Mong-Han Huang (UMD)

Using geophysics to study Earth’s upper crust

**Social Time:** 6:00-7:00 p.m.
Tysons Social Tavern, first floor DoubleTree by Hilton

**Dinner:** 7:00-8:15 p.m.
Peachtree Room, Harvest Café, second floor DoubleTree by Hilton

**Meeting & Presentation:** 8:15-9:30 p.m.
Peachtree Room, Harvest Café, second floor DoubleTree by Hilton

The DoubleTree by Hilton McLean Tysons is located at 1960 Chain Bridge Rd., McLean, VA, 22102. This location is within one-half mile of the Tysons Corner Metro station, near I-495, and has free parking available. We recommend entering the hotel from its rear parking lot along International Dr. as that entrance is closest to Tysons Social Tavern and our private meeting room.

If you wish to attend dinner ($35 members; $45 non-members) or the talk only (no charge), please inform us via email at dcgeophys@gmail.com by Monday, Oct. 7. Non-members and guests are always welcome. To obtain more details about the meeting and society, please visit our website at: [http://www.potomacgeophysical.com](http://www.potomacgeophysical.com).

**Abstract:** In this talk, I present two different geophysical methods in geodesy and seismology to study Earth’s upper crust along active plate boundaries. The first topic is “InSAR - Measuring crustal deformation from space”. I will briefly introduce Synthetic Aperture Radar Interferometry (InSAR) and how we use this technology to study crustal deformation related to active tectonic activities such as earthquakes and plate motions. The second topic is “Seismic interferometry - Turning noise to signal”. I will introduce this relatively new approach to detect change in seismic velocity due to earthquakes and hydrologic cycle. I will present two case studies of using both methods to study crustal deformation in Taiwan, one of the most tectonically active regions in the world. I will demonstrate using InSAR and numerical modeling to monitor and explain fault structure in southwest Taiwan. I will also present using seismic interferometry to detect subsurface rock fracture and fault healing following the 1999 Mw 7.6 Chi-Chi earthquake in central Taiwan.

Mong-Han Huang is an Assistant Professor at the University of Maryland where his research is focused on using geodesy and seismology to study crustal deformation related to active plate tectonics. He earned a Ph.D. in Geology from the University of California, Berkeley, and a M.S. in Geology and B.S. in Geosciences from the National Taiwan University.