

## Workshop Agenda

### Thursday, September 22 – Workshop Day 1

*Moderators: Cliff Thurber and John Jaeger*

- 7:00 AM Breakfast at World Trade Center
- 8:00 AM Welcome from the conveners, logistics, goals for the workshop
- 8:15 AM Comments from NSF representatives  
**Bilal Haq**  
**Chuck Estabrook**
- 8:30 AM Alaska margin geology and tectonic history  
**Terry Pavlis** - *The Alaska convergent margin: 200 million years of subduction/strike-slip tectonics*  
**Dave Scholl** - *The Basic Rock and Sedimentary architecture of the Submerged Alaska and Aleutian Forearcs--First Order Observations, Questions, and Wonderments.*
- 9:10 AM Surface processes and tectonics  
**Don Fisher** - *Mechanics, structure, and evolution of forearcs: the Aleutian margin as seen from a global perspective*  
**Sean Gulick** - *Influence of surface processes and sediment flux on subduction cycles and dynamics*
- 9:50 AM COFFEE BREAK
- 10:10 AM Megathrust behavior and the spectrum of seismic slip  
**Susan Schwartz** - *Global Comparison of Slow Slip Behaviors: How Does the Alaska Margin Measure Up?*  
**Tabrez Ali** - *Contemporary deformation in south-central Alaska*
- 10:50 AM Magma processes from deep to shallow  
**Peter Kelemen** - *Insights from the Aleutians on Continental Genesis and Evolution*  
**Stephanie Prejean** - *Tracking Magma Ascent in the Aleutian Arc*
- 11:30 AM Mantle processes and geodynamics  
**Ikuko Wada** - *Dynamic processes in the cold and hot regions of the mantle wedge*  
**Peter van Keken** - *Arcuate trenches with oblique convergence: 3D flow and thermal structure*
- 12:15-1:15 LUNCH

*Moderators: Donna Shillington and Peter Haeussler*

- 1:15 PM Topical talks  
***Bobby Reece** – Effects of spatial and temporal variation in sediment flux on the Aleutian subduction zone*  
***Rob Harris** – Heat flow measurements and the thermal state of the Alaska convergent margin*  
***Phaedra Upton** – 3D geodynamic and geomorphic modelling of the Alaska/Aleutian Margin – STEEP and GeoPRISMS*  
***Susanne Straub** – Linking arc volcanic fluxes and growth rates with Pleistocene climate change: Marine tephrostratigraphy of the Aleutian-Alaska volcanic arc*  
***Steve Holbrook** – Seismic structure of the Aleutian island arc near Adak: Finally, a Subduction Factory that actually makes continental crust?*
- 2:30 PM Introduction to Break-out Process and Objectives, including “Discovery Corridor” concept and thematic approach.
- 2:45 PM Introduction for Break-out Session #1: Research Targets and Data Gaps  
*Instructions: Identify key onshore and offshore Alaska research targets and data gaps. Work toward convergence on question of Discovery Corridor locations, keeping in mind that some research objectives best-suited to thematic approach.*
- 3:00 PM COFFEE BREAK
- 3:15 PM Break-out session #1, Round 1: Research Targets and Data Gaps  
*Topics:*  
*1 - Controls on size, frequency and slip behavior of subduction plate boundaries*  
*Co-leaders: Rob Witter, Ray Wells*  
*Scribe: Harmony Colella*  
*2 - Spatial and temporal patterns of deformation through the seismic cycle*  
*Co-leaders: Kelin Wang, Julie Elliot*  
*Scribe: Lindsay Worthington*  
*3 - Storage, transfer, and release of volatiles through subduction systems*  
*Co-leaders: Katie Kelley, Richard Allen*  
*Scribe: Christie Till*  
*4 - Geochemical products of subduction and creation of continental crust*  
*Co-leaders: Steve Holbrook, Michele Coombs*  
*Scribe: Ashley Tibbits*  
*5 - Subduction zone initiation and arc system formation*  
*Co-leaders: Gail Christeson, Brad Singer*  
*Scribe: Margarete Jadamec*  
*6 - Feedbacks between surface processes and subduction zone dynamics*  
*Co-leaders: Steve Kuehl, James Spotilla*  
*Scribe: Bobby Reece*
- 4:00 PM Break-out session #1, Round 2: Research Targets and Data Gaps  
*Instructions: Participants are required to switch rooms.*

