**Rheology: Where geophysicists, tectonicists and structural geologists collide!**

This session is aimed at folks who teach students in geophysics class and have a need to engage or infuse one or more of the course topics with an understanding of the processes behind the mathematical descriptions of material behavior and/or with a feel or intuition for selecting one or more behaviors for earth materials experiencing geophysical events or characterization.  The format will be to engage participants to identify their needs individually and in small groups, identify two to three high priority needs, provide resources for resolving those needs and discussing/engaging the use of those resources.

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**Tectonic setting for Rheology as function of depth in Earth?**

Considering only purely elastic models related to faults and seismic/interseismic deformation? (interesting discussion in Rick Allmendinger’s talk about whether earthquake-related interseismic deformation away from the fault is entirely elastic and whether the models need to be viscoelastic rather than elastic for these analyses.)

Elastofrictional crust of interest?

Viscoplastic crust and/or mantle lithosphere of interest?

Asthenosphere of interest (P-melt or H2O on grain boundaries)?

Sub-asthenosphere mantle of interest (post-perovskite)? Mantle convection? Plume activity? Dealing with subducting slabs?

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**Material- or time-dependent aspects of particular interest?**

Steady-state rheology vs. dynamic-state rheology an issue for you? Or is deformation rate an important constraint for you?

Spatial heterogeneity (porphyroblasts, batholiths, boudins, or….?)?

Application monomineralic material characterizations to a polymineralic material?

Anisotropy an issue?

Effects of fluids? Other environmental parameters that change rheology (temperature, pressure, strain rate/differential stress(!!!?!!)) – do these matter to you?

Scale of perspective for rheology – atomic? Lab-sample? Outcrop? Regional/Tectonic volumes?

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**More interest in an analog or analytical/approximation quantitative approach?**

Where do experimental results fit into your thought process?

Where do flow laws (idealized or experimentally derived) fit?

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Question for Bill – what are the graphical or illustrative illustrations for rheology?.....A picture is worth a thousand words