

Abstract for Solid Earth Physics Seminar, Harvard University

True Triaxial Testing of Rocks

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Abstract: By far the most common testing configuration for rocks is axisymmetric (either extension or compression). There are historical and technical reasons for this prevalence, but such tests give limited information about the full range of deviatoric stress states needed for applications, for which the stress state is seldom axisymmetric, and numerical simulations. Although Mogi conducted true triaxial tests (all three principal stresses are different) in pioneering work in the 60's, the number of these tests on rock since then has been small (though there are more on concrete and soil). Recently, however, Haimson has constructed an apparatus similar to Mogi's and has used it to carry out true triaxial tests on several rock types. This talk describes efforts to model these data within the framework of shear localization and use them to infer aspects of the constitutive relation.

**11:30 AM, Tuesday November 4, 2008
Hoffman Laboratory, 4th Floor Faculty Lounge**