



INLAND

GEOLOGICAL SOCIETY

March 2025

Newsletter of the Inland Geological Society Volume 37 No. 3

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Next Meeting:
Tuesday, March 11th

Time:
Social: 6:00pm
Dinner 6:15pm
Presentation:
7:00pm

Location:
3 Iron
Brewing Company
898 South Via Lata,
Suite A
Colton, CA 92324

Coming to Dinner?
Students \$10
IGS Members \$12
Non-Members \$15
Please RSVP by
March 7th to:

rsvp.igs@gmail.com

March Speaker: Evan Marschall

"Earthquakes on branch faults: What's around the fault matters"

Abstract:

Large strike-slip earthquakes often occur on geometrically complex fault systems and can involve rupturing multiple intersecting fault segments, often referred to as branch faults. These branch faults, as well as other geometric complexities such as bends and step overs, can act as barriers to earthquake rupture. Understanding if rupture is likely to propagate through or stop at a fault intersection is important because it will have implications for the overall size of an earthquake. In this study we use numerical models to highlight several key geologic and rheological parameters which affect the ability of rupture to propagate through a branch intersection. Through these numerical studies we illustrate the importance of accurately characterizing the elastic properties of the fault zone, as well as the nearby topographic features. This research has implications for several major fault systems in Southern California and how we approach likely rupture scenarios on those systems.

Speaker Biography:

Evan is a 5th year PhD candidate at the University of California Riverside. He received his Bachelor of Science in geophysics from the University of California Santa Barbara. He is a geophysicist who focuses on earthquake rupture along complex fault systems. His research involves using physics based numerical modelling tools to simulate rupture propagation along branch fault systems. He is also interested in earthquake associated hazards such as ground motion and tsunami generation. In this talk he will present research on how certain geological and rheological properties around a branch fault can influence earthquake rupture.

ANNOUNCEMENTS:

The Inland Geological Society will meet the second Tuesday of each month at:

3 Iron Brewing Company

898 South Via Lata , Suite A

Colton, California 92324

(<https://www.3ironbrewingco.com>)

Our next meeting is scheduled for Tuesday, April 8, 2025.

Visit our:

- Webpage at <https://www.inlandgeo.org>.
- Facebook Page at <https://www.facebook.com/groups/InlandGeo/>.

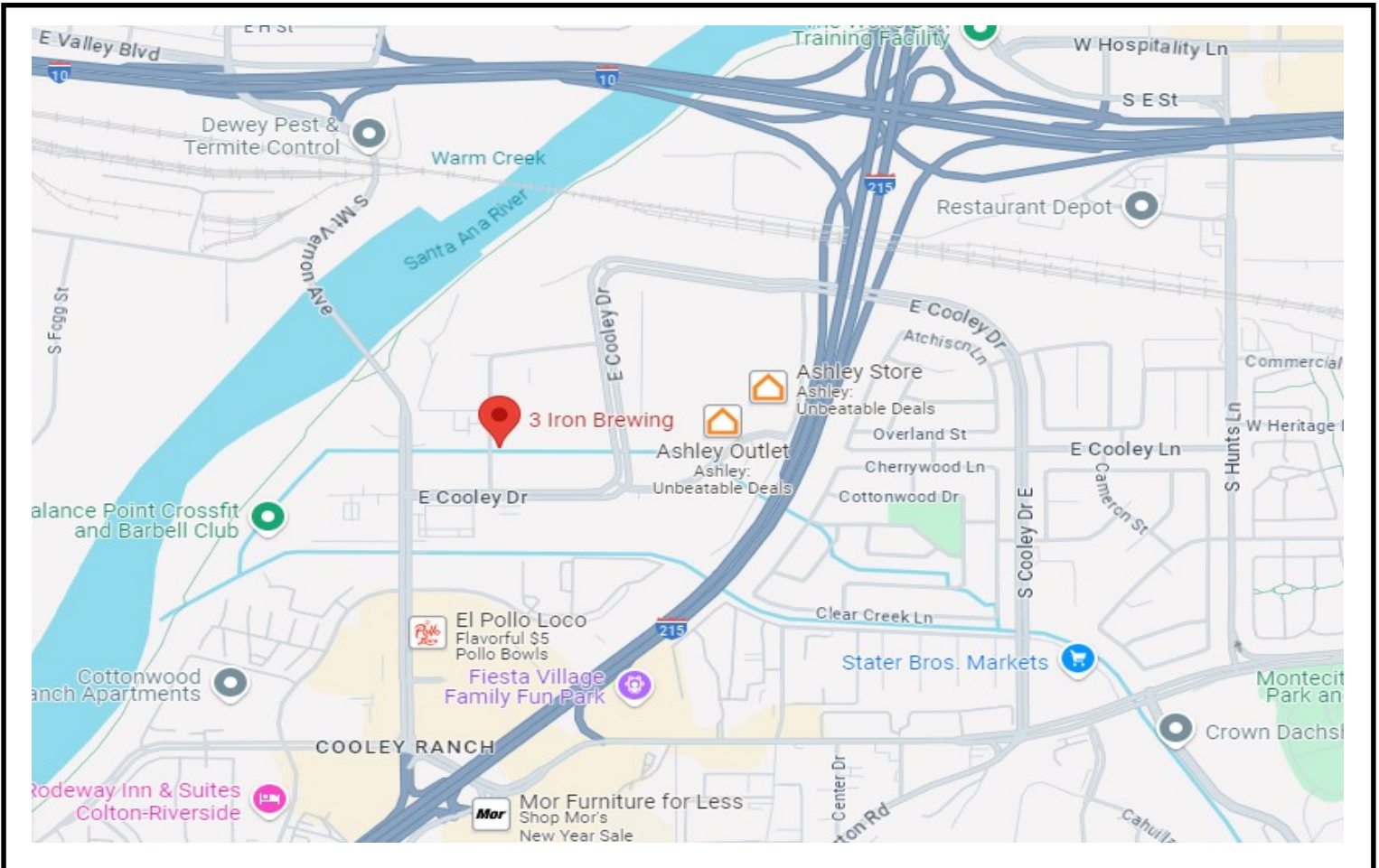
If you are interested in serving as the Inland Geological Society Membership Chair, please email Margaret Gooding at mgooding@roadrunner.com.

IGS coffee mugs are available at the monthly meetings for \$10. Get yours at the upcoming meeting!





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 (<https://www.3ironbrewingco.com>)



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