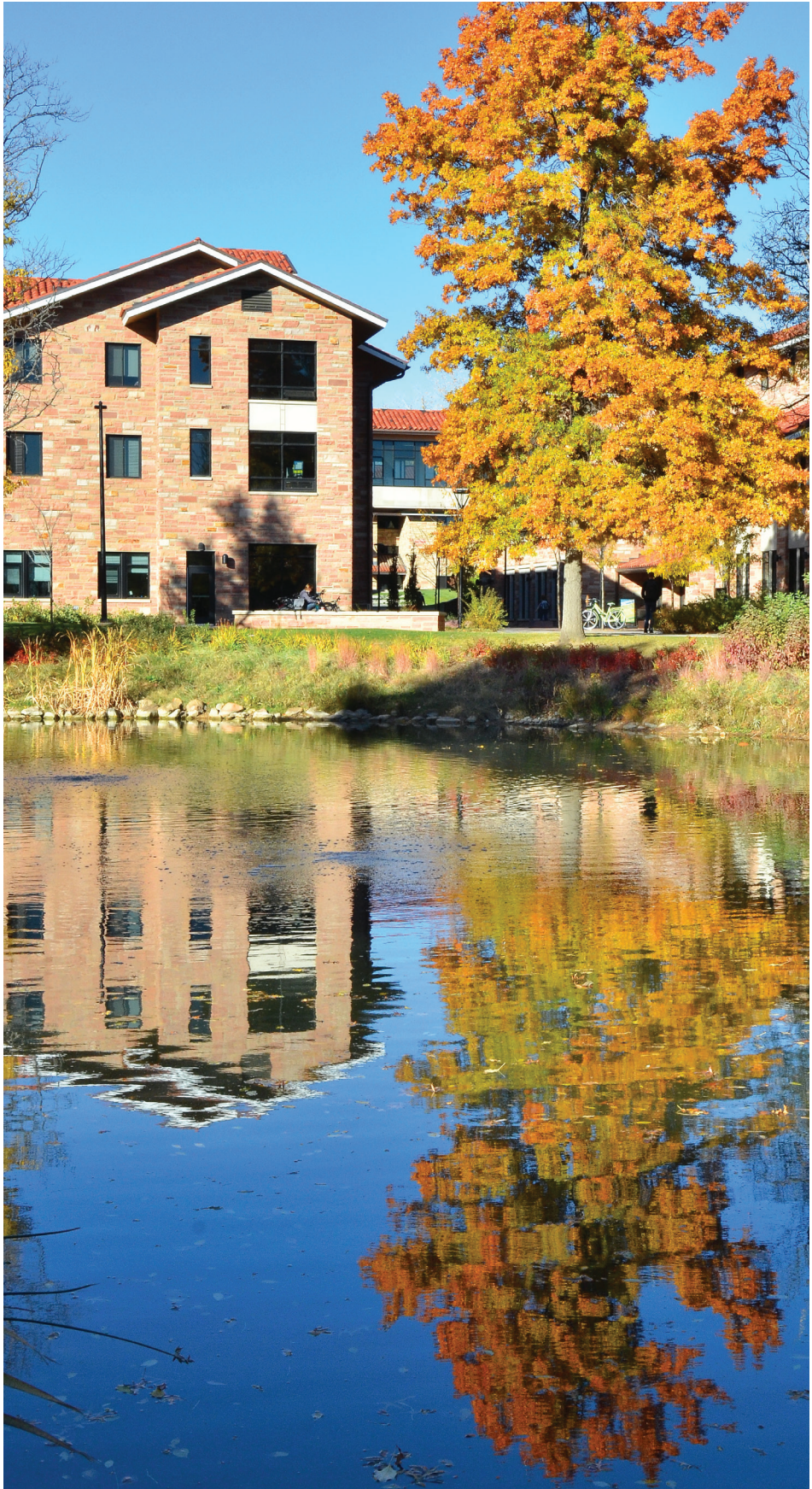
ADDITIONAL ACADEMIC ACHIEVEMENTS

Guggenheim Fellows

Guggenheim Fellowships are prestigious grants that provide fellows with blocks of time to pursue important scholarly work with as much creative freedom as possible. No special conditions are attached to these fellowships, and fellows may spend their grant funds in any manner they deem necessary to their work. Since 1949, more than 70 CU Boulder faculty members have been named Guggenheim fellows.

