

Upcoming RIO Workshops

- March 22: Proposal Budgeting 101
- April 18: Introduction to NIH Proposal Writing
- April 26: Finding Funding
- May 16: Communicating Your Research

Lunch is provided.

RSVP at the [RIO website](https://tinyurl.com/rioworkshops) (tinyurl.com/rioworkshops)



2018 Understanding Broader Impacts & CU Resource Expo



Research & Innovation Office
UNIVERSITY OF COLORADO **BOULDER**

February 20, 2018



Dr. Myron Gutmann

Professor of History, CU Boulder

Director, Institute of Behavioral
Science Population Program

Formerly: Assistant Director, NSF

Some Thoughts about Broader Impacts

Myron Gutmann

Institute of Behavioral Science
University of Colorado Boulder

Three topics

Some History

What's Required and What's Evaluated

**What I Think About (and maybe so
should you)**

NSF: Review Standards

- 1. What is the potential for the proposed activity to:
 - a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and**
 - b. Benefit society or advance desired societal outcomes (Broader Impacts)?****
- 2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?**
- 3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?**
- 4. How well qualified is the individual, team, or organization to conduct the proposed activities?**
- 5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?**

NSF: How Broader Impacts Can be Accomplished

- ***Through the research itself*** (i.e., research that has potential to lead to breakthroughs in certain industries or contribute to solutions to societal problems)
- ***Through the activities that are directly related to specific research projects*** (e.g., using the research project as a training ground for students or early-career scientists)
- ***Through activities that are supported by, but are complementary to, the project*** (e.g., running an educational workshop for high school students on your research topic)

NSF: Types of Broader Impacts

| Outcome | Description of Long-Term Outcomes |
|---------|--|
| 1 | Full participation of women, persons with disabilities, and underrepresented minorities in STEM (specifically African Americans, Hispanics, Native Americans, Alaska Natives, and Pacific Islanders) |
| 2 | Improved STEM education and educator development at any level |
| 3 | Increased public scientific literacy and public engagement with science and technology |
| 4 | Improved well-being of individuals in society |
| 5 | Development of a diverse, globally competitive STEM workforce |
| 6 | Increased partnerships between academia, industry, and others |
| 7 | Improved national security |
| 8 | Increased economic competitiveness of the United States |
| 9 | Enhanced Infrastructure for research and education |

1. Broadening Participation
2. Education & Infrastructure
3. Industry & Competitiveness
4. Everything Else

Source: Michael Thompson (University of Oklahoma), Broader Impacts Training (http://bir.ou.edu/files/bir/docs/New_Faculty_NSF_BI_General_Powerpoint_Slides.pdf)



Science Discovery
UNIVERSITY OF COLORADO **BOULDER**



How we can help with your Broader Impacts

Alexandra Rose, Broader Impacts Liaison
Stacey Forsyth, Director



Who are We?



Summer Camps



After-school Homeschool In-school





Teacher Professional Development



Community Outreach Events... and more!



NEST
studio for the arts

NATURE
ENVIRONMENT
SCIENCE &
TECHNOLOGY



Grand Challenge

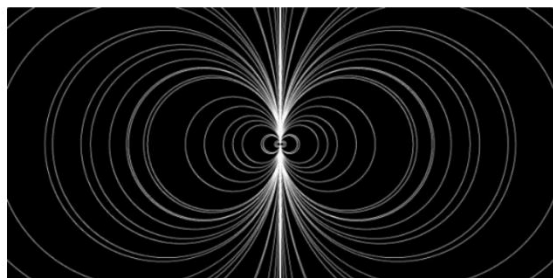
UNIVERSITY OF COLORADO **BOULDER**

NEST STUDIO FOR THE ARTS

Our Mission

Nature, Environment, Science & Technology (NEST) Studio for the Arts is a network of faculty, students, centers and campus units that combine artistic practice and scientific research to explore our common and disparate ways of observing, recording, experimenting and knowing. A series of cross-campus initiatives allow students to directly engage with faculty mentors and inspire alternate modes of communicating with the public.

NEST
studio for the arts



2018 Graduate Summer Fellowships Announced

View the full list of Graduate Summer Fellowships awarded this cycle.



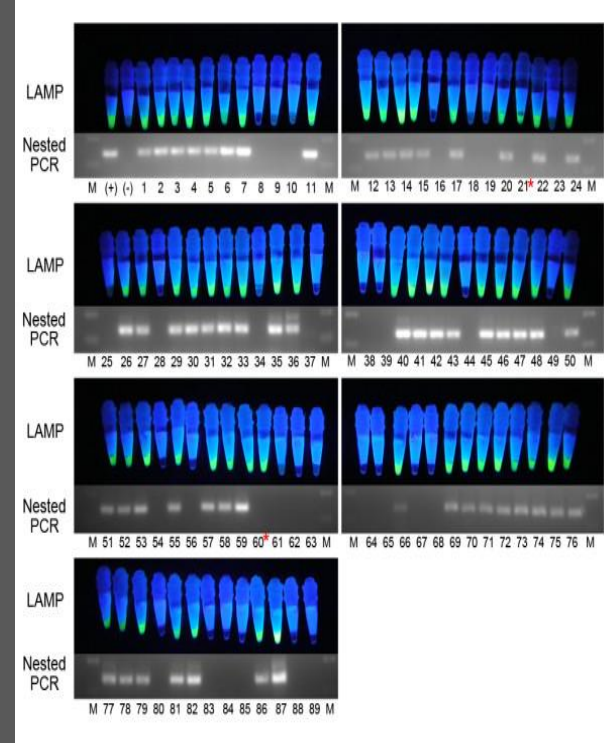
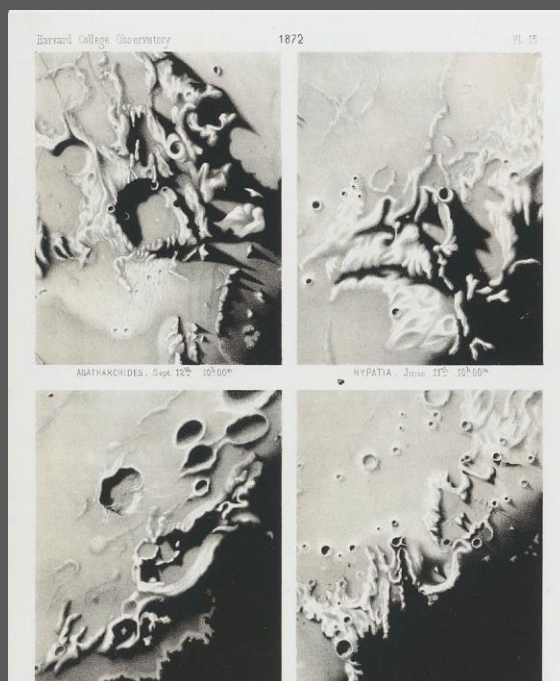
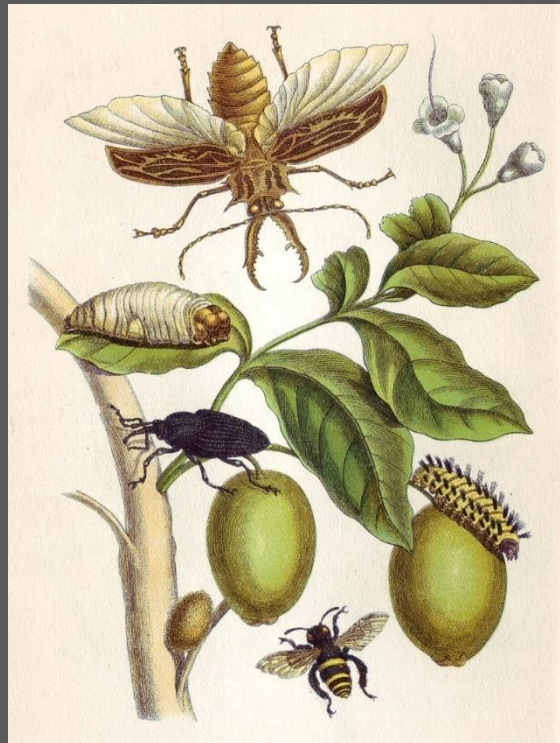
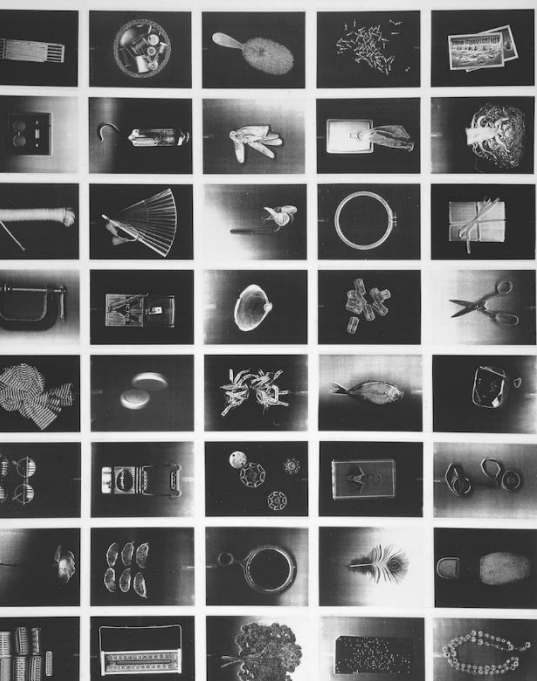
Call for 2018 Faculty Teaching Fellowships

