IGPP Virtual Seminar Series

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Separating Long-term tectonic motions, surface loading and other sources of Earth Deformation

Date: Tuesday, May 12, 2020
Time: 12:30 pm, Pacific Time
Host: El Knappe
Register to attend:
https://ucsd.zoom.us/meeting/register/tJApdOusrD8iGNDCGeDixqXwa3nO9gF2oaOw
Because this meeting will be recorded, please make sure that you are comfortable with it before registering.

Plate tectonics is driven by forces internal to the solid Earth, and measuring tectonic motions has been a fruitful focus for geodesy for the last few decades. However, geodetic observations depend not only on long-term tectonic motions, but also on elastic and viscoelastic effects of locked faults and the earthquake cycle. In addition, motions that ultimately result from surface loading (including glacial isostatic adjustment, GIA) also contribute to the measurements, both directly and in subtle indirect ways. As our field moves increasingly to the study of smaller amplitude steady motions and transient, time-dependent fault deformation, identifying these non-tectonic contributions becomes increasingly important. In this talk, I will take a tour around the North American continent to illustrate how these sources of Earth deformation can be separated, and how the continental-scale impact of GIA impacts estimates our estimates of tectonics.