The ASPRS recently introduced the “ASPRS Rising Star” program. The program brings early career professionals to the next level of inclusion in work within ASPRS and its Technical Divisions, and develops tomorrow’s ASPRS leaders. Benefits to ASPRS Rising Stars include a paid year of ASPRS membership and travel costs to attend the ASPRS Annual Conference, among others.

The Pacific Southwest Region of the ASPRS is happy to announce Kris Taniguchi-Quan as the first ASPRS Rising Star. Kris is a research scientist at Southern California Coastal Water Research Project (SCCWRP), a leading U.S. environmental research institute that works to develop a scientific foundation for informed water-quality management in Southern California and beyond. Kris received her B.S. in Environmental Science – Watershed Science in 2011 and M.S. in Geography in 2014 from San Diego State University (SDSU) and Ph.D. in Geography in 2018 from the joint doctoral program at SDSU and University of California, Santa Barbara. Kris is a fluvial geomorphologist who utilizes advanced geospatial techniques to investigate the impacts of urban development on river hydrology, stream channel erosion, and sediment transportation. During her graduate career, Kris has collaborated with the County of San Diego in using remote sensing techniques for stream channel characterization and historical time series of channel form, and with the U.S. EPA and U.S. Department of Agriculture in utilizing unmanned aerial systems (UAS) and Structure-from-Motion (SfM) photogrammetry techniques to quantify, monitor, and model erosion in Tijuana, Mexico. Her current research at SCCWRP focuses on developing and implementing a variety of watershed management tools to address the effects of hydrologic alteration on the ambient condition of streams and to develop ecohydrology targets designed to protect stream health. Kris strives to integrate geospatial sciences into watershed management and will be developing tools on the use of unmanned aerial systems for ephemeral and intermittent stream channel monitoring in Southern California.

Announcing the Newest ASPRS Student Chapter

The Pacific Southwest Region of ASPRS is proud to announce the official chartering of the Student Chapter at the University of Hawaii at Manoa. The Chapter provides a focus for ASPRS activities on the UH Manoa campus for students, faculty, and ASPRS members in Hawaii. If you’re interested in learning more about upcoming student chapter activities, please contact Chapter President Katie Taladay at taladay@hawaii.edu or Faculty Advisor Dr. Qi Chen at qichen@hawaii.edu, for further information.
High Density Aerial LiDAR

By: Melissa Christie, PSW Secretary/Treasurer

At the September ASPRS PSW Technical Session in Concord, CA, Lorraine Amenda from Towill, Inc. gave the first presentation titled, “High Density Aerial LiDAR”. The presentation focused on a comparison between high accuracy mapping approach from an aerial platform compared to mobile LiDAR. Towill flew a project site for CalTrans Region 8 as a pilot to assess the results of this aerial approach. The project was planned at 50ppsm density with high overlap. In the past, CalTrans has used their mobile LiDAR platform to collect high density LiDAR point clouds for feature mapping, asset inventory and condition assessment. Data extraction was becoming a challenge, as well as the high cost and safety concerns of driving all of CalTrans roads. Additionally, having a viewpoint from the ground limited the line of sight. From this pilot project, the following benefits were reported:

- collecting LiDAR from an aerial platform at low altitude with similar control layout as with mobile scanning proves to be nearly as accurate as data from a mobile scanner with vertical accuracies report at 0.039’ RMSEz;
- more swaths over the project area improve the calibration due to redundancy and high overlap; and
- by collecting more area around a site, other projects benefit. For example, in addition to this data set being used for transportation design, the bare earth surface model was also used in a hydraulic study on drainage in the area.

The future analysis will be to compare mobile LIDAR data with the high density airborne LiDAR on the same stretch of highway for a more detailed analysis of the differences in the two data sets. Please contact Lorraine Amenda with questions or comments: Lorraine.Amenda@towill.com. Lorraine is also the President of the Pacific Southwest Chapter of ASPRS.
Shahram Moafipoor from Geodetics Inc. gave a presentation titled “Geometric Accuracy Assessment of UAV LiDAR/Camera/Mobile Mapping”. Shahram identified that UAVs today do not have the payload capacity and battery power to support all the hardware required for mapping: GPSIMU, camera, LiDAR. Additionally, the unsteadiness of the platform can introduce errors into all of these systems, creating uncertainty in the data. Shahram identified tips to increase chances of obtaining a high accuracy data set:

- fly lower to the ground;
- steady flying;
- thorough flight planning; and
- follow heading initialization.

