Institute for Broadening Participation
Building Partnerships to Support Diversity in Science

The Institute for Broadening Participation

Building and Fostering Partnerships to Increase Participation and Diversity in STEM

IBP's Mission

- To make education and careers in science more accessible to students, particularly underrepresented minorities

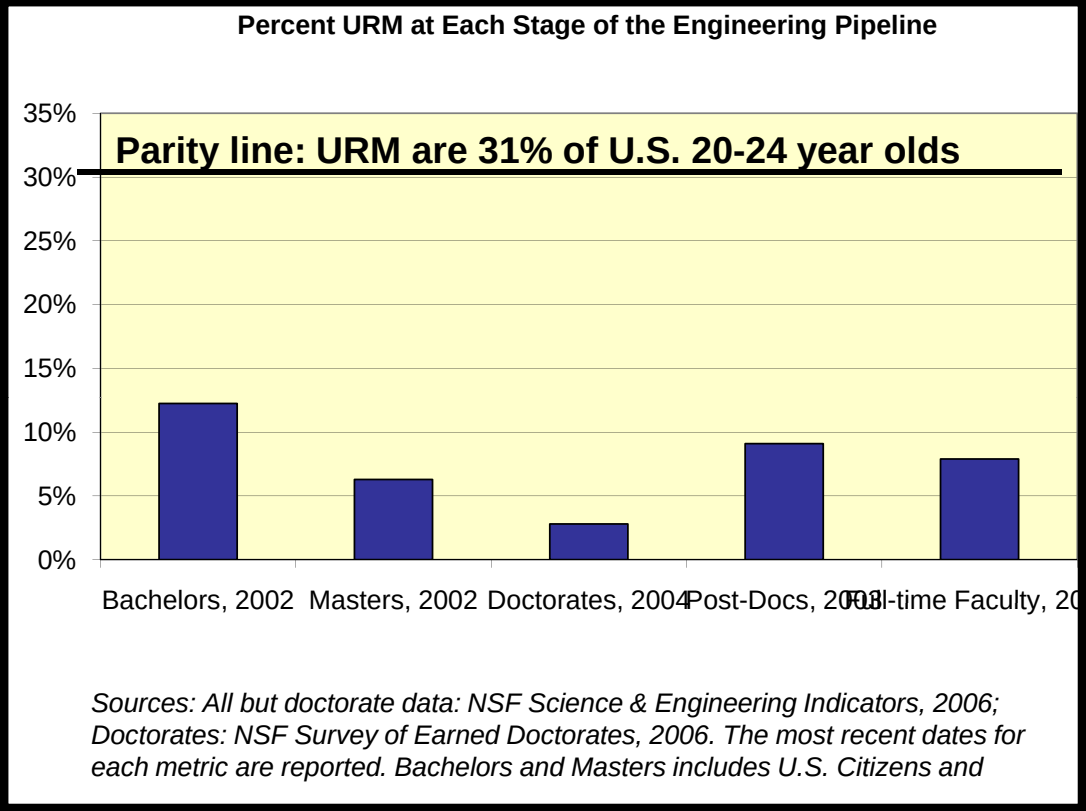
- To support faculty and administrators as they work to include students from a variety of backgrounds in their programs

- To foster an on-going exchange of ideas and resources between individuals and institutions who are working to navigate their future in the STEM fields

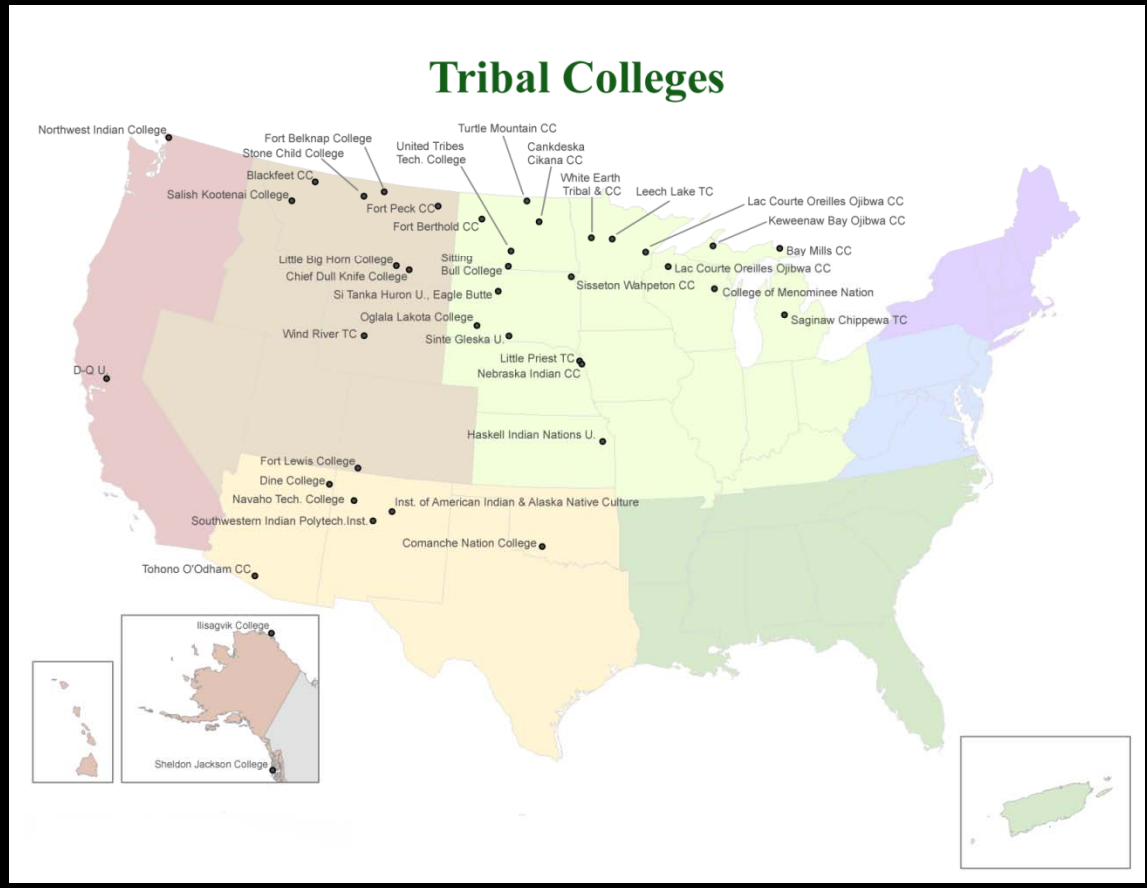
Why is Diversity Imperative?