CU Boulder Guggenheim Fellows Since 1998

| | |
|--|--|
| Len Ackland , College of Media, Communication and Information (2008) | Elizabeth Fenn , History (2005) |
| Fred W. Anderson , History (2001) | Bruce W. Holsinger , English (2004) |
| Thomas G. Andrews , History (2011) | Paul W. Kroll , Asian Languages and Civilizations (2007) |
| Mitchell C. Begelman , Astrophysical and Planetary Sciences (1998) | Noel E. Lenski , Classics (2009) |
| Roger G. Bilham , Cooperative Institute for Research in Environmental Sciences (1999) | Russell Keith Monson , Ecology and Evolutionary Biology (1998) |
| Albert Chong , Art and Art History (1998) | John O'Loughlin , Geography (2004) |
| G. Barney Ellison , Chemistry and Biochemistry (1999) | Stacey E. Steers , Film Studies (2014) |
| Michelle Ellsworth , Theatre and Dance (2016) | Margaret A. Tolbert , Cooperative Institute for Research in Environmental Sciences (2005) |
| Barbara A. Engel , History (2003) | Veronica Vaida , Chemistry and Biochemistry (2004) |
| Steven A. Epstein , History (1998) | Mark Winey , Molecular, Cellular and Developmental Biology (2007) |



ADDITIONAL ACADEMIC ACHIEVEMENTS

Howard Hughes Medical Institute

The Howard Hughes Medical Institute is a science philanthropy whose mission is to advance biomedical research and science education for the benefit of humanity. HHMI empowers exceptional scientists to pursue fundamental questions about living systems.

Howard Hughes Medical Institute Investigators

Kristi S. Anseth, Distinguished Professor and Tony Tisone Chair, Chemical and Biological Engineering

Thomas R. Cech, Distinguished Professor, Chemistry and Biochemistry

Min Han, Professor, Molecular, Cellular and Developmental Biology

Karolin Luger, Professor, Chemistry and Biochemistry

Roy Parker, Professor, Chemistry and Biochemistry

Howard Hughes Medical Institute Alumni

Natalie G. Ahn, Professor, Chemistry and Biochemistry

Robert Boswell, Professor, Molecular, Cellular and Developmental Biology; Vice Chancellor, Office of Diversity, Equity and Community Engagement

Society of Howard Hughes Medical Institute Professors

Leslie A. Leinwand (2006–present), Distinguished Professor, Molecular, Cellular and Developmental Biology

Howard Hughes Medical Institute Faculty Scholar

Gia Voeltz, Professor, Molecular, Cellular and Developmental Biology



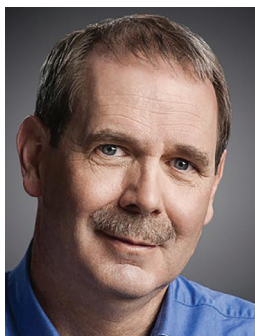
ADDITIONAL ACADEMIC ACHIEVEMENTS

James Craig Watson Medal

Presented every two years by the National Academy of Sciences, with the first medal bestowed in 1887, the James Craig Watson Medal honors outstanding contributions to the science of astronomy. The award includes a gold-plated medal, a \$25,000 prize and \$50,000 of research support.

Timothy Brown

Senior Research Associate, Center for Astrophysics and Space Astronomy



Timothy Brown has long reached for the stars, but he focused first on the nearest and dearest to Earth, our sun, before venturing further to discover new planetary systems. As an instrument maker and astronomer, he has not only contributed to our knowledge of the universe but also changed how we learn things about it. His design and invention of the Fourier tachometer allowed astronomers to discern that the sun's interior rotates at a faster rate than the sun's outer third. The most recent line of his research grew out of his work developing spectrometers. He investigates the presence of exoplanets by measuring tiny variations in starlight arising from the sidereal trembling of a star

being acted upon by the gravity of its exoplanets. He is currently working on the Network of Robotic Echelle Spectrographs (NRES), an interacting collection of spectrographs and telescopes distributed among six observatory sites in both hemispheres that will function together to provide a more precise measure of the quality and character of light from outside our galaxy. According to the deciding committee, Senior Research Associate Brown is being awarded the James Craig Watson Medal for "visionary scientific and technical advancements that have been critical to the fields of helioseismology, asteroseismology and the emerging field of spectroscopy of transiting exoplanets."

ADDITIONAL ACADEMIC ACHIEVEMENTS

John Fritz Medal

Awarded annually beginning in 1902 by the American Association of Engineering Societies, the John Fritz Medal is presented in recognition of scientific achievement in any field, including both pure and applied science. It is one of the most prestigious awards bestowed upon members of the engineering profession.