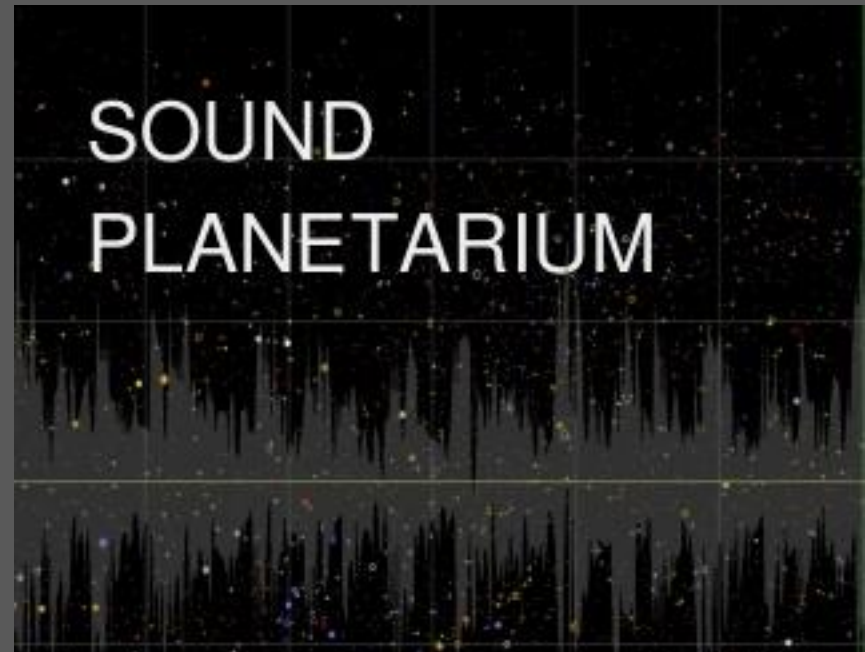
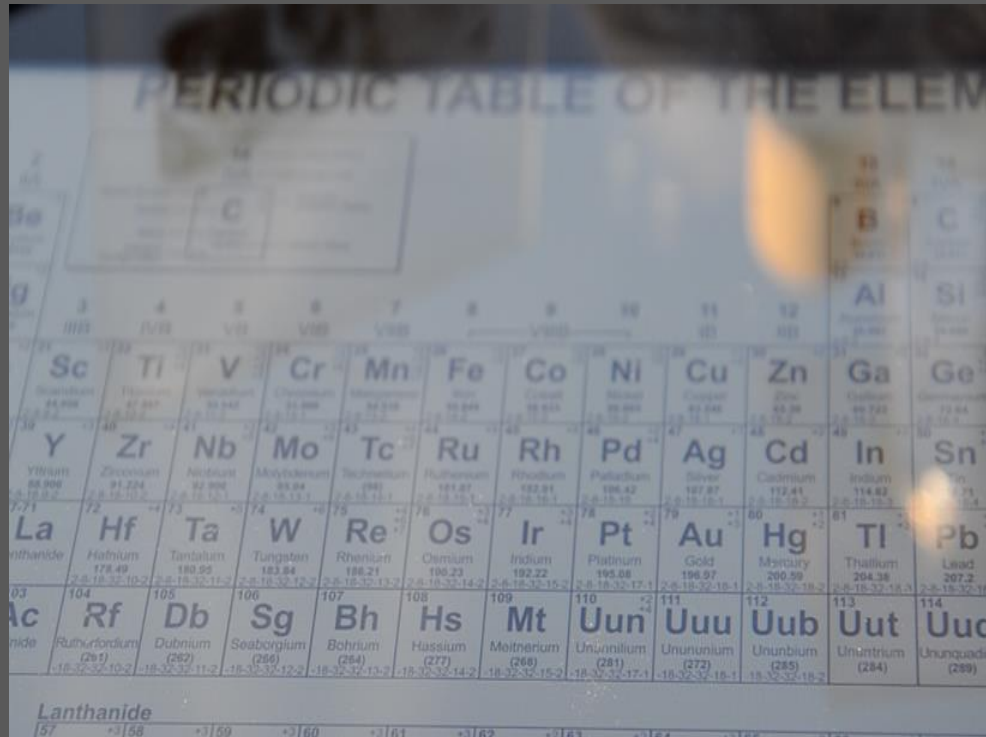
Announcing an open call for NEST Faculty Teaching Fellowships proposals, due **January 10, 2018** for Fall 2018 courses.



Call for Jobs

View open job applications at NEST.





Air-Cleaning Ceramic Artwork for Volatile Organic Compound Removal in Nail Salons

Camila Friedman-Gerliczb, Art & Art History
Aaron Lamplugh, Mechanical Engineering

Panoramic Methods: New Approaches to Interdisciplinary Research

Maya Livio, IAWP
Ashley Whipple, EBIO and INSTAAR

Water - Dust

Alice F. Hill, NSIDC, INSTAAR, CIRES
Toma Peiu, Dept of Critical Media Studies

Baffin Island Climate Change through Woodblocks & Watercolors

Sarah Crump, Geo. Sciences and INSTAAR
Nodin de Saillan, English

Project Re-Nest: Barn Swallows

Molly McDermott, EBIO
Aaron Treher, Art & Art History

Promontory Project: A Case Study of the Annihilation of Time and Space

Laura Hyunjhee Kim, IAWP
Jen Liu, ATLAS, College of Engineering

Scale in Art and Science

Megan Blanchard, EBIO
Amy Richman, Critical Media Practices

Thinking with Glaciers

Carly Anderson Stewart, EBIO
Joe Steele, Critical Media Practices
Christa Torrens, Environmental Studies, the Hydrologic Sciences Program and INSTAAR

Visualizing Music as Image and Sculpture

Zachary Patten, Music
Nicholas Landry, Applied Mathematics

Program
Evaluator

Informal
Educator

1 PhD level
Cognitive
Psychologist

3 PhD level
scientist



K-12 Educator

University
Instructor

Environmental
Designer

Science Writer

Social Media
Expert

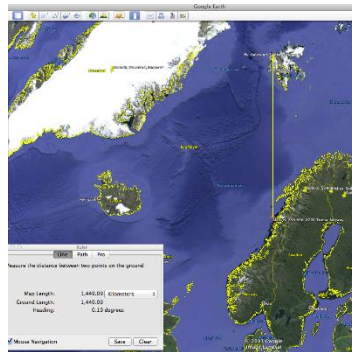
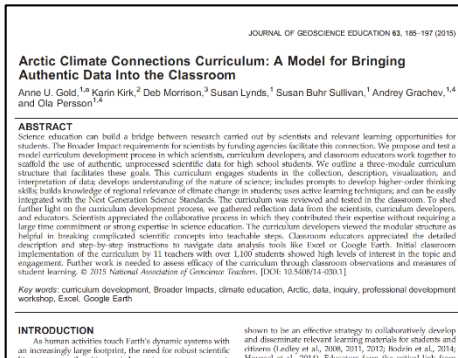
CIRES - Cooperative Institute for Research in Environmental Sciences Education & Outreach Group



NSF Broader Impact

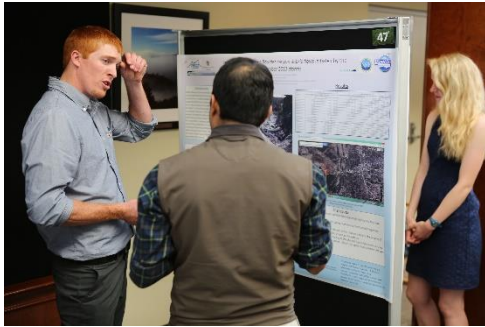


- Educator workshop
- Curriculum using authentic data
- Journal publication, Presentations