- "A matter of national need."
- "S & E workforce impacts our ability to compete in the global marketplace. All talent is needed."
- "We cannot afford to lose women and URM* students."
- "Female and URM faculty will help attract and retain female and URM students."
- Quality of Education – "diversity of viewpoints and experiences provides a richer educational environment for students and faculty alike."
- "Diverse teams are more effective problem solvers."

*** URM: "under represented minority," includes African Americans, American Indians and Alaska Natives, Pacific Islanders, and Latinos/as.**

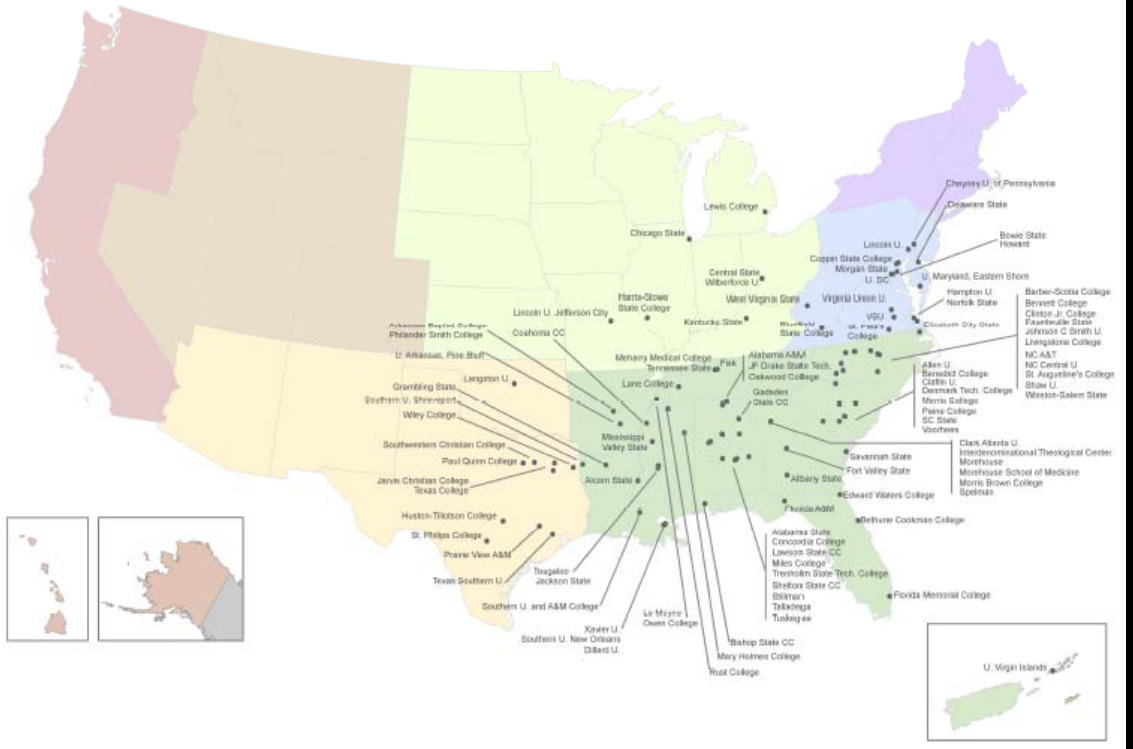


Sources: All but doctorate data: NSF Science & Engineering Indicators, 2006; Doctorates: NSF Survey of Earned Doctorates, 2006. The most recent dates for each metric are reported. Bachelors and Masters includes U.S. Citizens and


Tribal Colleges
Northwest Indian College
Fort Belknap College
Stone Child College
Blackfeet CC
Salish Kootenai College
Fort Peck CC
Turtle Mountain CC
United Tribes Tech. College
Cankdeska Cikana CC
Fort Berthold CC
White Earth Tribal & CC
Leech Lake TC
Lac Courte Oreilles Ojibwa CC
Keweenaw Bay Ojibwa CC
Bay Mills CC
Lac Courte Oreilles Ojibwa CC
College of Menominee Nation
Saginaw Chippewa TC
Little Big Horn College
Chief Dull Knife College
Sitting Bull College
Si Tanka Huron U., Eagle Butte
Sisseton Wahpeton CC
Oglala Lakota College
Wind River TC
Sinte Gleska U.
Little Priest TC
Nebraska Indian CC
D-Q U.
Haskell Indian Nations U.
Fort Lewis College
Dine College
Navaho Tech. College
Inst. of American Indian & Alaska Native Culture
Southwestern Indian Polytech.Inst.
Comanche Nation College
Tohono O'Odham CC
Ilisagvik College
Sheldon Jackson College

