

# **RIO Faculty Workshop**

# **Understanding Broader Impacts**



Science Discovery

UNIVERSITY OF COLORADO **BOULDER**

# Outline

Overview of Broader Impacts | 5 min

BI Examples | 10 min

CU Campus Resources | 10 min

NSF Perspective | 10 min

Q & A | 10 min

Group Discussion | 45 min

- K-12 Outreach
- Science Communication
- Experiences for Undergraduates
- Tech Transfer

# **Merit Review Criteria**

## **Intellectual Merit |**

the potential to advance knowledge

## **Broader Impacts |**

the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

Merit Review FAQs: [http://www.nsf.gov/bfa/dias/policy/merit\\_review/mrfaq.jsp](http://www.nsf.gov/bfa/dias/policy/merit_review/mrfaq.jsp)

# What are Broader Impacts?

K-12 Engagement

Integrate your research into undergraduate education

Train grad students in outreach

Broaden Participation in STEM

Science Cafés

Writing popular science articles

Research experiences for K-12 teachers

Translate theory to practice

Museum exhibits

Podcast about your work

Public talks

Contribute to National research competitiveness

Inform public policy

Host students in your lab

Convey impacts on human health

Blogging

Technology transfer to industry and community

“Broader impacts may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to the project.”

-NSF “Proposal & Award Policies & Procedures Guide”

**Activities should complement your research activities and be scaled appropriately for the proposed project or program.**

# Guiding Questions

- ❖ What is the potential to benefit society?
- ❖ Are proposed activities creative, original, potentially transformative?
- ❖ Is the plan based on sound rationale?  
Is there a mechanism to assess success?
- ❖ How well qualified is the team?
- ❖ Are there adequate resources to implement proposed activities?

# **Key Considerations**

Goals?

Audience?

Level of your involvement?

Amount of funding?

