



San Joaquin Geological Society

Date: Tuesday, May 8, 2018

Time: 6:00 PM Social Hour
7:00 PM Dinner
8:00 PM Lecture

Place: Eagles Lodge
1718 17th 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

**** SJGS Pass the Hat Night benefitting the Buena Vista Natural History Museum! ****
SJGS will be collecting cash and check for the Museum (also accepting credit card payments)

*** RSVP ***

**By: noon Monday,
May 7, 2018**

Register online:
<http://www.SanJoaquinGeologicalSociety.org/>

Pay online or at the door

SJGS WEBSITE

<http://www.SanJoaquinGeologicalSociety.org/>

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Exploring the evolution of an ancient lake basin on Mars with the Curiosity rover

Presented by: Dr. Katie Stack

Abstract: Since the Mars Science Laboratory Curiosity rover arrived in Gale crater in August 2012, the Curiosity team has addressed questions of early Mars habitability through the exploration of a diverse sequence of sedimentary rocks. For the past three years, Curiosity has been exploring its main exploration target—the lowermost strata of the 5 km-high mountain in the center of Gale crater, informally named Mount Sharp. During the trek upward through the basal units of Mount Sharp, Curiosity has observed the evolution of an ancient lake system, including evidence for cycles of wetting and drying, deposition by wind and rivers, and the pervasive interaction of water with sediments in the shallow subsurface. This talk will review recent discoveries by the Curiosity rover and will show how the rover's exploration continues to reveal the complex and long-lived depositional history of the Gale crater basin.

Biography: Katie Stack Morgan is a research scientist at the Jet Propulsion Laboratory, the Deputy Project Scientist of the upcoming Mars 2020 rover mission, and a participating scientist on the Mars Science Laboratory Curiosity rover mission. She graduated with a B.A. in geology and astronomy from Williams College in 2008 and earned her M.Sc. and Ph.D. in geology from Caltech in 2011 and 2015, respectively. For her work on the Curiosity rover, she was named to the 2013 Forbes' list of 30 under 30 and has earned several NASA Group Achievement Awards. Katie's research focuses on the Martian sedimentary rock record, using orbital and rover image data to understand the evolution of ancient surface processes on Mars.

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