



SOCIETY FOR CULTURAL ASTRONOMY
IN THE AMERICAN SOUTHWEST, INC.



PO BOX 2313
DOLORES, CO 81323
WWW.SCAAS.ORG

TAX ID: 45-3412899

Spatial Technologies for Cultural Astronomy Workshop
School of Earth and Space Exploration
Arizona State University - Tempe
November 9 – 12, 2017

Schedule of Events

Thursday Nov. 9th

5:00p – 7:00p Registration and informal reception Moxy Hotel lobby
1333 South Rural Road, Tempe AZ 85281

Friday Nov. 10th

8:30a Meet at Moxy Hotel lobby Check in. Coffee, snacks, lock up gear

9:30a Leave for field site (Note: Transportation will be organized to share personal vehicles)

12:00p Return from field site. Lunch on your own.

Workshop Session - Photogrammetry.

1:00p Introductions, Goals of the workshop.

1:20p Working session ISTB4: Agisoft PhotoScan session
3D model building from morning session images. Practical techniques in photogrammetry. Introduction to photogrammetry and initial model building.

2:30p Guest speaker:
Ralf Reulke, Professor of Computer Vision, Humboldt - Universität zu Berlin - "Low Cost Hard- and Software for 3D Reconstruction of Real World Scenes"

3:20p short break

3:40p More photogrammetry: MeshLab and SketchUp
Refining 3D models, GeoRegistration, Coordinate Orientation, and exporting models.

- 4:45p Day end closing remarks
- 5:00p Technical support available for ~1 hour
 - load and debug QGIS to tomorrow sessions
 - continue working with 3D models
- 6:00p Social time at Mill Ave bar/restaurant (optional)

Saturday Nov. 11th, 2017

GIS DAY

- 9:00a Overview of the day. What we are trying to accomplish.
- 9:10a GIS Overview. Principals of Geographic Information Systems.
- 9:40a Hands on Introduction to QGIS (Cindy Zhang)
- 10:15a 10 minute Break
- 10:25a More hands on QGIS tutorials
- 11:15a South Mountain Archaeology, (Aaron Wright)
- 12:00n Lunch - Provided
- 12:50p tDAR: An Introduction. (Frank McManamon)
- 1:30p GIS in Archaeology Project descriptions
ASU Archaeologist
- 2:30p 10 minute break
- 2:40p GIS in Archaeology Project descriptions
ASU Archaeologists Emily Fioccoril
Matt Peeples
Katherine Dungan
Caitlin Wichlacz
- 3:30p Hands on location projects. Bring your own research geography to GIS
- 4:15p Object files in GIS. Bird Rock in GIS.
- 4:45p Wrap up the day.
- 5:00p Done with Saturday workshop
- 7:00p SCAAS 2017 Workshop Dinner

Sunday, Nov. 12th

ASTRONOMY DAY

- 9:00a Starting in Marston Theater (Ric Alling)
Archaeoastronomy demo
Coordinate systems demo
- 9:30a Move to Room 296.
- 9:40a Overview of the day. What we are trying to accomplish.
Key Themes
- 9:45a Astronomy for the Cultural Astronomer
How does the sky work?
How we observe and predict phenomena.
Introduction to useful formulas.
- 10:05a Hands on introduction to Stellarium.
Hands on introduction to Cartes du Ciel.
Hands on Star chart project(s).
- 10:30a 10 minute break
- 10:40a Image processing a Horizon
Hands on create and locate a site-specific horizon
Include geo reference
Include up load to planetarium software
Alternative ... Alt, AZ coordinate upload
- 12:00n Lunch - Provided
- 12:50p Modeling Sun Shadow effects (Chris Dombrowski)
- 1:20p More hands on work Spatial modeling in Planetarium Software
Create your own model for upload.
- 1:55p Short Break 10 minutes
- 2:05p Wrap up discussions about the workshop, site documentation and
resources for further development.
- 3:00p Adjourn