- 4:45 PM Introduction to Alaska databases  
*Andrew Goodwillie – GeoPRISMS Portal and MGDS*  
*Chris Nye – Geochemical databases*
- COFFEE
- 5:15 PM Panel discussion logistical considerations for working in Alaska (3 x 5 min)  
*Donna Shillington & TBA – Marine geophysical logistics*  
*Brad Singer & Chris Nye – Onshore field geology*  
*John Power & Geoff Abers – Onshore geophysical studies*
- 6:00 PM Plenary - open-mike discussion
- 6:30 PM CONFERENCE DINNER (at World Trade Center)
- 7:30 PM Poster Session (with Cash Bar); Data Mini-Session (concurrent w/ Posters)

### Friday, September 23 – Workshop Day 2

- 7:00 AM Breakfast at World Trade Center
- Moderators: Gene Yogodzinski and Jeff Freymueller*
- 8:00 AM Break-out Session #1 reports
- 9:30 AM Potential Partners with GeoPRISMS (Panel)  
*Instructions: Panelists provide 2-3 min introductions about representative partner activities, and their relevance to, and opportunities for, GeoPRISMS efforts*  
**John Power** (USGS/AVO)  
**John Eichelberger** (USGS, Int. Volcano Hazards Collaboration)  
**Ginger Barth** (USGS, Extended Continental Shelf)  
**Richard Allen** (Cascadia Initiative)  
**Bob Woodward** (IRIS/USArray)  
**Kelin Wang** (Canada)  
**Christel van den Bogaard** (Germany and Russia)  
**Yoshi Tatsumi** (Japan)
- 10:15 AM COFFEE BREAK
- 10:30 AM Introduction to Break-out Session #2: Implementation Strategies  
*Instructions: Consider Discovery Corridors for focused research versus a thematic approach. Define overlaps and opportunities between GeoPRISMS & EarthScope activities. Begin to identify potential Discovery Corridors. Discuss possible thematic studies necessary to complete primary site studies.*
- 10:45 AM Break-out Session #2, Round 1: Implementation Strategies  
*Topics: (Break-out leaders and scribes as for Session #1)*  
 1 - Controls on size, frequency and slip behavior of subduction plate boundaries  
 2 - Spatial and temporal patterns of deformation through the seismic cycle

- 3 - Storage, transfer, and release of volatiles through subduction systems
- 4 - Geochemical products of subduction and creation of continental crust
- 5 - Subduction zone initiation and arc system formation
- 6 - Feedbacks between surface processes and subduction zone dynamics

11:30 PM Break-out session #2, Round 2: Implementation Strategies  
*Instructions: Participants are required to switch rooms.*

12:15 PM LUNCH

*Moderators: Donna Shillington and Peter Haeussler*

1:30 PM Break-out Session #2 reports

2:30 PM Plenary – open-mike discussion of Implementation Strategies

3:15 PM COFFEE BREAK

3:45 PM Introduction to Break-out Session #3: Discovery Corridors and Themes  
*Instructions: Refine potential Discovery Corridor locations across discipline, and resolve implementation gaps that justify thematic studies.*

4:00 PM Break-out Session #3: Discovery Corridors and Themes (Leaders, scribes TBA)

5:15 PM Plenary – open-mike discussion of Discovery Corridors and Themes

6:00 PM DINNER ON YOUR OWN (PLUS SPONSORED STUDENT DINNER TBA)

7:30 PM Poster Session (with Cash Bar)

### **Saturday, September 24 – Workshop Day 3**

7:00 AM Breakfast at World Trade Center

*Moderators: Cliff Thurber and John Jaeger*

8:00 AM Break-out Session #3 reports

9:00 AM Plenary open-mike discussion with final vote on Discovery Corridors and Themes

10:00 AM Introduction to Break-out Session #4: Data Acquisition Plans  
*Instructions: A) Outline and justify future data acquisition efforts, identify possible community experiments, sequence, and timelines and (B) and thematic efforts, especially those not fully addressed by Discovery Corridors.*

10:15 AM COFFEE BREAK

10:30 AM Break-out Session #4: Data Acquisition Plans (Leaders, scribes TBA)

11:30 AM Plenary discussion, student perspective, decision making, and wrap-up