Shahram reported a pilot study whereby he evaluated the pros/cons of LiDAR, Imagery and “Geophotomap” collected from a UAV platform. He found the results in accuracy were comparable even though processing time was reduced based on quantity of data collected.

Processing time for each of the sensors varied greatly however the accuracy results were comparable. In summary, many factors can affect data accuracy and most can be mitigated with proper planning, execution and survey. By combining these sensors on a single UAV platform one can achieve a high accuracy data set in a short amount of time without having to pay the high cost of an aircraft for small project areas. Please contact Shahram Moafipoor for more information: SMoafipoor@geodetics.com
Laser Scanning Inside a 52-inch Underground Pipeline

By: Melissa Christie, PSW Secretary/Treasurer

The final speaker of the evening was JR Gregory, LSIT, a surveyor at Towill, Inc. JR’s presentation was titled, “Laser Scanning Inside a 52” Underground Pipeline”. A local water district needed to replace a major underground pipe that was serving a large community. The water could only be shut off for a short period of time. The challenge was that the whole pipe could not be excavated and the water district needed to determine the best approach to repairing the pipeline in a short amount of time. Engineers determined they needed to know the character and condition of the pipe so they could fabricate a slip-pipe that would easily fit inside the old pipe. This project involved surveying the interior of approximately 1,800 feet of pipeline in three separate segments.

JR talked about the challenges with working inside a 52” underground pipe. Most notable was that the pipe was actually 48” and even got smaller from there. The pipe was understood to be metal and turned out to have a concrete coating on the interior. After overcoming logistical challenges in the first few days, the project moved quickly. JR talked about the quality assurances that were put in place, specifically the use of a total station, a Faro scanner, and a Trimble-SX10 (combined total station and scanner). The redundancy ensured that they would not have to return if they found an error in processing later on. Safety was the top concern, with emergency services standing by. Overcoming the knowledge that they were working in a confined space underground took some getting used to. Please contact JR Gregory for more information on surveying in confined spaces: JR.Gregory@towill.com. He is up for the next challenge.
2019 Student Scholarships

The Pacific Southwest Region of ASPRS: The Imaging and Geospatial Information Society is pleased to offer three student scholarships in 2019. Students pursuing a degree in any of the geospatial disciplines (GIS, remote sensing, photogrammetry or closely related field) at the Associate, Baccalaureate or Graduate level of study are encouraged to apply.

Each award will consist of a $1,000 check plus a one-year paid ASPRS membership for the following year at the appropriate level, (Student or if graduating, Associate Membership).

To be eligible for consideration, the applicant must be a current student member of ASPRS. The deadline for applications to be received is 11:59pm February 28, 2019.

The application form is available on the ASPRS Pacific Southwest Region’s website – [http://www.pswasprs.org](http://www.pswasprs.org) – which may also be accessed through the Regions tab at ASPRS.org.

Submission Requirements:
- Completed Application, (including a 500 word [max] essay)
- Current academic transcript, (an unofficial version is acceptable)

All submissions should be made by email to the chair of the Awards committee at the region email address below.

Please title your email 2019 Scholarship Application and include all required items as either PDF or MS Word formatted documents:

pswasprs@gmail.com

Event Funding Support Request
ASPRS Pacific Southwest Region

Funding requests to the ASPRS Pacific Southwest Region (PSW), may be made for financial support of events hosted by other organizations in the region with similar missions and goals. The request for funding should be made by a member of ASPRS PSW on behalf of the requesting organization or event one calendar quarter prior to the event date.

Examples of support include: Funding of venue charges, refreshments (no alcohol) and other similar expenses incurred in hosting educational events, workshops, speakers, GIS Day events, and other similar activities. Typically support of up to $100 will be considered reasonable, with larger amounts possible pending the specific nature and impact of the specific event.

In recognition of ASPRS PSW sponsorship, promotional materials should mention ASPRS PSW (e.g. include region logo and acknowledge region support) and/or ASPRS PSW should be mentioned during opening comments at the event. ASPRS PSW may also request that information regarding ASPRS PSW and membership in the organization be provided to attendees.