Frank Kreith

Professor Emeritus, Mechanical Engineering



In being awarded the John Fritz Medal, Professor Emeritus Frank Kreith joins an auspicious company that includes Alexander Graham Bell, Thomas Edison and Orville Wright. The award acknowledges Kreith's distinguished career in alternative energy, especially his seminal contributions to solar energy research during his 20-year career at CU and as part of what is now called the National Renewable Energy Laboratory in Golden, Colorado. Early in his career he built a heat transfer laboratory for NASA's Jet Propulsion Laboratory, and he worked under J. Robert Oppenheimer on peacetime applications for nuclear energy. He also served for 12 years as a consultant on energy and the environment for the National Conference of State Legislatures.

Kreith has written 15 books on heat transfer and renewable energy, and he served as the founding editor for the American Society of Mechanical Engineers' (ASME) *Journal of Solar Energy Engineering*. In honor of his contributions, the ASME established the Frank Kreith Energy Award, which honors individuals who make significant contributions to conservation and renewable energy. He formally retired from CU in 1979 but has remained active in university life, including teaching now and again for the Department of Mechanical Engineering.

ADDITIONAL ACADEMIC ACHIEVEMENTS

MacArthur Fellows

The MacArthur Foundation accepts yearly nominations in as broad a range of fields and areas of interest as possible to identify and support talented individuals—writers, scientists, artists, social scientists, humanists, teachers—who have shown extraordinary originality and dedication in creative pursuits, and a marked capacity for self-direction. The MacArthur Fellows Program awards five-year, unrestricted fellowships, sometimes referred to as “genius grants,” to individuals who show exceptional merit and promise of continued creative work.

CU Boulder MacArthur Fellows Since 1981

Charles Archambeau, Physics (1988)

David Hawkins, Philosophy (1981)

Deborah S. Jin, Physics (2003)

Daniel Saul Jurafrsky, Linguistics (2002)

Patricia N. Limerick, History (1995)

Margaret Murnane, Physics (2000)

Dimitri Nakassis, Classics (2015)

Norman R. Pace, Molecular, Cellular and Developmental Biology (2001)

Ana Maria Rey, JILA (2013)



ADDITIONAL ACADEMIC ACHIEVEMENTS

National Academy of Education

The National Academy of Education advances the highest-quality education research and its use in policy formulation and practice. It consists of up to 150 U.S. members and 25 foreign associates who are elected on the basis of outstanding scholarship or other outstanding contributions to education. Since its establishment, the academy has sponsored a variety of commissions and study panels that have published influential proceedings and reports.

Active Academy Members

Gene V. Glass, School of Education (2000)

Lorrie A. Shepard, School of Education (1992)

Carl E. Wieman, Center for Science Education (2009)

Retired Academy Members

Margaret A. Eisenhart, School of Education (2004)

Kris Diane Gutiérrez, School of Education (2010)

Walter Kintsch, Institute of Cognitive Science (1992)

Deceased Academy Members

Robert Lee Linn, School of Education (1990)

ADDITIONAL ACADEMIC ACHIEVEMENTS

National Academy of Engineering

The National Academy of Engineering includes more than 2,000 peer-elected senior professionals in business, academia and government who are among the world's most accomplished engineers and who provide leadership and expertise for projects focused on the relationships among engineering, technology and the quality of life.

Daniel J. Scheeres

Distinguished Professor, Aerospace Engineering Sciences



Daniel Scheeres has made his mark in space, quite literally. In recognition of his work, colleagues in his field renamed an asteroid in his honor. Throughout his scholarly life, Scheeres has worked to understand the motions of small bodies in space—focusing especially on asteroids and moons. Early in his career Scheeres collaborated with NASA's Jet Propulsion Laboratory on NEAR, the Near Earth Asteroid Rendezvous mission, which was the first to orbit an asteroid and the first to touch down on its surface. Since then he has striven to understand the complicated physics of asteroids, whose irregular shapes and inconstant densities can lead to unexpected phenomena in their orbital mechanics. Scheeres uses

radio science data to measure the gravity coefficients of asteroids, extrapolating from that their mass distribution, and he is currently serving as the radio science lead and co-investigator for NASA's OSIRIS Rex Asteroid Sample Return Mission.