Research Experience for Undergraduates



- Summer mentoring opportunity
- Reaching diversity – rural Colorado 2YC students



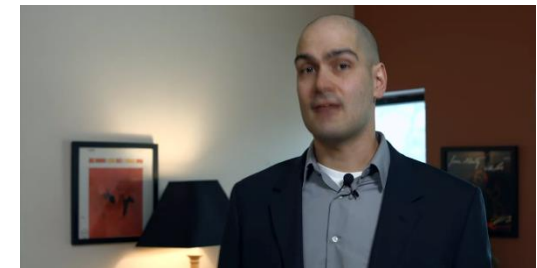
<http://cires.colorado.edu/outreach/>



Massive Open Online Course



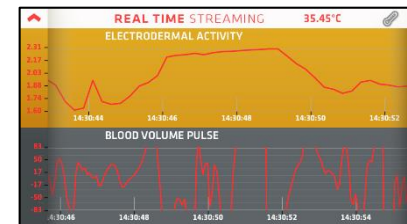
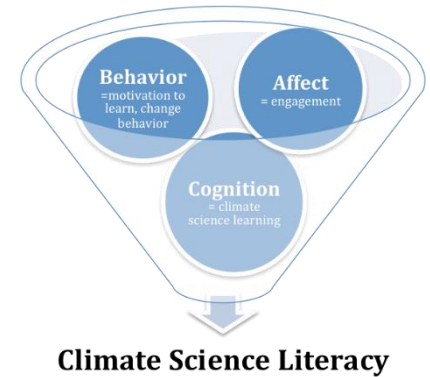
- Short lectures
- ~ 7,000 total students
- 62,257 lectures viewed





NSF CAREER Education Component

- Educational videos & curriculum
- Educational research
- Opportunity for grad students



CONTACT US



DESCRIBE YOUR SCIENCE/PROPOSAL



LEARN ABOUT WAYS TO ENGAGE



DEVELOP A COMPETITIVE OUTREACH PLAN

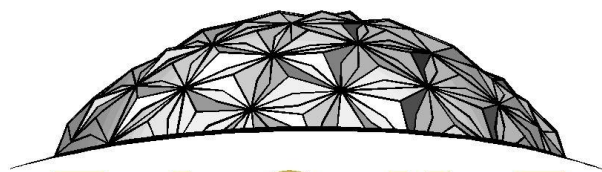


BROADEN THE IMPACT OF YOUR SCIENCE

Contact:

Anne.U.Gold@Colorado.edu

<http://cires.colorado.edu/outreach/>



FISKE
PLANETARIUM



University of Colorado **Boulder**

John Keller, PhD

Director, Fiske Planetarium

Astrophysical and Planetary Sciences

john.m.keller@colorado.edu

<https://www.colorado.edu/fiske>

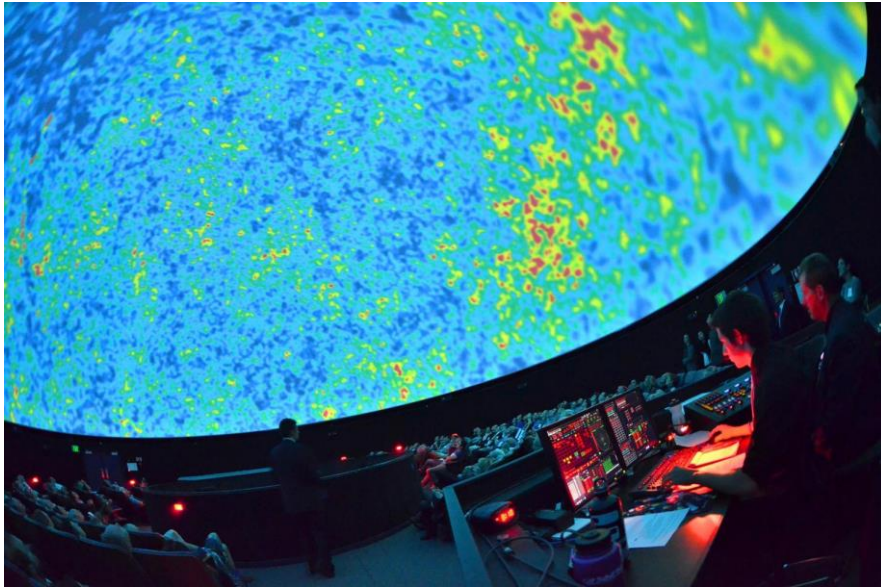
Fiske Planetarium

- Largest Dome btw Chicago and Los Angeles (65-foot diameter seats 207)
- State-of-the-Art Digital Projection System (8Kx8K full dome at 60 fps)
- Plus MegaStar Projector (10 million stars and Milky Way)
- Lobby with Science on a Sphere and Exhibit Space
- Eight permanent staff and ~40 student staff (education, production, events)



Local Education and Public Outreach

- 50,000 K-12 students throughout Colorado's public school system annually
- 8,000 CU undergraduates per year
- 40,000 public event attendees each year
- Tackling Galaxy/Black Hole Coevolution (NSF 1714503) – APS Faculty Julie Comerford



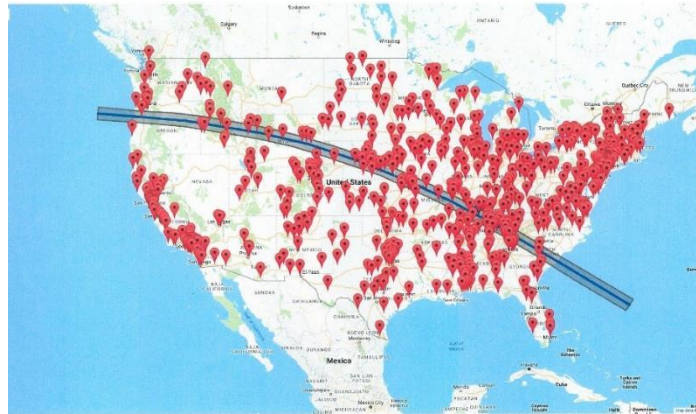
But not just Astronomy ...

- Climate Change in Our Back Yard
- Neuroscience and Chronic Pain
- Arts, Dance, and Theater
- ... all other disciplines!!

Image credit: PhD Comics, Supermassive Black Holes Explained

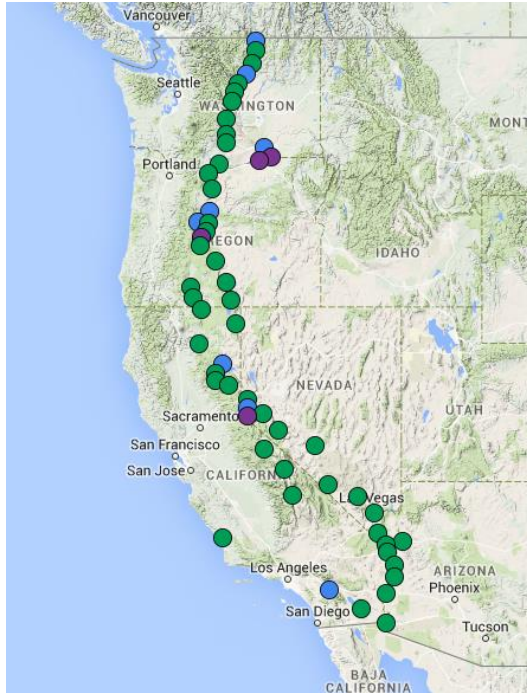
Global Education and Public Outreach

- Roughly 1,300 digital planetarium facilities worldwide
- Fiske has distributed free film content to over 90 sites in 18 countries
- Fiske also supported eclipse glasses in libraries and CU balloon launch



Citizen Science

- RECON – Research and Education Collaborative Occultation Network



Be Immersed. Be Engaged. Be Inspired.