Hispanic Serving Institutions
Cal. State, Fullerton
Cal. State, Dominguez Hills
Cal. State, Long Beach
Cal. State, Los Angeles
LA Harbor College
Mt. San Antonio College
Santa Ana College
Santa Monica College
Rio Hondo College
Canada College
Cal. State, Monterey Bay
Cal. State, Fresno
Cal. State, Bakersfield
Pueblo CC
Adams State College
Cal. State, San Bernardino
College of the Desert
San Diego State
Imperial Valley College
Arizona Western College
New Mexico HighLands U.
New Mexico Tech
South Plains College
New Mexico State
Cochise College
El Centro College
Mountain View College
U. Texas, El Paso
Western Tech. Institute
El Paso CC
Midland College
Odessa College
San Jacinto College
U. Houston
Southwest Texas Jr. College
Victoria College
Coastal Bend College
Texas A&M International U.
Laredo CC
Texas A&M, Kingsville
U. Texas, Pan American
U. Texas, Brownsville
U. Texas, San Antonio
Palo Alto College
Our Lady of the Lake U.
San Antonio College
Northeastern Illinois U.
St. Augustine College
New Jersey City U.
CUNY, John Jay College
CUNY, Bronx CC
CUNY, Lehman College
CUNY, Hunter College
CUNY, City College NY
Florida National College
College of Business and Tech.
City College
Florida International U.

Historically Black Colleges & Universities



What We Know are Best Practices:

- **Institutional Leadership**
- **Targeted Recruitment**
- **Engaged Faculty**
- **Personal Attention**
- **Peer Support**
- **Enriched Research Experience**
- **Bridging to the Next Level**
- **Continuous Evaluation**
- **Comprehensive Financial Support**

Immediate Action Items:

✓Develop a Recruitment Plan
Assign Tasks and Due Dates to Specific People

✓Develop a Retention Plan
Assign Tasks and Due Dates to Specific People

✓Incorporate Routine Formative Evaluation into your Programs

What we do to Help:

Virtual Outreach
&
Face to Face Outreach

Institute for Broadening Participation

Building Partnerships to Support Diversity in Science

www.PathwaysToScience.org

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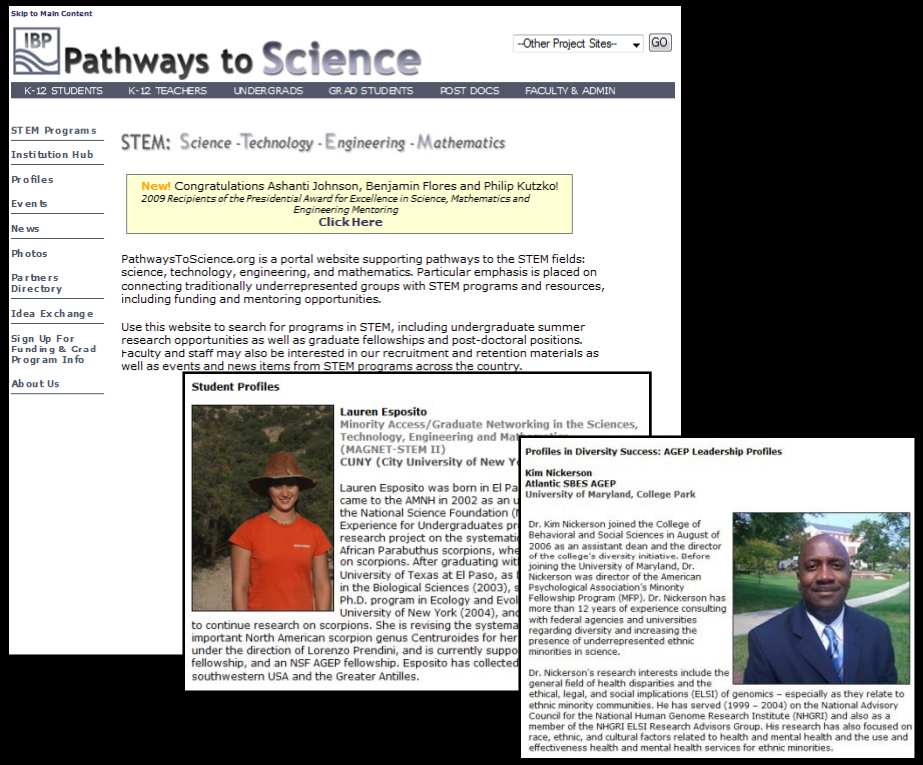


- Programs
- Contacts
- Profiles
- News
- Events
- Photo Slideshows
- Documents & Best Practices

