

Geophysical Society of Pittsburgh

Proudly Presents Tuesday, April 1st, 2014 At



Penn Brewery, Pittsburgh, Pennsylvania

8.8 Magnitude Earthquake at Maule, Chile: the Geodetic Emergency Response Dr. Dana Caccamise

Abstract: The 27 February 2010 (M 8.8) Maule, Chile Earthquake, the 6th largest earthquake ever recorded, occurred in south-central Chile and partially overlaps the rupture area of the 1960 (M 9.5) Valdivia Earthquake, the largest earthquake ever recorded. The 2010 megathrust occurred in an area that has been studied by our geodesy and geodynamics group and collaborators since 1993, and the coseismic displacement field was recorded by dozens of continuous GPS (CGPS) stations in the region. At the time, the Maule event was only the second enormous megathrust event to occur in the modern times of space geodesy (being more accessible than the previous event in 2004, Indonesia), and the US National Science Foundation funded major scientific responses (i.e., seismological, geomorphological and InSAR characterizations) so as to capture its coseismic and postseismic deformation field in unprecedented detail.

The presentation will provide an overview of our geodetic response some of the implications of the plate interface, some of the human impacts from the earthquake processes and aftermath of the event, including locating and steering the drilling operation for the recovery of the Chilean miners following the famous mining accident. This event is arguably one of the most carefully studied earthquakes in history.



Biography: Dana Caccamise, Geophysicist, Senior Design Engineer, The Ohio State University, is industry recognized as a leading innovator in GPS, GNSS, LIDAR and geodetic field engineering and has managed remote field explorations in Greenland, Antarctica, North America, South America and the Southwest Pacific Islands. In his professional capacity, Dr. Caccamise has worked for General Positioning LLC, The University of Hawaii Sea Level Center, University of Hawaii at Manoa, The IT Group - Pacific Division, and OHM Remediation Services.

Dr. Caccamise has received many awards and recognitions stemming from the works related to South American national geodetic infrastructures, earthquake response, and work with the Geographical Military Institutes of Bolivia and Chile and South American universities. These awards include an honorary doctorate degree (D.Sc. Honoris Causa) from the Escuela Militar de Ingenieria of Bolivia (EMI), medals of honor from Chilean and Bolivian armies, plaques of recognition from the Instituto Geografico de Militar, and the Golden Theodelite from the Escuela Militar de Topografia del Ejercito (EMPTE).

Dr. Caccamise earned a B.S. in Earth Sciences from State University of New York at Buffalo State, holds a M.S. in Geophysics from the University of Hawaii at Manoa and a M.S. in Earth Sciences from The Ohio State University, and received an honorary doctorate from the Escuela Militar de Ingenieria of Bolivia (EMI). He is also completing requirements to obtain a Ph.D. in Earth Sciences at The Ohio State.

Please RSVP using the PayPal link on the Geophysical Society of Pittsburgh website at: <u>www.thegsp.org</u> Cost: \$35 Members, \$40 Non-members (\$20 for Students). Meeting Location: Penn Brewery, 800 Vinial St., Pittsburgh, PA 412.237.9400 Tuesday, April 1st Meeting Menu

5:00 pm Social Hour



This months social hour is proudly sponsored by **NEOS GeoSolutions**

Beer on Tap:

Penn Dark Lager Beer, European-Style Dark Penn Gold Lager, Munichener Helles Style Penn Pilsner, Vienna Style Pilsner Also Available: Red & White wine

Hors D'oeuvres:

Side of Smoked Salmon with Pumpernickel, Cream Cheese, Chopped Eggs and Red Onions, and Capers

6:00 pm Dinner

<u>Dinner Buffet</u>

Weiner Schnitzel Sausages and Sauerkraut Penne Alfredo, Grilled Vegetables, Potato Pancakes, Green Beans with Red Peppers, and, Tossed Green Salad with Ranch, Italian and Balsamic Dressing. Dessert: Apple and Cherry Pie Coffee & Cream

7:00 pm Lecture

We are pleased to announce that this months lecture will be held at :

Penn Brewery

800 Vinial Street Pittsburgh, PA 15212 USA 412.237.9400