FISKE PLANETARIUM

Looking forward to partnering with you!!

john.m.keller@colorado.edu

<https://www.colorado.edu/fiske>



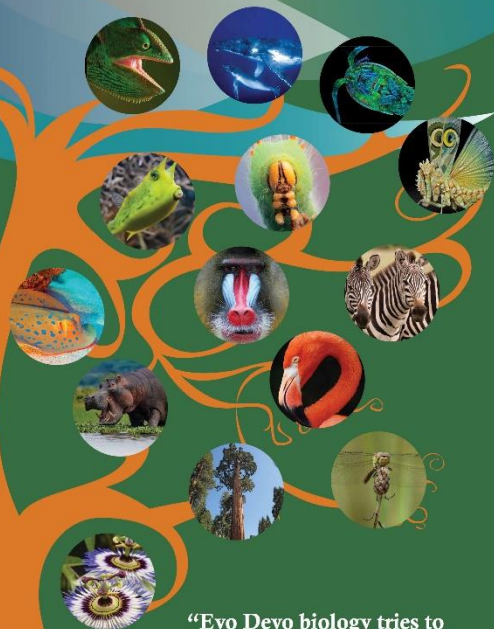


Museum of Natural History

UNIVERSITY OF COLORADO **BOULDER**

Evo Devo

Sharing genes for 3.5 billion years



"Evo Devo biology tries to understand a fundamental question - how does evolution create new things?"

~ Dan Madeiros Ph.D., Biologist

Evolutionary Developmental Biology, Evo Devo for short, is a rapidly changing field of science that explores how embryos develop, and how this process evolves over time to produce new types of organisms.

This exhibit was funded by the National Science Foundation and produced by the University of Colorado Museum of Natural History.



Fruit Flies to Human Eyes

Charles Darwin's revolutionary achievement, *On the Origin of Species*, transformed how we understand ourselves and all life on earth. But ultimately he did not have the tools to answer all of the questions his landmark theory of evolution posed.

Questions such as:

- How do new features arise?
- How are traits passed from generation to generation?
- How do complex structures, like the eye, develop?

More than a century later, evolutionary explorers discovered that a few master genes, which have been shared across all species for hundreds of millions of years, can explain much of life's diversity. This new field of science, which links evolutionary and developmental biology, is called Evo Devo.

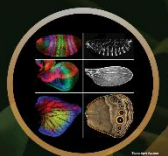


Charles Darwin

"Evo Devo seeks to understand how the process of evolution works at the most basic level, the information encoded in DNA." ~Dan Madeiros Ph.D., Biologist

EVO – Evolutionary Recycling

During the 1980s, scientists working with fruit fly and mouse embryos discovered that the same kinds of genes control development in these very different animals. At this "eureka" moment scientists realized that the same set of ancient master genes have been recycled through generations and across species.



Hox genes

DEVO – Life's Developmental Design

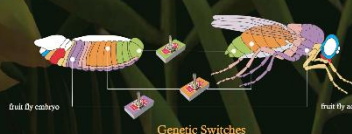
Evo Devo explores how organisms grow from a single cell through all the stages of embryo development up to birth – something that can be seen in action under a microscope.



Hox genes

Genetic Switches Shape Life

Genes switch on and off for different lengths of time throughout an organism's development. Changes in when and where genes are switched on during development can cause major changes in the form and function of the adult organism. These changes can lead to the rapid evolution of new organs, tissues, and structures, and ultimately, whole new species.



Genetic Switches

Evolution in the Lab



"I was one of those kids who loved dinosaurs, and when I learned that I was related to them, and a cow, and a bat, and other vertebrates, it just blew me away."

~ Dan Madeiros, Ph.D., Biologist

1. Start with a Good Question

Dan's first question was: how did the first vertebrates develop? He then refined his questions further to ask: "How did vertebrates first form skulls and jaws?"

2. Select the Right Research Animal

To begin to understand this major evolutionary transition that is critical to the success of all jawed vertebrates, including ourselves, Dan attempts to replicate evolutionary processes by modifying gene expression in amphioxus, lampreys, and zebrafish. These three model organisms represent different evolutionary steps in the transition from invertebrate to vertebrate body plans.



Amphioxus, a fish-like marine animal with a rudimentary neural system, splits from vertebrates 500 million years ago.



Lampreys are living fossilizations of the ancient vertebrates that appeared just prior to the evolution of jaws.



Zebrafish are easily studied model organisms that help researchers identify gene function and evolutionary relationships.

Gene activity is visualized by the use of labeled RNA probes. To observe the function of the identified genes, short DNA segments are microinjected into developing embryos and then analyzed for changes in cartilage as they develop.

3. Discover, Share and Repeat

With access to the vast catalogue of genes identified in flies, mice, and other model organisms, scientists can design RNA probes to ask what changes in gene expression lead to the transition from jawless to jawed animals. In the lab, these changes can then be replicated in live embryos by altering how genes are switched on and off. This "reverse engineering" of development can identify specific evolutionary events that get to the heart of where we come from.



Antlers are made of bone and are covered in a soft, velvet-like material called velvet. The velvet is made of blood vessels and nerves that supply the antlers with nutrients. As the antlers grow, the velvet is shed, and the antlers are left with a hard, bony surface. The antlers are shed and regrown each year.

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Antlers & Horns...What's the Difference?

Animals with Antlers

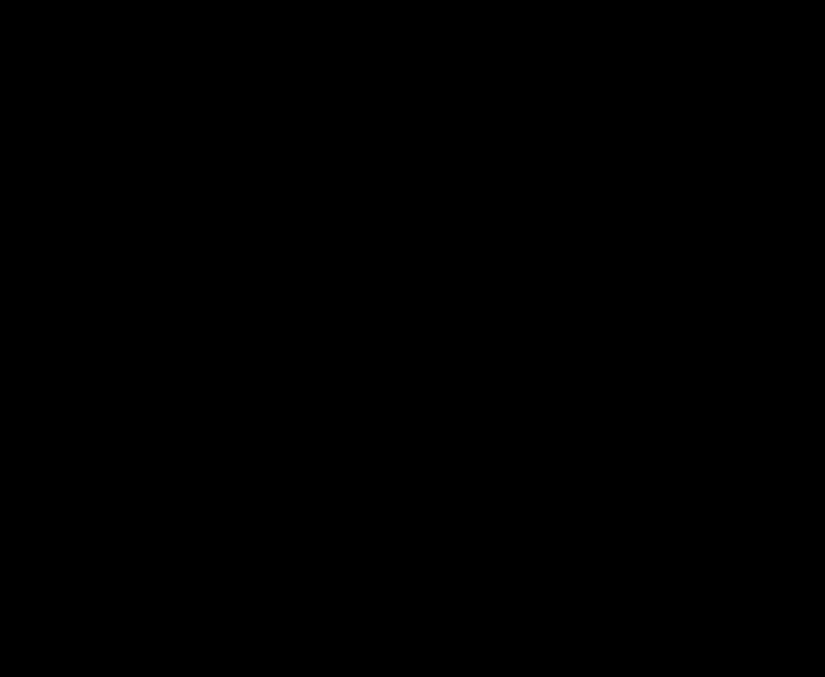
Antlers are made of bone and are covered in a soft, velvet-like material called velvet. The velvet is made of blood vessels and nerves that supply the antlers with nutrients. As the antlers grow, the velvet is shed, and the antlers are left with a hard, bony surface. The antlers are shed and regrown each year.

Animals with Horns

Horns are made of keratin, a tough, fibrous material that is also found in human hair and nails. Horns are covered in a soft, velvet-like material called velvet. The velvet is made of blood vessels and nerves that supply the horns with nutrients. As the horns grow, the velvet is shed, and the horns are left with a hard, bony surface. The horns are shed and regrown each year.