# Lab Visits



# Science Cafés



# Community Outreach



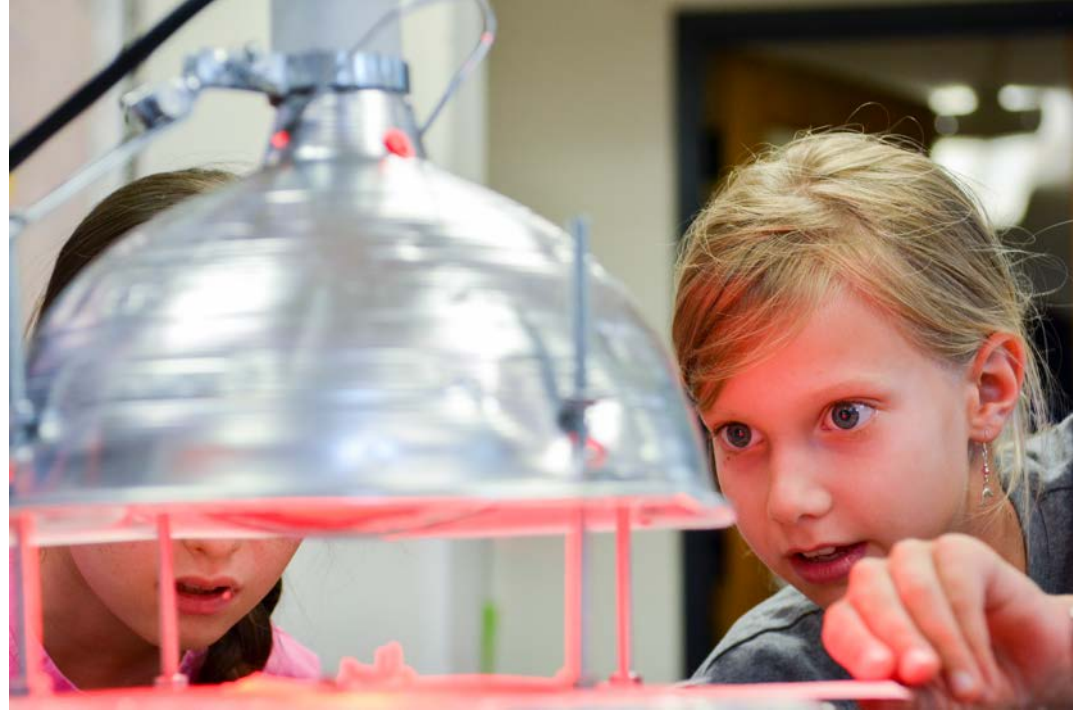
# Boulder Creek CZO

INSTAAR



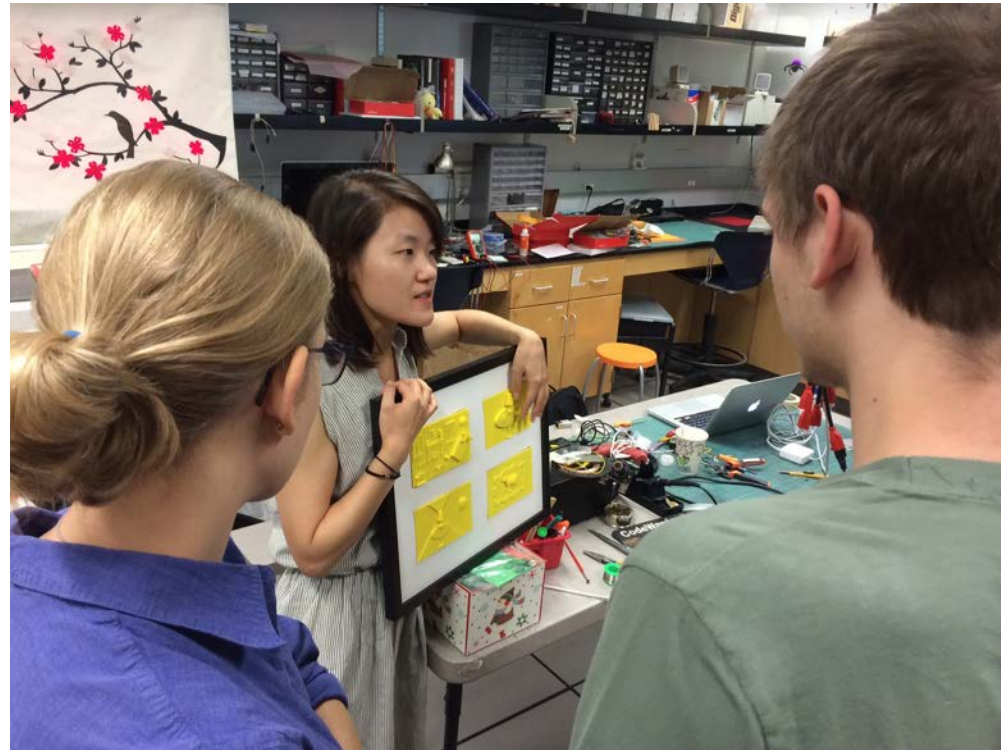
# Photo Origami

College of Engineering &  
Applied Science



# Tactile Picture Book Project

Computer Science





# **CU BI Resources**

Office of Outreach & Engagement  
(Outreach Grant Applications now open!)

Outreach Centers

Science Discovery

Fiske Planetarium

Museum of Natural History

Dept. & College Outreach Programs  
(PISEC, BSI, CU ENGAGE, etc.)

Dept. & College Diversity Offices  
(ODECE, BOLD, etc.)

RIO Office



# Museum of Natural History

University of Colorado **Boulder**



Programs



Exhibits



Traveling Exhibits

Contact: Sharon Tinianow, Assistant Director

[Sharon.tinianow@colorado.edu](mailto:Sharon.tinianow@colorado.edu)

[www.colorado.edu/cumuseum](http://www.colorado.edu/cumuseum)



# Broader Impacts in the Life Sciences

## ➤ Undergraduate Research-BSI Scholars in STEM

Include students from underrepresented groups in your lab

## ➤ BSI Teacher Professional Development

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

## ➤ Online Resources for Teachers and Students-ScienceLIVE

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





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# BROADER IMPACTS / **SUMMIT 2017**

April 26-28, 2017 • Skamania Lodge, Stevenson, WA

**Registration Open**

*Click here* 

# **NSF Perspective**

Dr. Chaitanya Baru

Senior Advisor for Data Science

CISE Directorate, NSF

**Q & A**

# **Group Discussion**

- K-12 Outreach
- Undergraduate Experiences
- Science Communication/  
Public Audiences
- Technology Transfer

## **Wrap Up**

What types of Broader Impacts activities are you hoping to develop/implement in the near future?

Would you be interested in attending a follow up event where you could meet one-on-one with broader impacts providers across campus?

# For More Info

## **CU Science Discovery**

<http://sciencediscovery.colorado.edu>

### **Stacey Forsyth**

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### **Alexandra Rose**

Alexandra.Rose@colorado.edu

## **CU Outreach & Engagement**

<https://outreach.colorado.edu>

## **CU Research & Innovation Office (RIO)**

<https://colorado.edu/innovate>

## **NABI**

<https://broaderimpacts.net>