Date of request: ______________________________ (please submit at least one calendar quarter prior to your event date)

Organization/sponsor of the event: ______________________________

Individual requesting funding: ______________________________

Requestor’s position/role with the sponsoring organization: ______________________________

Requestor e-mail address: ______________________________

Requestor phone number: ______________________________

Event for which you are requesting funding: ______________________________

Event date: ______________________________

Event location: ______________________________

Anticipated attendance: ________

Please briefly describe the nature of the event or program for which you are requesting funding. (Event type? e.g. speaker, workshop, outreach event; who is the audience? e.g. professionals, students, public; how will the requested funds be used to support the event?)

________________________________________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

The above form is available at https://goo.gl/tHah91
Student Chapter Benefits
from the ASPRS
Pacific Southwest Region

Participating in an ASPRS Student Chapter helps you develop technical knowledge, leadership experience and lasting relationships with peers and mentors. To help you achieve success with your student chapter activities and events, the Pacific Southwest Region of ASPRS offers student chapters in our region a variety of benefits, as described below.

Visit the ASPRS website to learn if there is a chapter at your school. If there isn't one there, please contact us: pswasprs@gmail.com about the process for getting one started at your university.

Grants and programs to support chapter activities

- Receive an annual Student Chapter Support Stipend (currently $150) to assist your chapter operations and activities.
- Apply for a Special Event Grant (up to $500) to support a high-impact event (e.g. GIS Day, Geospatial Symposium or Speaker Events, support to help students to attend State or National Conferences).
- Assistance in identifying and scheduling ASPRS Professional members in our region to speak at a campus event hosted by your chapter.

[The above may be useful in leveraging additional campus club and activities resources]

Networking and scholarship opportunities

- Participate in the ASPRS annual meeting and get involved with the Student Advisory Council.
- Enter your chapter team in the annual Geoleague Challenge and win prizes!
- Opportunities to apply for National Awards and Scholarships.
- Access to PSW Region Student Scholarships.
- Assistance in identifying APRS Professional members as mentors or for other professional opportunities (internships, summer jobs, etc.).

Materials and Resources

- Access to outreach materials from ASPRS.
- Discounts on a variety of resources and materials available through the ASPRS Bookstore.
- Use of the PSW region banner and/or table cover at your events and post a custom ASPRS PSW Region logo on your materials.
Your Pacific Southwest Region Council

The officers for the Pacific Southwest Region are working hard to provide you with quality technical presentations near to home. In the last few years we’ve offered technical sessions in San Diego, Fresno, Reno, and Davis. We are currently planning sessions for 2018. If you have suggestions for locations and topics for a session near where you live, please contact one of our officers or the region email at pacificsouthwestregion@asprs.org.

President: Lorraine B. Amenda, PLS, CP lorraine.amenda@towill.com
Vice President: Dr. Riadh Munjy munjy@pixel-mapping.com
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Dr. Omar Mora oemora@cpp.edu
Dr. Steven Steinberg, GISP steves@sccwrp.org
Ross Winans ross.winans@noaa.gov

Join The Regional Council’s Monthly Teleconference

Are you interested in joining the regional council’s teleconference, in order to share ideas or learn more about ASPRS activities? If so, please RSVP by sending an email to pswasprs@gmail.com.

Upcoming Events of Interest:

Dec. 3-7, 2018
Austin, TX
URISA GIS Leadership Academy

Jan. 24, 2019
Fresno, CA
Fresno State Geomatics Conference

Jan. 28-30, 2019
Denver, CO
International LiDAR Mapping Forum (ILMF)

Jan. 27-31, 2019
Denver, CO
ASPRS Annual Conference

Feb. 25-28, 2019
Portland, OR
GIS/CAMA 2019

Feb. 25-28, 2019
Redlands, CA
Esri Geodesign Summit

Mar. 5-8, 2019
Palm Springs, CA
Esri Developer Summit

Mar. 24-28, 2019
Boise, ID
Intermountain GIS Conference

Apr. 3-7, 2019
Washington, DC
AAG Annual Meeting

Apr. 8-10, 2019
Fresno, CA
CalGIS 2019