

# San Joaquin Geological Society

#### Date: Tuesday, June 10, 2019

- *Time:* 6:00 PM Social Hour 7:00 PM Dinner 8:00 PM Lecture & Poster Session
- Place: American Legion Hall 2020 H Street, Bakersfield, CA 93302

#### **PSAAPG Members**

\$25 with reservation\$30 without reservation

Non PSAAPG Members \$30 with reservation

Full-time Students with ID: \$10 - Courtesy of California Resources Corporation

### \* **RSVP** \*

By: noon Monday, June 10, 2019

Register online: http://www.SanJoaquinGeologic alSociety.org/

Pay online or at the door

#### SJGS WEBSITE

http://www.SanJoaquinGe

ologicalSociety.org/

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# Rate and character of Late Quaternary folding in the Santa Maria Basin, CA and implications for active faulting

## Presented by: Ian McGregor, CSU Long Beach

**Abstract**: The onshore Santa Maria area in central California is an inverted basin with several kilometers of estimated shortening that has folded, faulted, and uplifted Miocene deep-water rocks [Woodring and Bramlette, 1950; Namson and Davis, 1990; McCrory,1995]. Abundant outcrop and subsurface data from active oil fields in the area describe the basin stratigraphy and general kinematics through time, but do not estimate the late Quaternary activity of these structures and Quaternary deformation rates, pertinent for seismic risk assessment. A detailed quantitative analysis on the structures within the Santa Maria Basin, in terms of the recent amount and rate of uplift, shortening, and fault slip that has occurred, was conducted using the basal contact of a regional late Pleistocene fluvial deposit, the Orcutt Formation, as a marker of deformation. Results also aim to evaluate conflicting structural models proposed for present uplift and folding [Seeber and Sorlien, 2000; Lettis et al, 2004].

**Biography**: Ian McGregor is a Masters Candidate at CSU Long Beach with thesis completion expected for summer 2019. He earned his B.S. in 2016 from San Francisco State University completing a senior research thesis on fault kinematics in the Santa Lucia Range, central California. Professional experience includes geophysical work, interpreting seismic data, and building structural models for basins world-wide. Ian was an intern for the CSULB Office of Research and Sponsored Projects, Geological Society of America graduate grant recipient, and CSULB College of Natural Sciences and Mathematics Richard D. Green Fellowship award recipient in 2018.

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