www.PathwaysToScience.org

Institution Hubs

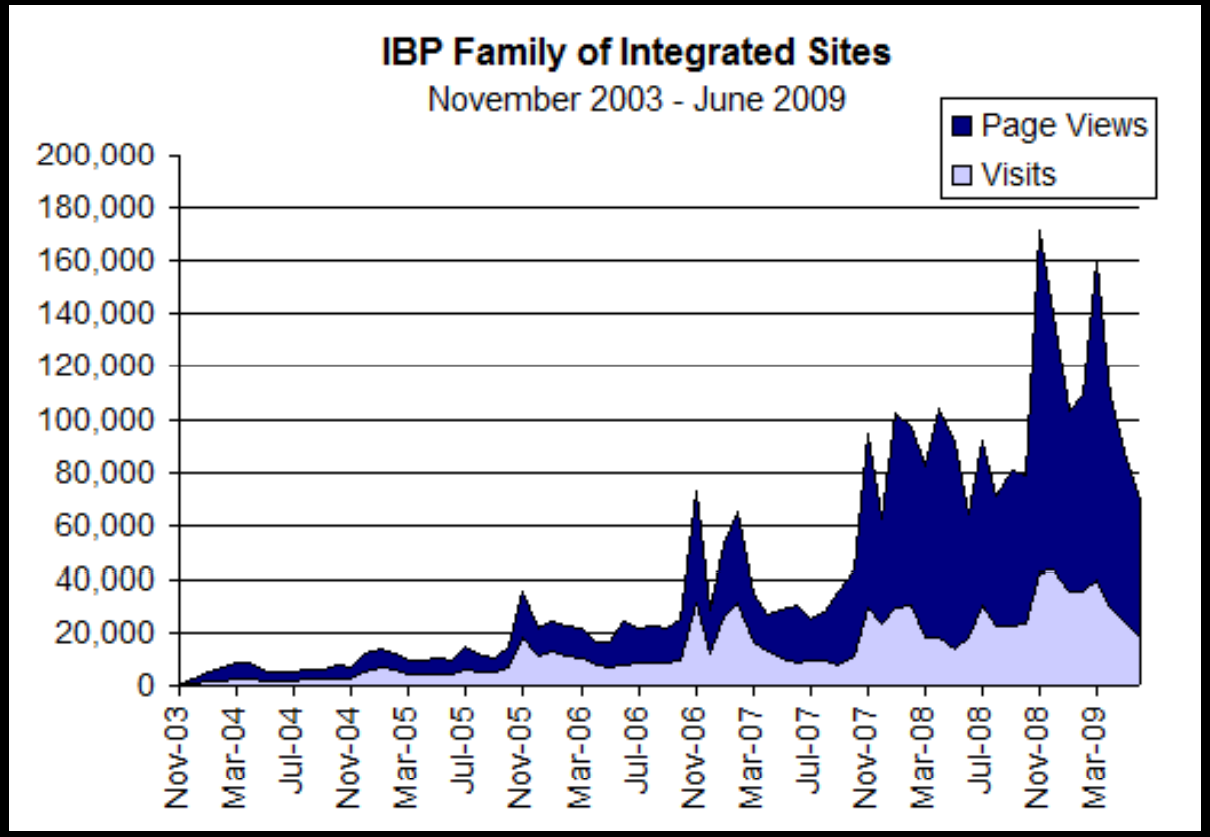
View
programs, contacts, photo
s, news, events, profiles, a
nd a locator map for **892**
different institutions.

www.PathwaysToScience.org

For each of the **1,366** programs in our database, view program information including participating institutions, program brochures and videos, academic disciplines, contacts, photos, news, events and profiles.

Web Statistics

Peaks of over 40,000 visits per month



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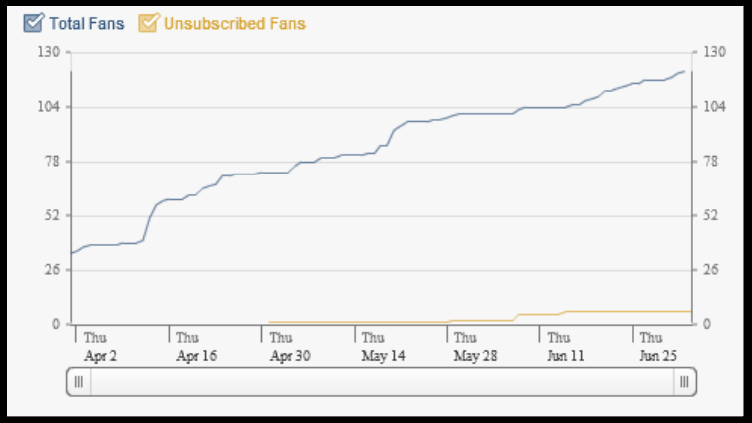
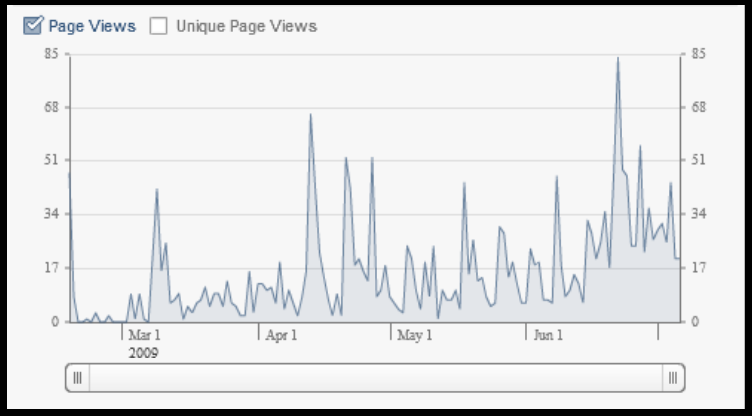
Future Directions: Social Networking Tools

Using Facebook to promote programs and network with students and Faculty/Administrators