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Technology Transfer Office
UNIVERSITY OF COLORADO BOULDER

Dipika Singh, Licensing Manager

February 20, 2018



Vision

To be an
innovation hub

Mission

Translate world-
class research into
commercial and
social impact

Function

To assess, protect,
develop, and spin
out CU Boulder's
emerging
technologies



RESOURCES

Mindset

- Commercialization Academy
- Soft Launch in May

Mentors

- Entrepreneur in Residences
- Business Liaison
- Faculty Innovation Ambassadors

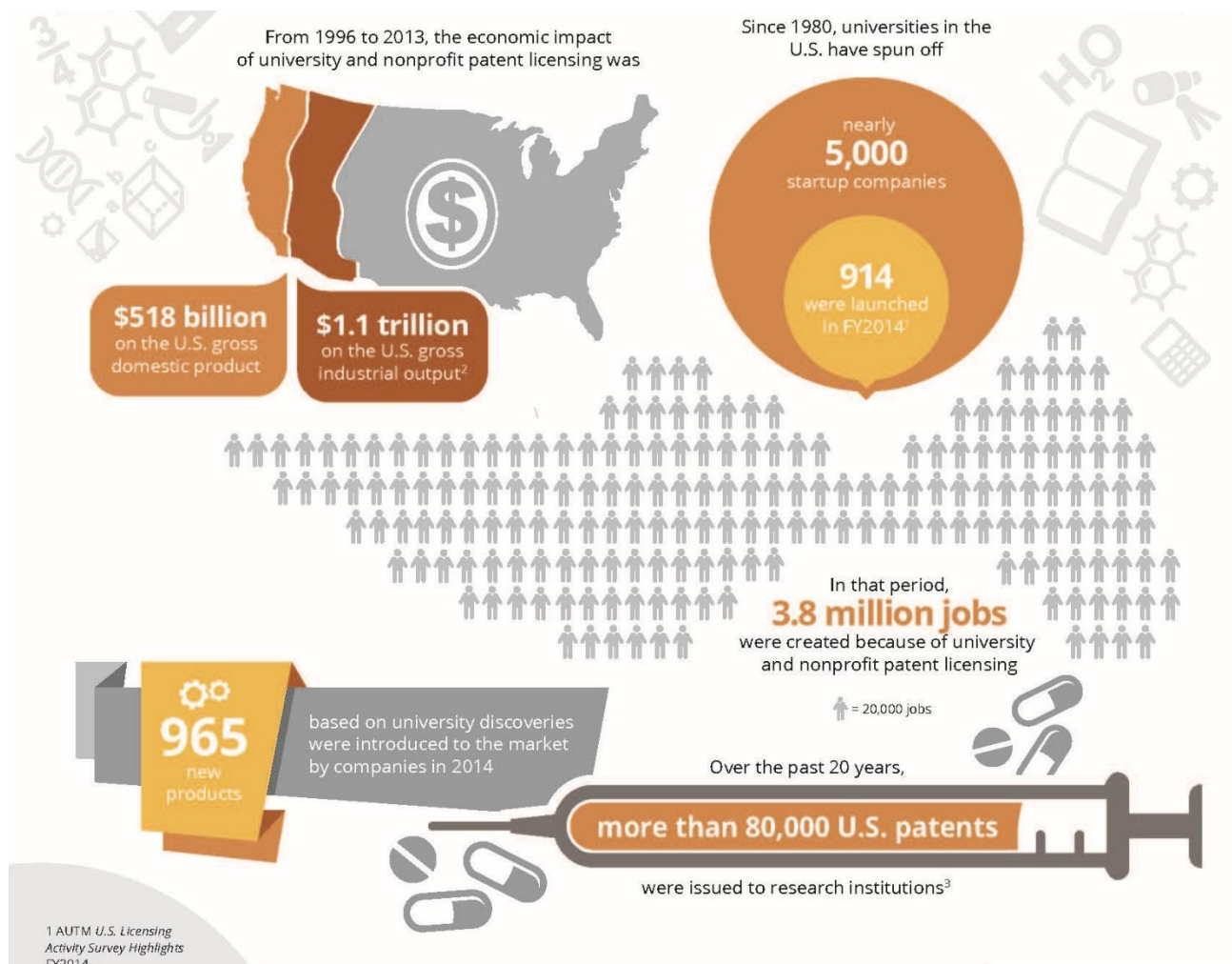
Money

- Advance Industry Accelerator Fund
- Chancellor's Fund

Intellectual Property

- IP Strategy
- IP Management

NATIONAL IMPACT OF TECH TRANSFER



THANK YOU



BIOLOGICAL
SCIENCES
INITIATIVE

Broader Impacts Opportunities in the *Life Sciences*

Increase:

Access

Diversity

Scientific Literacy



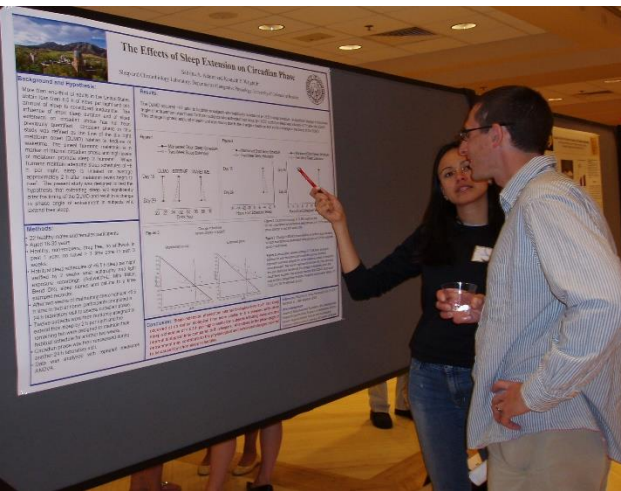
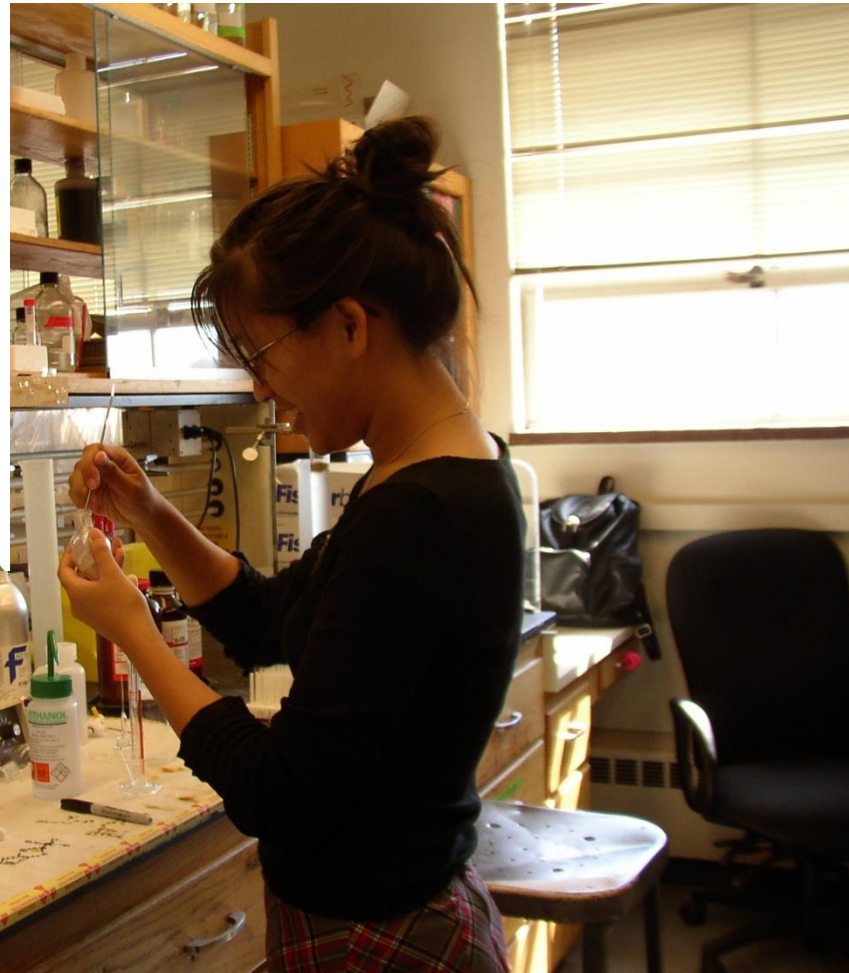
Undergraduate Research