Professor Scheeres has been at CU since 2007 and has served as an integral part of the Colorado Center for Astrodynamics Research (CCAR). He leads the Celestial Spaceflight Mechanics Laboratory at the university and has received numerous internal and external awards, including a Dean's Award for Outstanding Research and a Faculty Research award, both from the College of Engineering and Applied Sciences. He has been elected fellow to numerous prestigious scientific organizations, including the American Institute of Aeronautics and Astronautics, the Celestial Mechanics Institute and the American Astronautical Society.

Active Academy Members

Bernard Amadei, Civil, Environmental and Architectural Engineering (2008)

Kristi S. Anseth, Chemical and Biological Engineering (2009)

Daniel N. Baker, Laboratory for Atmospheric and Space Physics (2010)

Robert Braun, Civil, Environmental and Architectural Engineering (2014)

Ross Corotis, Civil, Environmental and Architectural Engineering (2002)

Michael Dumont King, Laboratory for Atmospheric and Space Physics (2003)

David Marshall, Mechanical Engineering (2007)

Diane Marie McKnight, Institute of Arctic and Alpine Research (2012)

Jacques I. Pankove, Electrical, Computer and Energy Engineering (1986)

Richard Strauch, Electrical, Computer and Energy Engineering (1989)

Valerian Tatarskii, Cooperative Institute for Research in Environmental Sciences (1994)

Kaspar J. Willam, Civil, Environmental and Architectural Engineering (2004)

Deceased Academy Members

George H. Born, Aerospace Engineering Sciences (2004)

Adolph Busemann, Aerospace Engineering Sciences (1970)

Steven F. Clifford, Cooperative Institute for Research in Environmental Sciences (1997)

Earl Gossard, Cooperative Institute for Research in Environmental Sciences (1990)

Don Hearth, Aerospace Engineering Sciences (1989)

Max Peters, Chemical and Biological Engineering (1969)

A. Richard Seebass, Aerospace Engineering Sciences (1985)

Klaus D. Timmerhaus, Aerospace Engineering Sciences (1975)

Retired Academy Members

Frank Stephenson Barnes, Electrical, Computer and Energy Engineering (2001)

Lewis M. Branscomb, Physics; JILA

Delores Etter, Electrical, Computer and Energy Engineering (2000)

Fred Glover, Leeds School of Business (2002)

Martin M. Mikulas, Center for Aerospace Structures (1999)

ADDITIONAL ACADEMIC ACHIEVEMENTS

National Academy of Inventors Fellows

The National Academy of Inventors is a nonprofit member organization that includes U.S. and international universities alongside governmental and nonprofit research institutes. The academy has more than 3,000 individual inventor members and fellows spanning more than 200 institutions. The NAI Fellows program supports 582 fellows worldwide. Collectively, NAI Fellows hold more than 21,000 issued U.S. patents.

Christopher Bowman

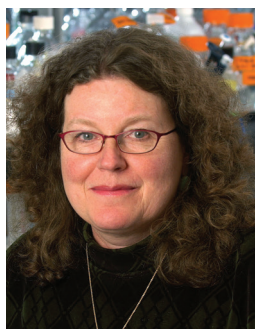
Distinguished Professor, Chemical and Biological Engineering



Christopher Bowman investigates polymers, complex substances with an exciting range of scientific and industrial uses. His research group focuses on inventing new materials for use in diverse applications, ranging from new dental composites to photolithography, nanotechnology and smart materials. He holds 16 patents, including one for an improved dental resin, and co-directs the NSF Industry/University Cooperative Research Center for Fundamentals and Applications of Photopolymerizations. He has published over 300 scholarly articles in journals including *Polymer Chemistry*, *the Journal of the American Chemical Society* and *Dental Materials*. His excellence in all aspects of scholarly life is clear from his many accolades, both external and internal, which include the R. H. Wilhem Award and the Professional Progress Award from the American Institute of Chemical Engineers, as well as the John and Mercedes Peebles Teaching Innovation Award and the Max S. Peters Outstanding Service Award from the CU College of Engineering.

Leslie Anne Leinwand

Distinguished Professor, Molecular, Cellular and Developmental Biology



Leslie Leinwand leads her research team to invent new biotechnological solutions to genetic problems that have long afflicted human beings. They especially study the cardiac and skeletal muscle systems, and she and her team are investigating how soy estrogens regulate cardiac growth. Her inventive approach and willingness to take risks has led to surprising research insights. Her lab recently conducted extensive research on Burmese pythons, whose hearts double in size within 48 hours of eating and shrink back down just as quickly. They've identified three fatty acids that combine to trigger the heart growth and are working to develop biotechnological applications for their findings that will improve human cardiac health.