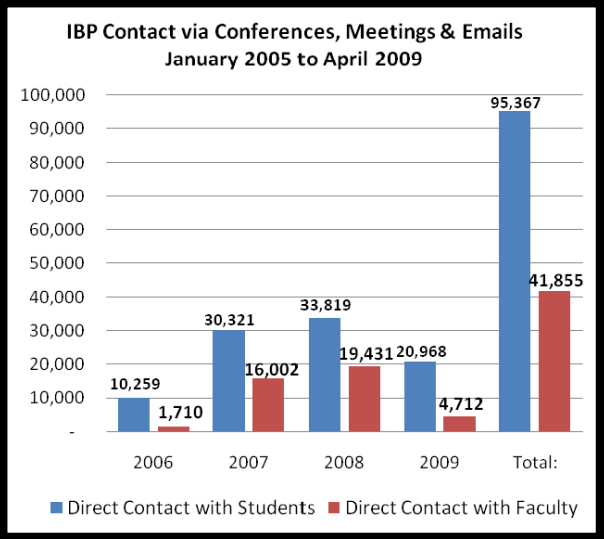
Face to Face Outreach

To Faculty/Staff:

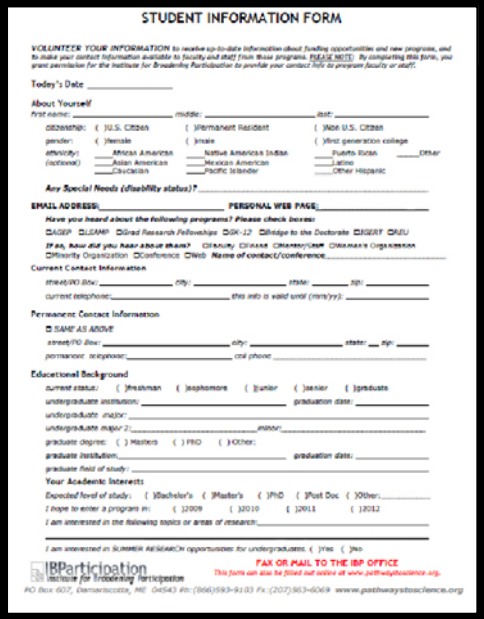
- ✓ Conference presentations
- ✓ Small Meetings

To Students:

- ✓ Presentations at conferences
- ✓ Student Information Form
- ✓ Information booths



Student Directory



STUDENT INFORMATION FORM

VOLUNTEER YOUR INFORMATION to receive up-to-date information about funding opportunities and new programs, and to make your contact information available to faculty and staff from those programs. PLEASE NOTE: By completing this form, you grant permission for the Institute for Broadening Participation to provide your contact info to program faculty or staff.

Today's Date _____

About Yourself

first name: _____ middle: _____ last: _____

citizenship: ( )U.S. Citizen ( )Permanent Resident ( )Not U.S. Citizen

gender: ( )Female ( )Male ( )first generation college

ethnicity: ____African American ____Native American Indian ____Puerto Rican ____Other
(optional) ____Asian American ____Mexican American ____Latino
____Caucasian ____Pacific Islander ____Other Hispanic

Any Special Needs (disability status)? _____

EMAIL ADDRESS: _____ PERSONAL WEB PAGE: _____

Have you heard about the following programs? Please check boxes:

☐AGEP ☐LSAMP ☐Grad Research Fellowships ☐SMI-12 ☐Bridge to the Doctorate ☐IGERT ☐REU

If so, how did you hear about them? ☐Faculty ☐Friend ☐Family/Other ☐Minority Organization
☐Minority Organization ☐Conference ☐Web *Name of contact/conference* _____

Current Contact Information

street/PO Box: _____ city: _____ state: _____ zip: _____

current telephone: _____ *this info is valid until (mm/yy):* _____

Permanent Contact Information

☐ *SAME AS ABOVE*

street/PO Box: _____ *city:* _____ *state:* _____ *zip:* _____

permanent telephone: _____ *cell phone* _____

Educational Background

current status: ( )Freshman ( )Sophomore ( )Junior ( )Senior ( )graduate

undergraduate institution: _____ *graduation date:* _____

undergraduate major: _____

undergraduate major 2: _____ *minor:* _____

graduate degree: ( ) Masters ( ) PhD ( )Other:

graduate institution: _____ *graduation date:* _____

graduate field of study: _____

Your Academic Interests

Expected level of study: ( )Bachelor's ( )Master's ( )PhD ( )Post Doc ( )Other:_____

I hope to enter a program in: ( )2009 ( )2010 ( )2011 ( )2012

I am interested in the following topics or areas of research: _____

_____

I am interested in SUMMER RESEARCH opportunities for undergraduates: ( )Yes ( )No

IBParticipation Institute for Broadening Participation

FAX OR MAIL TO THE IBP OFFICE

This form can also be filled out online at www.pathwaystoscience.org.

PO Box 607, Damariscotta, ME 04543 Ph: (866)593-9103 Fx: (207)563-6069 www.pathwaystoscience.org

- ✓ Began in 2003
- ✓ 30,000+ records
- ✓ Over 70% underrepresented minorities
- ✓ Growing by 3,000 – 5,000 students per year (we added 5,700 students in 2008)
- ✓ Includes data from partner organizations such as GEM, CIC-SROP, the Leadership Alliance, and NSF AGEP, IGERT, and REU
- ✓ In 2008, we provided student lists to 24 STEM programs wishing to reach out to URM students. These lists totaled 43,400 student names (9,000 individual students) and included 49 different declared majors.