BSI STEM Scholars

Apprentice-based

Mentored

Professional Development



CUREs

Course-based **U**ndergraduate **R**esearch **E**xperiences
Faculty **R**esearch



Chemotherapy Discovery Lab
MCDB 2171



Antibiotic Discovery Lab
MCDB 1171





ScienceLIVE

Online Resources

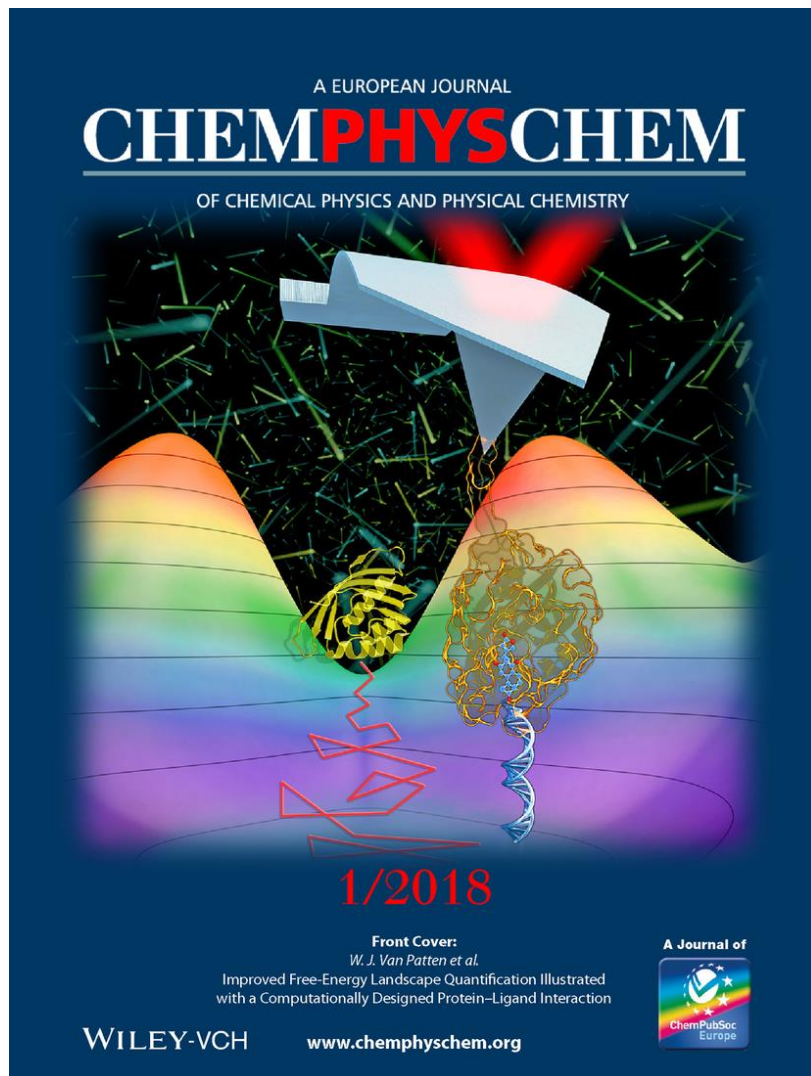
Connect field research to K-12 students, teachers and the general public



Teacher Professional Development

Help K-12 teachers communicate your research and its value to youth





Broader Impacts:

Retention

Graduation

Undergraduate Co-authorship

Advanced Degrees

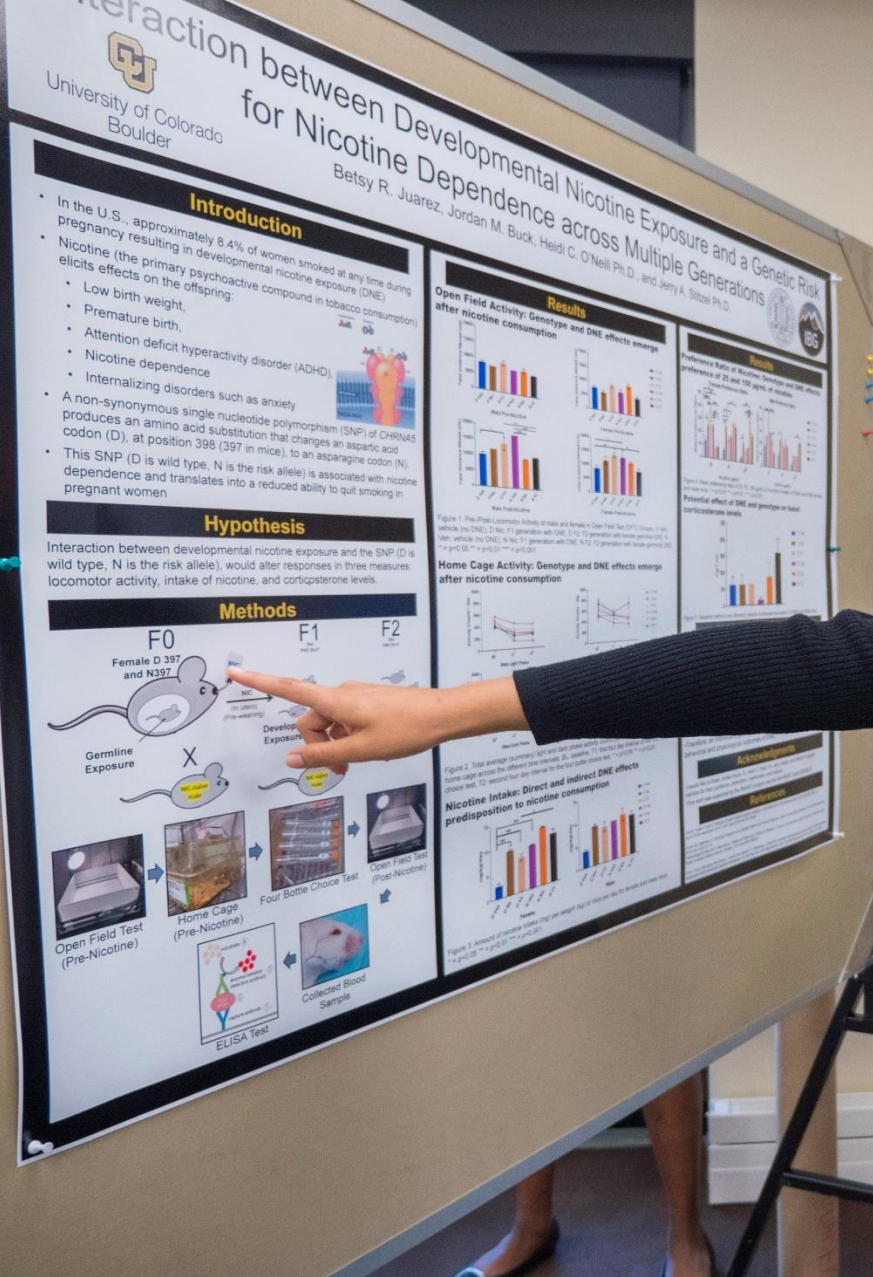
Colorado Diversity Initiative



Barbara Kraus

303-492-5779

Barbara.Kraus@colorado.edu



Summer Multicultural Access to Research Training (SMART)



Graduate
student
recruitment:

**Colorado
Advantage
PhD Preview
Weekend**

Diversity
Fellowships

Signing Bonus





Graduate student COMMUNITY and PROFESSIONAL DEVELOPMENT
SMART, Recruiting at National Conferences, CU Café, SACNAS

Department of Mechanical Engineering

| | Total | | | | | Total Female | | | | | US Citizens/Perm. Residents | | | | | US Female | | | | | US Underrpresented Minorities | | | | |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|--------------|----------|----------|----------|----------|-----------------------------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|-------------------------------|----------|----------|----------|----------|
| CU Data | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 |
| No. of applicants to PhD program | 147 | 147 | 119 | 106 | 149 | 32 | 32 | 21 | 25 | 34 | 83 | 83 | 64 | 64 | 86 | 24 | 22 | 16 | 17 | 27 | 13 | 7 | 10 | 11 | 16 |
| No. applicants accepted by program | 38 | 46 | 49 | 44 | 64 | 13 | 16 | 12 | 13 | 20 | 24 | 30 | 35 | 31 | 48 | 10 | 12 | 9 | 8 | 19 | 3 | 7 | 4 | 5 | 7 |
| No. that matriculated | 22 | 19 | 23 | 19 | 23 | 9 | 6 | 4 | 6 | 6 | 17 | 12 | 16 | 14 | 18 | 7 | 5 | 3 | 4 | 6 | 2 | 4 | 2 | 1 | 4 |
| No. PhDs awarded | 15 | 17 | 18 | 18 | 17 | 3 | 3 | 6 | 3 | 2 | 7 | 10 | 10 | 14 | 14 | 21 | 2 | 5 | 3 | 2 | 1 | 0 | 2 | 1 | 2 |
| No. currently enrolled | 101 | 96 | 96 | 94 | 107 | 27 | 26 | 24 | 24 | 28 | 70 | 69 | 69 | 63 | 73 | 1 | 21 | 20 | 18 | 22 | 8 | 6 | 7 | 7 | 9 |

[illegible]

SOURCES:

University of Colorado, Office of Data Analytics

NSF, NIH, USED, USDA, NEH, NASA, Survey of Earned Doctorates

STUDENTS WITH DISABILITIES

Assistive technology resources, accommodations, mediation for disability related grievances.





