
PRE-MEETING SHORT COURSE #4

INTRODUCTION TO DRONES (sUAS) IN THE GEOSCIENCES

DATES: September 13th, (½ day, 8:00 a.m. - 12:30 p.m.)

INSTRUCTOR: *Gregory S. Baker, Colorado Mesa University*
gbaker@coloradomesa.edu

DESCRIPTION: This short course is designed for any unexperienced or novice users of small unmanned aerial systems (sUAS; "drones") that are either students, faculty, or professionals. No prior experience with drones is required. Although topics covered may be insufficiently advanced for intermediate - to expert-sUAS users, such users are nevertheless highly encouraged to participate and share their knowledge & experience. Topics covered will include sUAS hardware & software basics, current USA/FAA rules/regulations, and case studies in state-of-the-art applications including orthomosaic & structure-from-motion (SfM) techniques. Quantitative applications will be emphasized. Due to limited time and logistics, there will only be a brief demonstration of sUAS by the instructor and participants will not pilot missions. *For those wishing to see a more comprehensive field demonstration, the drone will be flown on Field Trip # 3, A Reassessment of Structural Controls on Unaweep Canyon, Uncompahgre Uplift, Western Colorado, U.S.A" on September 12th.*

Qualifications: In addition to >30 years of academic experience in applied near-surface geophysics [<https://scholar.google.com/citations?user=3gPjucUAAAAJ&hl=en&oi=sra>] the leader is a FAA-certified pilot since 2016, with over 300 hours of sUAS flight time, and owner/operator of a small drone company (www.geoavatar.com) mainly conducting subcontracting & not-for-profit work with educators in the geosciences. In addition, the leader of the proposed short course has successfully led previous GSA Short Courses in 2013, 2014 & 2015 at the GSA Annual Meeting ("Introduction to Near-Surface Geophysics") as well as 2018, 2019 & 2020 ("Introduction to Drones (sUAS) in the Geosciences").

PARTICIPANT LIMIT: 20

COST: TBD



Fully-digital 3D structure-from-motion (SfM) model of a marine termination sequence within the Blackhawk Formation, Spring Canyon, Utah. The 3D model may be viewed in video at: <https://vimeo.com/371473554> . Image by G.S. Baker, not to be reproduced digitally or otherwise without written consent. Contact: gbaker@coloradomesa.edu .