

*The National Academies of*  
**SCIENCES • ENGINEERING • MEDICINE**

**Service-Learning in Undergraduate Geosciences Workshop**

**April 20 & 21, 2016**

**National Academy of Sciences Building, Room 125**

**2101 Constitution Ave, NW, Washington D.C.**

**April 20**

8:30 a.m. Breakfast and Networking (food provided for all participants)

9:00 a.m. **Welcome and Workshop goals**  
**Cathy Manduca, Chair of the Organizing Committee**

**Questions to Address**

See list of Questions on Page 7

9:15 a.m. Why is service-learning important in Geosciences?  
**David Szymanski, Bentley University**

9:45 a.m. Q&A

**Session I: Understanding the Breadth of Service-Learning Implementation Across Disciplines**

Address Questions #1, 2, and 6 from the list on Page 7

Moderator: Ed Laine

10:00 a.m. The Promise of Service-Learning: Outcomes and Challenges  
**Linda Silka, University of Maine**

10:30 a.m. Q&A

10:45 a.m. Break

11:00 a.m. Reflect on Learning Goals: Break-Out Session

What have been your experiences/observations about service-learning? What is valuable about service-learning to your students, faculty, institution, and community? What has gone well in your SL experience? What needs to be improved? (30 minutes)

What are the barriers to the adoption of service-learning within the geoscience profession? What barriers are there to adoption of service-learning at your institution? Brainstorm strategies for overcoming these barriers. (30 minutes)

***Each Group should prepare slides with bullet points and email to mscheiber@nas.edu***

- Slide #1-What is being done well?
- Slide #2-What areas need attention?

- 12:00 p.m.     Reporting back from break-out sessions
- Moderated by Ed Laine
    - *First group will present its top 3 points from each slide*
    - *Subsequent groups will attempt to give 3 new points each*
- 12:30 p.m.     *Lunch* (food provided for all participants)

**Session II: Understanding What is Known about the Impact of Service-Learning Experiences on Students from Historically Under-Represented Populations**

Address Question #4 from the list on Page 7

Moderator: Sue Ebanks

- 1:30 p.m.     Participation in geosciences and service-learning by historically underrepresented populations  
**Suzanne O'Connell, Wesleyan University**
- 1:50 p.m.     Panel of commenters on what the presentation suggests about impact (positive, negative, and unique opportunities)
- **Antony Berthelote, Salish Kootenai College (remote)**
  - **Ben Cuker, Hampton University**
- 2:10 p.m.     Q&A
- 2:30 p.m.     Break

**Session III: Understanding how the Geoscience Community Defines and Implements Service-Learning**

Address Questions #1, 2, and 3 from the list on Page 7

Moderator: Sarah Fortner

- 2:45 p.m.     Categorizing and synthesizing information about service-learning experiences in geosciences  
**Suzanne Savanick Hansen, Macalester College**
- 3:05 p.m.     Specific examples of service-learning
- **Caroline Davies, University of Missouri, Kansas City**
  - **Bob Gilbert, University of Texas Austin (remote)**

- 3:25 p.m. Q&A
- 3:45 p.m. Break-Out Session: reflect on the common elements of service-learning in geosciences and consider which aspects are unique to the various groups within your assignment.

- *Group #1-Disciplines of Geosciences (NAS 125)*
  - *(oceanography, atmospheric science, etc.)*
  - *remote participants may only participate in this break-out group*
- *Group #2-Institution Types (NAS 227)*
  - *Community colleges, primarily undergraduate institutions, comprehensive universities, research universities, etc.*
- *Group #3-Types of Students (NAS 360)*
  - *Honors, introductory, historically under-represented, local, attending school far from home, first generation college students, etc.*

***Each Group should prepare slides with bullet points and email to mscheiber@nas.edu***

- Slide #1-common elements
- Slide #2-unique features
- Slide #3-relevant design principles for service-learning in the context of your group's assigned topic

- 4:45 p.m. Reporting back from the break-out session
- Moderated by Sarah Fortner
    - *First group will have 5 minutes to present its top 3 points*
    - *Subsequent groups will attempt to give 3 new points each in their 5 minute slots*

### **Wrap Up**

- 5:15 p.m. Review of the day  
**Cathy Manduca, Chair of the Organizing Committee**
- 5:30 p.m. Adjourn
- 6:00 p.m. Dinner on your own
- 8:00 p.m. Optional Gathering at the "A Bar" at Avenue Suites in Georgetown for anyone interested in meeting up with colleagues  
(Buy your own drinks)  
2500 Pennsylvania Ave, NW (about 1 mile north of the meeting site)

## **April 21**

8:30 a.m. Breakfast and Networking (food provided for all participants)

9:00 a.m. Recap of Day #1 and overview of Day #2 Plans  
**Cathy Manduca, Chair of the Organizing Committee**

### **Session IV: Understanding how Service-Learning Experiences Could Enhance The Competitiveness of Geoscience Students in the Workforce**

Address Question #5 from the list on Page 7

Moderator: Art Goldstein

Background Material:

Geoscience Employers Workshop Summary (May 2015)

[http://www.jsg.utexas.edu/events/files/Summit\\_Webinar\\_2015.pdf](http://www.jsg.utexas.edu/events/files/Summit_Webinar_2015.pdf)

[http://www.jsg.utexas.edu/events/files/Employers\\_Workshop\\_outcomes.pdf](http://www.jsg.utexas.edu/events/files/Employers_Workshop_outcomes.pdf)  
and

*Connecting Workforce Development and Civic Engagement: Higher Education as  
Public Good and Private Gain* by Richard M. Battistoni and Nicholas V.

Longo <http://www.tncampuscompact.org/files/wfd.pdf>

9:20 a.m. Panel Discussion on service-learning and workforce

- **John Gierke**, Michigan Technological University and Peace Corps Master's International Program
- **Amy Cohen**, George Washington University
- **Eric Riggs**, Texas A&M

10:20 a.m. Q&A

10:45 a.m. Break

11:00 a.m. Break-Out Session: planning service-learning projects in geosciences  
to enhance workforce competitiveness

- design of service-learning projects
- learning goals/outcomes
- working with community partners
- finding resources
- communicating a way of thinking
- questions you would like addressed by researchers

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mscheiber@nas.edu***

12:00 p.m. Lunch (food provided for all participants)

- 1:00 p.m.      Reporting back from break-out sessions
- 1:45 p.m.      Discussion of Potential Research Questions  
**Susan Sullivan**
- Comments from the audience
- 2:15 p.m.      The future of service-learning in geosciences  
**Cathy Manduca, Chair of the Organizing Committee**
- Committee Members and Participants share the messages they heard during the workshop
- 3:00 pm.      Adjourn