Office for Outreach and Engagement

UNIVERSITY OF COLORADO **BOULDER**

Sue Postema Scheeres, Outreach Communications Manager
February 20, 2018

Mission

Outreach and Engagement Campus Definition

At CU Boulder, we define outreach and engagement as the ways faculty, staff and students collaborate with external groups in mutually beneficial partnerships that are grounded in scholarship and consistent with our role and mission as a comprehensive, public research university.

Endorsed by the CU Boulder Council of Deans, February 16, 2010

Building Connections



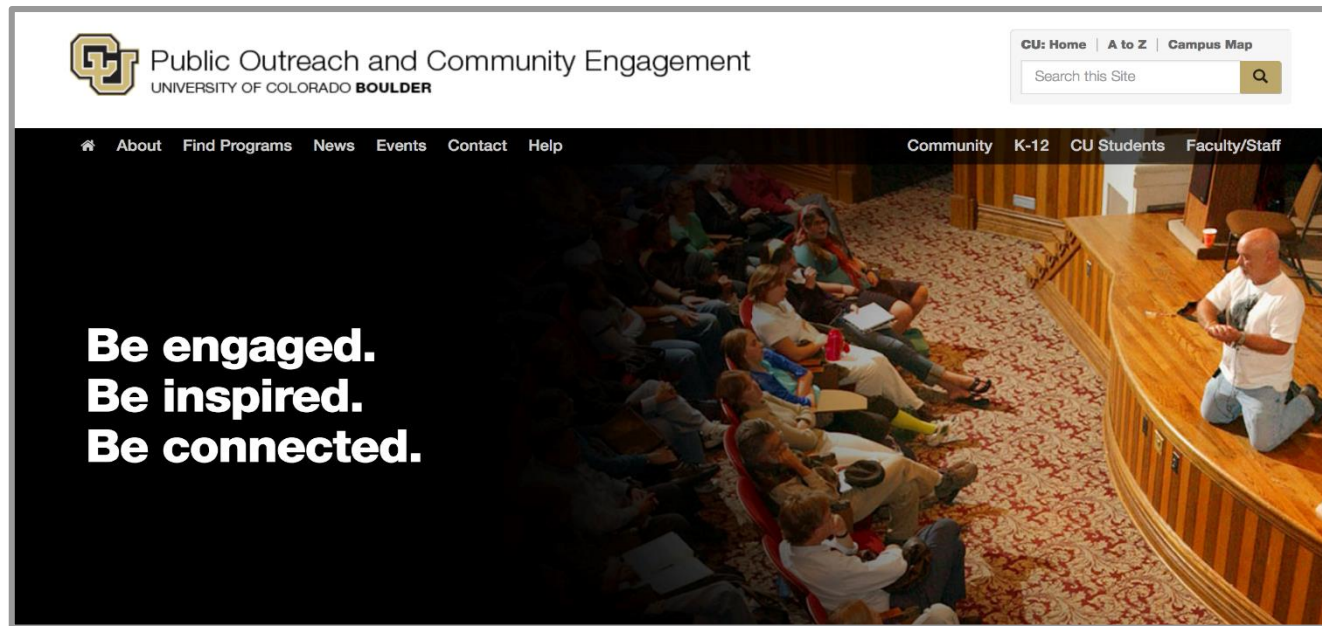
Funding



- **CU Boulder Outreach Awards**
- **Community Impact Grants**
- **Micro Grants**

colorado.edu/outreach/ooe/outreach-funding

Public Outreach and Community Engagement website



outreach.colorado.edu



Office for Outreach and Engagement

UNIVERSITY OF COLORADO **BOULDER**

Thank You!

Contact us at **outreach@colorado.edu**

colorado.edu/outreach/ooe

Follow us: @cuoutreach



Incorporating *meaningful* broader impacts into an NSF proposal: A case study

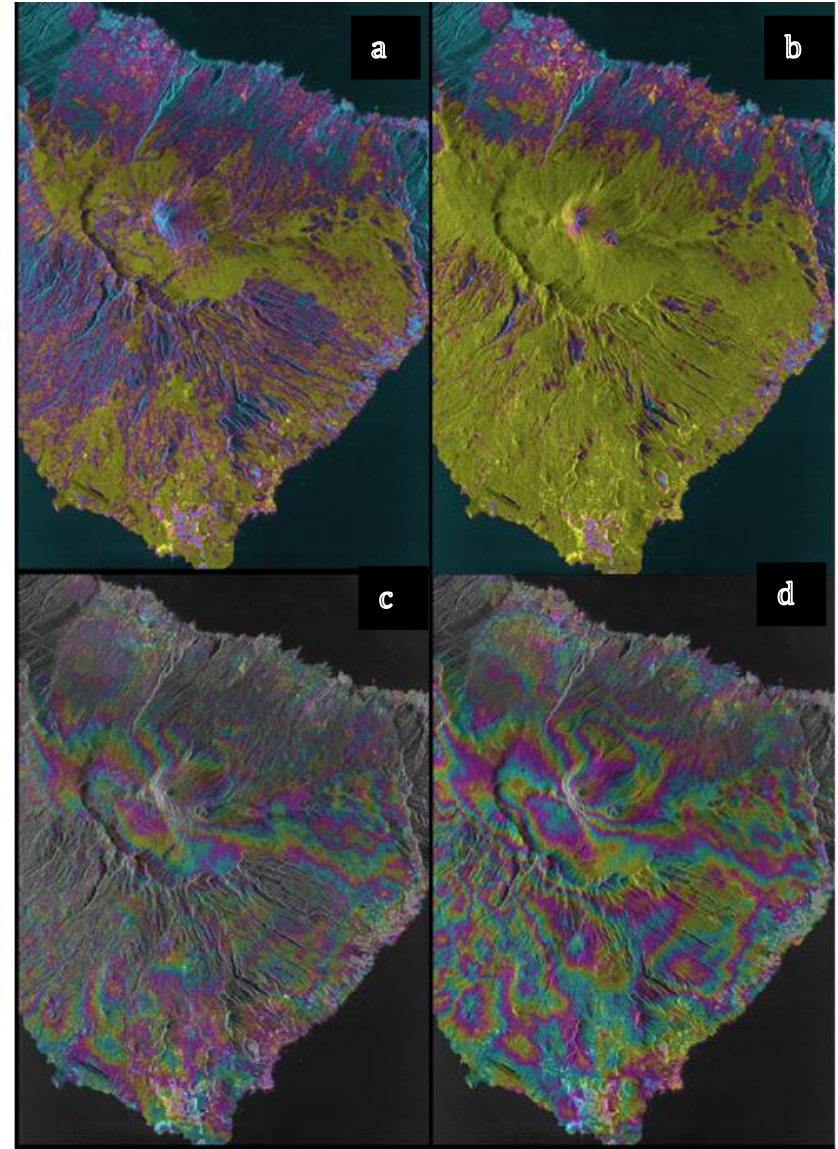
Kristy Tiampo

ESOC Director and Professor of Geological Sciences

NSF proposal on remote sensing of natural hazards

Making the long story short: The first submission was ranked quite high, biggest criticism was in the Broader Impacts section

1. Rewriting the scientific impacts was easy
2. Incorporating training and community impact was more challenging



Step one: Incorporating undergraduates and underrepresented minorities

CIRES Research Experience for Community College Students (RECCS)



Step one: Incorporating undergraduates and underrepresented minorities

UNAVCO Research Experiences in Solid Earth Science for Students (RESESS)

RESEARCH EXPERIENCES IN SOLID EARTH SCIENCE FOR STUDENTS

RESESSTM

What is RESESS?
RESESS is an internship program dedicated to increasing the diversity of students entering the geosciences.

- Paid summer internship
 - Travel, salary, housing provided
 - Conduct your own research project
 - Receive support from mentors
- Opportunity to present your work locally and at a conference
- Direct access to a supportive community of geoscientists

The poster also features two circular inset images: one of a woman pointing at a map of the Denver-Julesburg Basin on a screen, and another of a young man in a Princeton University shirt standing in a forest.

Step one: Provides an opportunities for supervisory training for postdocs and graduate students

RESEARCH EXPERIENCES IN SOLID EARTH SCIENCE FOR STUDENTS

RESESS™

What is RESESS?

RESESS is an internship program dedicated to increasing the diversity of students entering the geosciences.