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Summer Research Experiences for Undergrads

Summer Research Opportunities by Institution:
A - E

Jump to: A - E | F - J | K - O | P - T | U - Z

An exclamation mark denotes a program with an approaching deadline

Academy of Natural Sciences, Philadelphia *(Philadelphia, PA)*
- Botany, Entomology, Environmental Research, and History of Science REU

Agnes Scott College *(Decatur, GA)*
- Southeastern Association REU in Astronomy

Alabama A&M University *(Normal, AL)*
- Dept. Of Physics REU Summer Program

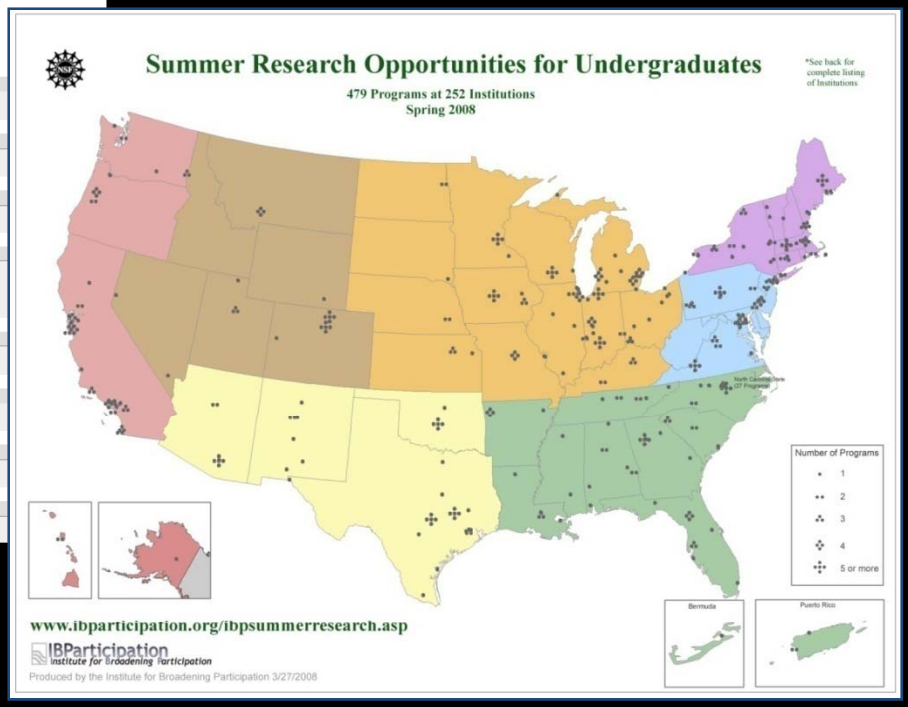
American Museum of Natural History *(New York, NY)*
- REU in Astrophysics and Earth and Planetary Science
- REU in Evolutionary Biology or Physical Sciences

Arctic Region Supercomputing Center *(Fairbanks, AL)*
- Alaska Research Summer Challenge

Arizona State University *(Tempe, AZ)*
- National Nanotechnology Infrastructure Network (NNIN) REU Program

Arkansas State University *(State University, AR)*
- Research Internships in Science of the Environment (RISE)

Auburn University *(Auburn, AL)*
- Micro/Nano-Structured Materials, Therapeutics, and Devices REU