Professor Leinwand serves as the chief scientific officer for the BioFrontiers Institute. In the past she directed the Linda Crnic Institute for Down Syndrome, the Colorado Initiative in Molecular Biotechnology, and the Cardiovascular Institute. Her honorable appointments include being named a fellow of the American Association for the Advancement of Science, a Howard Hughes Medical Investigators Professor and an elected member of the American Academy of Arts and Sciences.

ADDITIONAL ACADEMIC ACHIEVEMENTS

National Academy of Sciences

Founded in 1863 and considered one of the highest honors for an American scientist or engineer, the National Academy of Sciences is a private, nonprofit, self-perpetuating society of distinguished scholars engaged in scientific and engineering research and dedicated to the furtherance of science and technology and their use for the general welfare.

Active Academy Members

Kristi S. Anseth, Chemical and Biological Engineering (2013)

Marvin H. Caruthers, Chemistry and Biochemistry (1994)

Thomas R. Cech, Chemistry and Biochemistry (1987)

Noel A. Clark, Physics (2007)

Eric Cornell, Physics (2000)

Lawrence Gold, Molecular, Cellular and Developmental Biology (1995)

John L. Hall, JILA (1984)

James T. Hynes, Chemistry and Biochemistry (2011)

Henry C. Kapteyn, Physics (2013)

William Carl Lineberger, Chemistry and Biochemistry; JILA (1983)

Jane A. Menken, Institute of Behavioral Science (1989)

Josef Michl, Chemistry and Biochemistry (1986)

Margaret Murnane, Physics (2004)

Roy Robert Parker, Chemistry and Biochemistry (2012)

Margaret A. Tolbert, Chemistry and Biochemistry (2004)

Carl E. Wieman, Center for Science Education (1995)

David J. Wineland, Physics (1992)

Jun Ye, JILA (2011)

Retired Academy Members

Lewis M. Branscomb, Physics; JILA

Richard A. McCray, JILA (1989)

J. Richard McIntosh, Molecular, Cellular and Developmental Biology (1999)

Norman R. Pace, Molecular, Cellular and Developmental Biology (1991)

William B. Wood, Molecular, Cellular and Developmental Biology (1972)

Deceased Academy Members

Kenneth Boulding, Economics (1975)

Edward U. Condon, Physics; JILA (1945)

Linda S. Cordell, University of Colorado Museum of Natural History (2005)

Stanley Cristol, Chemistry and Biochemistry (1972)

Charles H. DuPuy, Chemistry and Biochemistry (1999)

George Gamow, Physics (1953)

Deborah Jin, Physics (2005)

David M. Prescott, Molecular, Cellular and Developmental Biology (1974)

Stanislaw M. Ulam, Mathematics (1966)

John Wahr, Physics (2012)

Gilbert White, Institute of Behavioral Science (1973)

ADDITIONAL ACADEMIC ACHIEVEMENTS

National Medal of Science

The National Medal of Science was established by the 86th Congress in 1959 as a Presidential Award to be given to individuals “deserving of special recognition by reason of their outstanding contributions to knowledge in the physical, biological, mathematical or engineering sciences.” In 1980 Congress expanded this recognition to include the social and behavioral sciences. National Medals of Science are awarded by the president of the United States to individuals deserving of special recognition by reason of their outstanding cumulative contributions to knowledge in service to the nation.

Previous CU Boulder Medal Winners

Marvin H. Caruthers, Chemistry and Biochemistry (2006)

Thomas R. Cech, Chemistry and Biochemistry (1995)

Keith Roberts Porter, Institute of Behavioral Science (1976)

Gilbert F. White, Geography (2000; deceased)

David J. Wineland, Physics (2007)

ADDITIONAL ACADEMIC ACHIEVEMENTS

Nobel Laureates

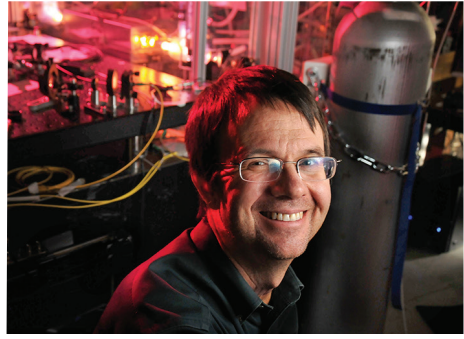
The Nobel Prize is an international award given yearly for achievements in physics, chemistry, economics, medicine, literature and peace. Nomination and selection of winners vary according to the category and prize-awarding institutions.