- Paid summer internship
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- Opportunity to present your work locally and at a conference
- Direct access to a supportive community of geoscientists



Step two: Early Career Scientist Professional Development Workshop

Final year workshop; again with the support of
UNAVCO and some CIRES resources

2018

PLATE TECTONICS
CRYOSPHERE
LIDAR
VOLCANOES
SEA-LEVEL
IONOSPHERE
SCIENCE COMMUNICATION

SUBDUCTION ZONES
BOREHOLE
INSAR
TROPOSPHERE
EDUCATION
REAL-TIME GPS
NETWORKS

UNAVCO

SCIENCE

WORKSHOP

Geodesy Advancing Geosciences and EarthScope: Applications for Science and Society

UNAVCO

Logos for NSF and NASA are visible in the bottom left corner.



Why 3D printing? Have you seen a 3D printer?



\$2,000



\$700



A woman with dark hair and glasses, wearing a light-colored sleeveless top and dark pants, stands in the center of the room, looking towards the projection screen.





NSF Career Proposal

4.3 Education Outreach

Our education outreach effort will be centered on workshops to teach the local communities about 3D-printed tactile picture books (see Figure 7). In partnership with Anchor, we plan to run workshops for parents and TVIs. Outside the blind community, we will work with two partners.

CU Science Discovery is a K–12 STEM education outreach organization housed in our university’s Division of Continuing Education [19]. We previously ran a workshop teaching high-school students about 3D-printed tactile pictures. Encouraged by positive responses from the students, we plan to expand this outreach education effort. Our research lab will also host two high-school students as research apprentices (see letter from Dr. Stacey Forsyth).

Gemmell Library is our university’s engineering library [65]. We worked together to display our 3D-printed tactile pictures as a public art exhibit [20]. Through this experience, we realized the potential of 3D-printed tactile pictures to educate the public about the integration of literacy, engineering, and art. We plan to work together to create new exhibits and run workshops to teach librarians about 3D-printed pictures (see letter from Laura Burfield).



Build a Better Book

About

The Build a Better Book project, based at the University of Colorado Boulder, works with school and library Makerspaces to engage youth in the design and fabrication of accessible picture books and graphics. Using both low- and high-tech Makerspace tools, such as 3D printers, laser cutters, Makey Makeys, conductive boards and craft materials, youth design, fabricate, test and refine multi-modal books, games and STEM graphics that incorporate tactile and audio features. These products are designed by and for learners with visual impairments as well as other physical and learning disabilities. Through the Build a Better Book initiative, middle and high school youth develop technology skills and learn about STEM careers as they design and create accessible, multi-modal picture books, graphics and games that can be seen, touched and heard!

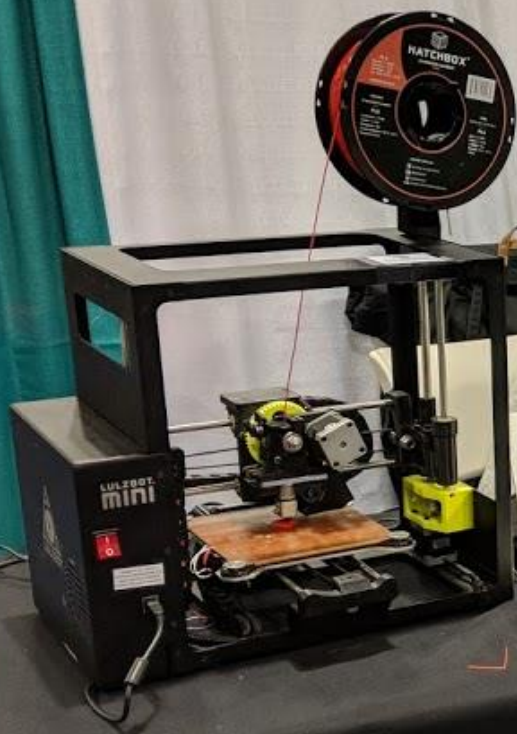
Current Partners

University of Colorado Boulder

- College of Engineering and Applied Science (Dept. of Computer Science)
- CU Science Discovery



Science Discovery
UNIVERSITY OF COLORADO BOULDER



Evaluation is a “systematic investigation of the worth or merit of an object.”

NSF evaluation handbook

Susan Lynds

CIRES Program Evaluator,

Evaluation Consultant CU Office of Outreach & Engagement

Evaluation

Why?

- Accountability
- Monitor quality
- Gather evidence on impact
- Document results
- Provide publishable data





**Front-End
Evaluation**



**Formative
Evaluation**





**Front-End
Evaluation**





**Formative
Evaluation**



**Summative
Evaluation**

Website Evaluation



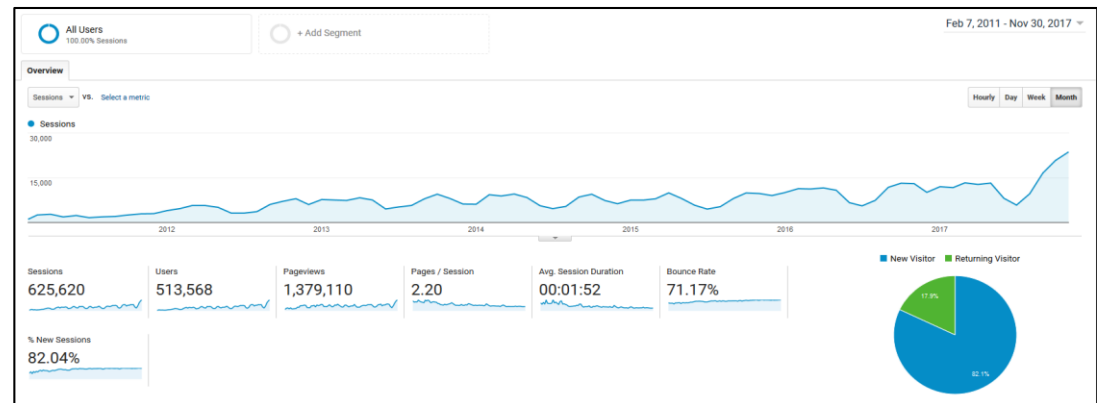



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This survey is conducted by an independent company, CFI Group. Your participation is voluntary and your response is anonymous; we are not collecting or storing any personal data.

CONTINUE ➡
NO THANKS ✕



Interested in evaluation for your BI component or educational research?

Contact:

Susan.lynds@colorado.edu



Grab a Handout & Network!



Research & Innovation Office
UNIVERSITY OF COLORADO BOULDER

CU Boulder's [Research & Innovation Office](#) presents

Understanding Broader Impacts & CU Resource Expo

February 20, 2018, 12:00 - 1:30pm, UMC Aspen Rooms

See below for a list of on-campus broader impacts resources represented at today's workshop.

 **BIOLOGICAL SCIENCES INITIATIVE**
Julie Graf, Director
Julie.Graf@colorado.edu
colorado.edu/bsi/


 **FISKE PLANETARIUM**
John Keller, Director
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colorado.edu/fiske/
 University of Colorado Boulder

 **CIRES**
Education & Outreach
Anne Gold, Director
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 **Museum of Natural History**
UNIVERSITY OF COLORADO BOULDER
Sharon Tinianow, Assistant Director
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 **CU Green Labs Program Manager**
Kathy A. Ramirez-Aguilar, PhD
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 **NEST studio for the arts**
Erin Espelle, co-Director
Tara Knight, co-Director
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 **Earth Science & Observation Center**
Kristy Tiampo, Director
kristy.tiampo@colorado.edu
cires.colorado.edu/esoc/

 **Technology Transfer Office**
UNIVERSITY OF COLORADO BOULDER
Dipika Singh, Licensing Manager
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 **Office for Outreach and Engagement**
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Colorado Diversity Initiative
Barbara Kraus, Program Manager
barbara.kraus@colorado.edu
colorado.edu/GraduateSchool/DiversityInitiative/

Have feedback about today's workshop? [Please participate in this short \(1 minute\) survey](#) to help [RIO workshops](#) better support you and campus-wide research development needs.

Survey also available at: tinyurl.com/biworkshopsurvey Questions? Email rio@colorado.edu



Research & Innovation Office
UNIVERSITY OF COLORADO BOULDER

Upcoming RIO Workshops

- March 22: Proposal Budgeting 101
- April 18: Introduction to NIH Proposal Writing
- April 26: Finding Funding
- May 16: Communicating Your Research

Lunch is provided.

RSVP at the [RIO website](https://tinyurl.com/rioworkshops) (tinyurl.com/rioworkshops)