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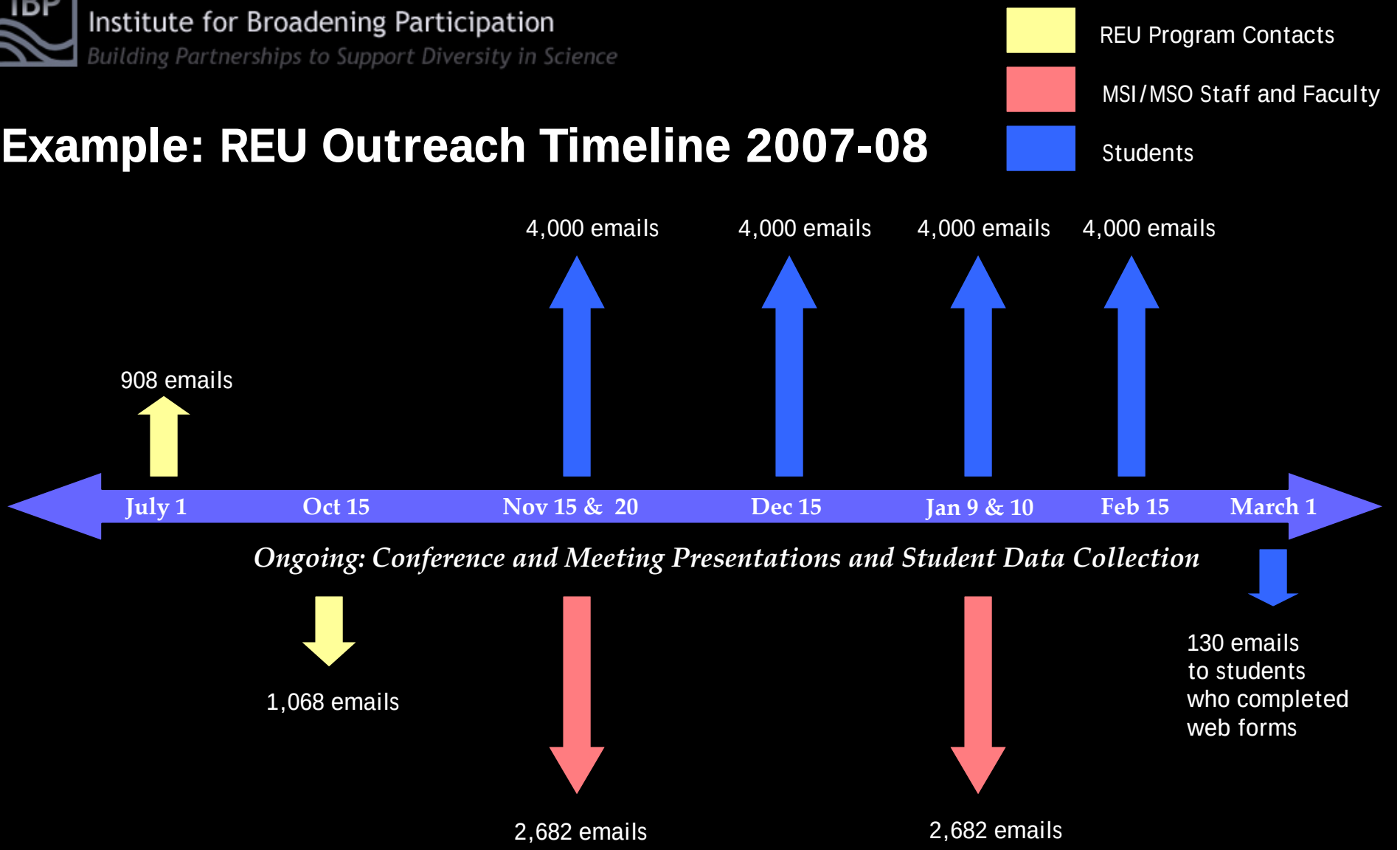
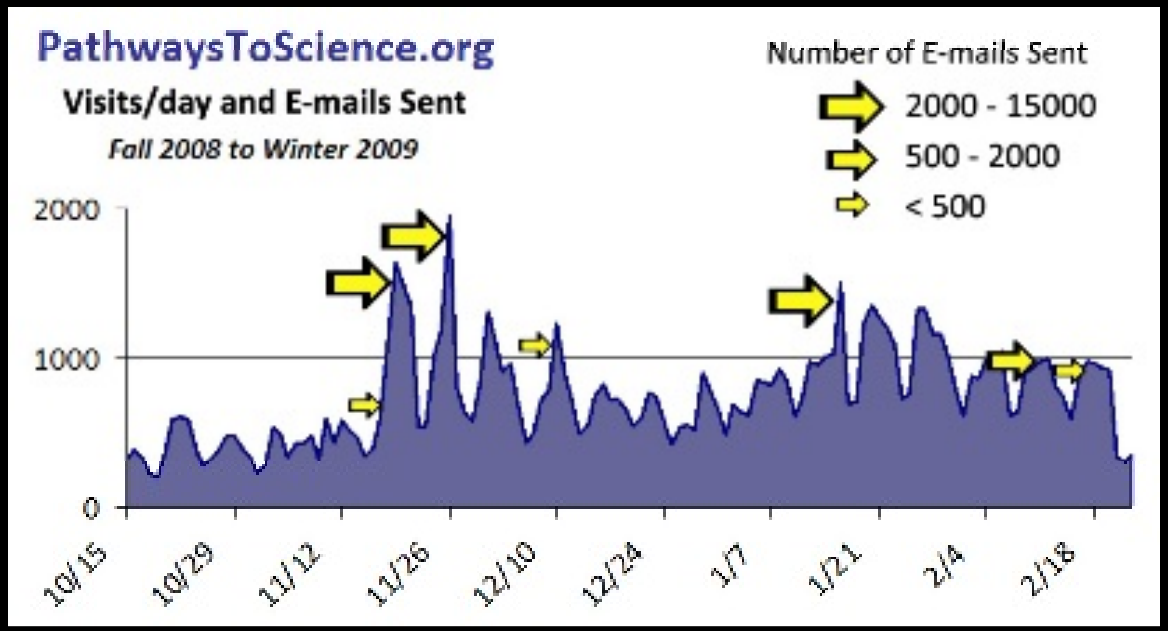
Example: REU Outreach Timeline 2007-08



Virtual Outreach: Visits per day to our Pathways Site



Outreach-Mentoring and Professional Development

- **MS PHD'S** (Minorities Striving and Pursuing Higher Degrees of Excellence in Earth System Science

- **National Alliance for Doctoral Studies in the Mathematics**

We use digital tools to supplement face-to-face mentoring activities:

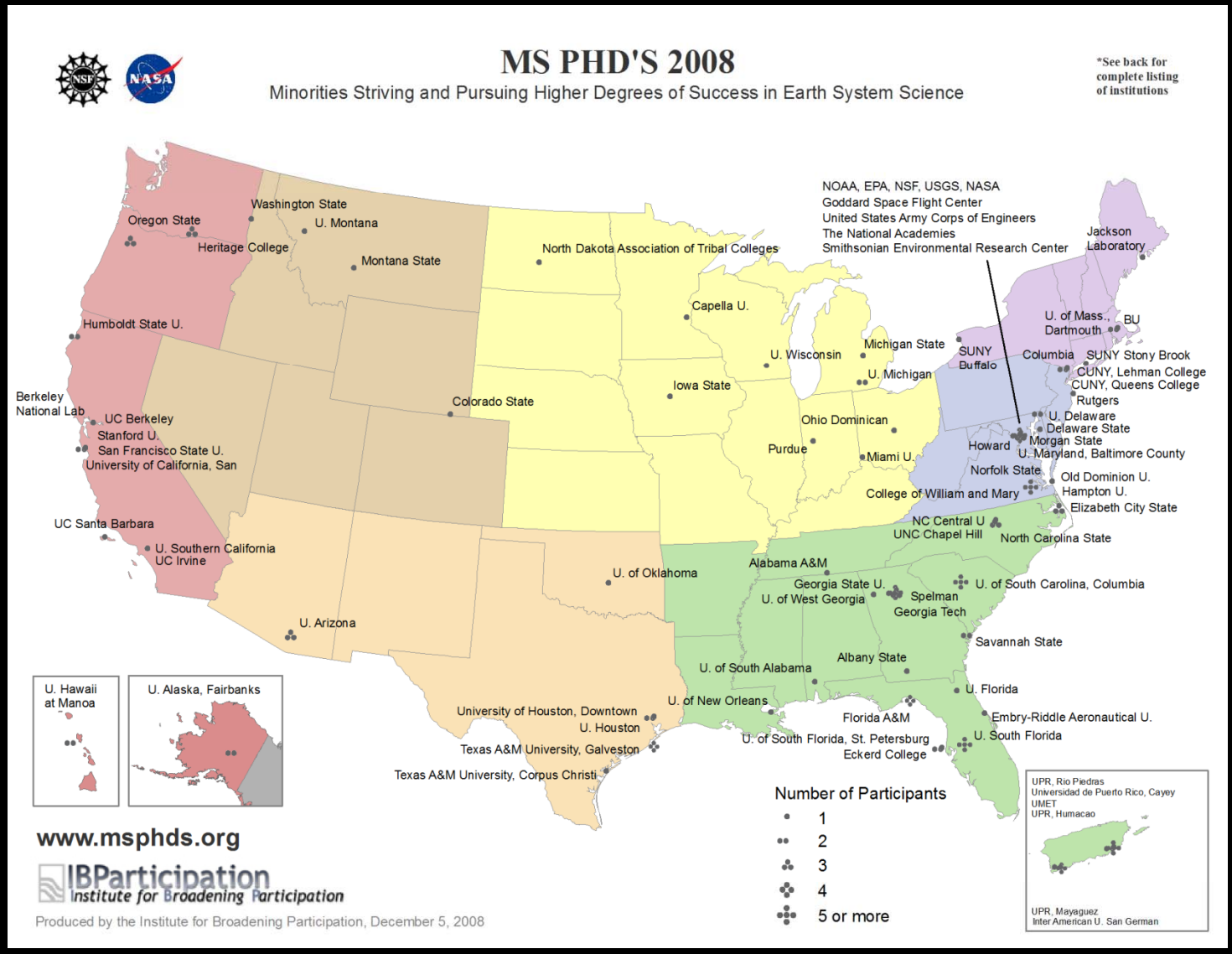
- web forums
- list-serv
- online application forms & review process
- VOIP and video-cams

The Phases

	Phase I	Phase II	Phase III
Professional Organization	AGU Fall Meeting, California Academy of Science, Aquarium of the Bay	AGU, AMS, ASLO, Consortium for Ocean Leadership IODP Science Steering and Evaluation Panel, TOS, WHOI OCB, NABGG, NSTA, SACNAS, On the Cutting Edge	Capstone Events: National Academies Ford Foundation Fellowship Program and Ocean Studies Board, NSF, NASA, EPA, NOAA, FWS, USGS, Capitol Hill, Smithsonian National Museum Of The American Indian
Location	San Francisco, CA	Organization Specific	Washington, D.C. area
Dates	November/ December	Spring-Fall	Spring

- The Students participate in three phases designed to facilitate professional development, mentoring and networking activities

- The MS PHD'S community provides a supportive environment in which participants develop strategies and professional skills necessary to excel in the Earth System Sciences


MS PHD'S 2008
Minorities Striving and Pursuing Higher Degrees of Success in Earth System Science
*See back for complete listing of institutions
NOAA, EPA, NSF, USGS, NASA
Goddard Space Flight Center
United States Army Corps of Engineers
The National Academies
Smithsonian Environmental Research Center
Jackson Laboratory
Washington State
Oregon State
U. Montana
Heritage College
Montana State
North Dakota Association of Tribal Colleges
Capella U.
Humboldt State U.
U. of Mass., Dartmouth
BU
U. Wisconsin
Michigan State
SUNY Buffalo
Columbia
SUNY Stony Brook
U. Michigan
CUNY, Lehman College
CUNY, Queens College
Iowa State
Rutgers
Berkeley National Lab
UC Berkeley
Stanford U.
San Francisco State U.
University of California, San
Colorado State
Ohio Dominican
U. Delaware
Delaware State
Morgan State
Howard
Purdue
Miami U.
U. Maryland, Baltimore County
Norfolk State
Old Dominion U.
Hampton U.
College of William and Mary
Elizabeth City State
NC Central U
UNC Chapel Hill
North Carolina State
UC Santa Barbara
U. Southern California
UC Irvine
Alabama A&M
U. of Oklahoma
Georgia State U.
U. of West Georgia
Spelman
Georgia Tech
U. of South Carolina, Columbia
U. Arizona
Savannah State
Albany State
U. of South Alabama
U. Florida
U. of New Orleans
Florida A&M
Embry-Riddle Aeronautical U.
U. South Florida
U. of South Florida, St. Petersburg
Eckerd College
University of Houston, Downtown
U. Houston
Texas A&M University, Galveston
Texas A&M University, Corpus Christi
U. Hawaii at Manoa
U. Alaska, Fairbanks
UPR, Rio Piedras
Universidad de Puerto Rico, Cayey
UMET
UPR, Humacao
UPR, Mayaguez
Inter American U. San German
Number of Participants
1
2
3
4
5 or more
www.msphds.org
IBParticipation
Institute for Broadening Participation
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The Institute for Broadening Participation

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