



September 2011

## LOS ANGELES BASIN GEOLOGICAL SOCIETY MEETING ANNOUNCEMENT

**September 22nd (Thursday)** Dr. Nate Onderdonk, Assistant Professor in the Department of Geological Sciences, California State University, Long Beach, **will speak on:**

**Pre-historic earthquake history and slip-rate of the northern San Jacinto fault zone: Implications for seismic hazard estimates and rupture patterns in the southern San Andreas fault system.**

### Abstract

Slip along the San Andreas fault zone is divided between the southern San Andreas and the San Jacinto fault zones south of the eastern San Gabriel Mountains. Some recent slip-rate data and geodetic data suggest that these two faults may be accommodating approximately equal amounts of plate-boundary deformation. To explore this possibility and evaluate the manner in which deformation is divided between the faults, we have been working along the northern San Jacinto fault trying to make new slip-rate measurements and collect paleoseismic data. In the past few years, we have been able to make new measurements of slip-rate from several deflected and offset stream channels. We have also been able to identify and explore a new paleoseismic site that is located within a small sag formed between two fault strands that pass through the eastern side of Mystic Lake in the San Jacinto Valley. A series of trenches excavated across the sag exposed faulted and folded sedimentary strata that record at least 7 ground-rupturing earthquakes over the past 1600 years. I will compare the new data from Mystic Lake with paleoseismic data from the central San Jacinto fault and the San Andreas fault, and discuss the implications for rupture patterns and the possibility of ruptures jumping from one fault to the other.

### Speaker's Biography

Nate Onderdonk is an Assistant Professor in the Dept. of Geological Sciences at Long Beach State University. He earned a BS in Physics from Principia College and an MS and PhD in Geology from UC Santa Barbara. He spent two years as a post-doc at the University of Oslo, Norway studying arctic geology in western Norway, Spitsbergen, and eastern Greenland. His research spans a range of topics in the fields of tectonics and geomorphology and currently includes tectonic rotation in California, the San Jacinto fault zone, and hydrothermal seeps in the Imperial Valley.

***Come and enjoy – Learn about the latest concepts regarding California's Strike-Slip Fault systems ...!***

### Meeting Time, Place, Cost and Reservations

#### **Time:**

**Thursday, Sept 22nd, 2011**

#### **Typical Meeting Agenda**

**Lunch Served: 11:30 AM to 12:00PM**

**Announcements: 11:45 AM to 12:00 PM**

**Guest Speaker: 12:00 PM to 12:30PM**

**Questions/Close: 12:30 PM to 12:45 PM**

## Place:

**The Grand at Willow Street Conference Center** located at 4101 East Willow Street, Long Beach, CA. (562-426-0555). Take Lakewood Boulevard south from the San Diego Freeway (405), turn west onto Willow Street and turn right onto Grand Avenue at the sign for the Center. Park free in the garage structure.

## Cost:

**Lunch and Speaker: \$20.00 with reservations  
\$25.00 without reservations**  
**Student: FREE (Lunch and Speaker)**

## Meeting Reservations:

Make your reservations using our web site at [www.labgs.org](http://www.labgs.org), or by calling Becca Lanners at (562) 495-9310, or emailing [Becca\\_Lanners@oxy.com](mailto:Becca_Lanners@oxy.com)

*Reservations made prior to Tuesday before the meeting is appreciated, but reservations up to the morning of the meeting will be honored.* As always walk-ons are welcome.

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Website posting only: \$20/month