1989

Thomas R. Cech

Chemistry and Biochemistry



2001

Eric Cornell

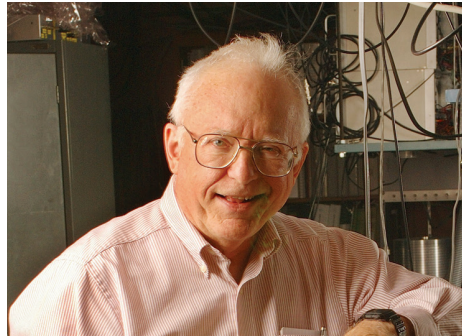
Physics; JILA



2001

Carl Wieman

Physics; JILA



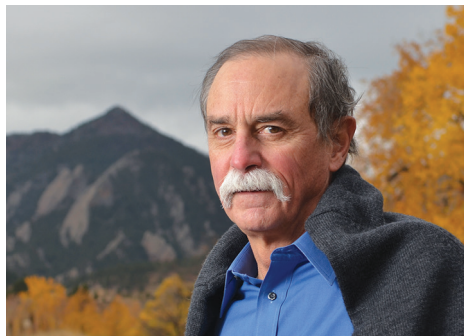
2005

John Hall

Physics; JILA

2007

A group of hundreds of researchers from around the world that included more than a dozen **CU Boulder research faculty members** shared the Nobel Peace Prize with former Vice President Al Gore for their contributions to the international report of the Intergovernmental Panel on Climate Change.



2012

David Wineland

Physics

ADDITIONAL ACADEMIC ACHIEVEMENTS

Sloan Research Fellowship/Alfred P. Sloan Foundation

Sloan Research Fellowships seek to stimulate fundamental research by early-career scientists and scholars of outstanding promise. These two-year fellowships are awarded yearly to 126 researchers in recognition of distinguished performance and a unique potential to make substantial contributions to their fields.

Garret Miyake

Assistant Professor, Chemistry and Biochemistry



Early in his career as a researcher professor, Garret Miyake has assembled impressive credentials in the field of polymer chemistry. Polymers are large molecules created from the synthesis of smaller repeated subunits, or monomers; this characteristic leads natural and synthetic polymers to display a range of useful and unique physical properties for which chemists can engineer. Miyake's team develops new organic and organometallic catalysts to facilitate novel syntheses of renewable monomers into sustainable polymers. A large part of their research explores using light in the process of polymerization to reduce the prominence of certain sorts of metals. This research contributes to the development of sustainable polymer materials that will be vital for our society, as it increasingly values resource sustainability.

Professor Miyake has received numerous awards and honors for his research. In addition to the Sloan fellowship, he was awarded the 2017 Young Scholar Award from the Polymer Division of the American Chemical Society, and in 2016 he won the Maximizing Investigator's Research Award for New and Early Stage Investigators from the National Institutes of Health. He holds multiple patents in the field of polymer synthesis, has published in *Science* and the *Journal of the American Chemical Society*, and has been invited to speak at institutions all over the United States.

ADDITIONAL ACADEMIC ACHIEVEMENTS

Rahul Nandkishore

Assistant Professor, Physics



How does the strange world of quantum mechanics, with its uncertainty and entanglement, interact with the seemingly ordered everyday reality of human beings? This is a question that Rahul Nandkishore seeks to answer through his research into emergent phenomena in complex systems. Emergent phenomena are entities or effects that arise from the interactions of smaller connected subsystems; they display surprising and novel characteristics not already detectable in the smaller systems. Nandkishore studies systems with manifold bodies and components characterized by strong degrees of interaction and randomness. His research promises to bolster investigation

into technologies capable of harnessing quantum mechanics to produce a new generation of better, more powerful, devices. He also researches a special quantum particle called a Dirac fermion, and his theories will be helpful in predicting future emergent phenomena that may arise from recently discovered classes of materials, such as graphene.

Professor Nandkishore's research has brought him to numerous conferences, workshops and presentations, including several that he organized himself. He has published widely, including in the *Proceedings of the National Academy of Sciences*. Recent awards include the 2016 U.S. Air Force Office of Sponsored Research Young Investigator Award and a 2016 Foundational Questions Institute grant.





University of Colorado **Boulder**

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