

COREY OCHSMAN



Corey Ochsmann is a benefactor of the ASPRS' Rising Star Program. He has an unique perspective on where archaeology of the past meets geospatial technologies of the future. He studied geography and art history at George Mason University and later earned a Masters in Classical Archaeology from Leiden University in the Netherlands. His focus on geospatial technology in archaeology brought him to work several seasons as the GIS manager at the excavations of the Villa di Massenzio in Rome. Since then, he has continued to work in a variety of positions at the cross section of the geospatial industry. In 2011, Corey began working with lidar and started deploying to Afghanistan with the USACE Buckeye Program. He transitioned to the Buckeye UAS platform in Jordan and worked there for several years before bringing his breadth of knowledge to Woolpert. Corey currently lives in Colorado and he spends his free time traveling, climbing mountains, and BASE jumping.

Tell us about your educational background including your doctoral research, if applicable.

I was not the best student in high school as I preferred to be outside on my dirt bike or playing baseball rather than studying. I attended George Mason University and I began my education aspiring to be a chemical engineer because I was enamored with AP Chemistry. But higher level calculus and computer science classes halted my progress and I sought a subject that would, in my mind, allow me some breathing room. I began studying geography at GMU and the major required a minor. My new-found interest in art history pushed me to minor in that subject, something a sane person would rarely do. But that is how I learned to love education and I dove head first into art history and archaeology. I discovered remote sensing just before graduating and realized that I could combine the two fields. My parents pushed graduate school on me and, as a rebellious move, I found a program in Classical Archaeology in Leiden, The Netherlands and zipped off to Europe in the summer of 2006. Living and studying abroad was one of the best experiences in my life. I look back on those years with extremely fond memories and although I was never a brain, I do miss how school made me feel empowered. I wrote my Masters thesis on early Greek and Phoenician colonization philosophies in the Mediterranean. Although my career utilizes my Geography degree, the skills I learned obtaining my Masters had undoubtedly prepared me for what was to come.

Do you have a particular teacher or professor who inspired your love of science? Why?

I am thankful for Barry Haack of GMU, who instructed my first remote sensing class. He inspired me to explore the world through travel for work. Additionally, Chris Greg of GMU instructed the majority of my Greek and Roman art and archaeology classes and inspired me to enjoy learning, guided me on my first archaeological excavations, and gave me insight on life in academia.

What is the focus of your current research?

My current research is focused on improving and innovating Lidar workflows. I am fortunate enough to have brilliant minds around me who are able to produce huge amounts of quality Lidar data for a multitude of customers, but there is always room for improvement. As a Team Leader, I need to always be looking forward and researching new ways for my group to improve quality and efficiency.

Tell us about something we might see in our daily lives that directly correlates to your work.

Although it may not be obvious while watching news of the latest disaster relief, or the next large wildfire sweeping across Colorado, USGS 3DEP data is used for planning and mitigation purposes. According to the agency, "A core mission of the USGS is to provide information that leads to reduced loss of life and damage to property and infrastructure from hazards like landslides, earthquakes, floods, hurricanes and wildfires." My Lidar team at Woolpert processes tens of thousands of square miles of Lidar data annually that will be used in USGS's core mission.

Give us an example of how multi-disciplinary research directly contributed to your work.

The production, and exploitation, of Lidar data isn't a simple process. The Lidar department alongside flight crews plan the flights based on point density and the accuracies required. Survey teams collect, control, and maintain checkpoints based on customer and project needs. At Woolpert we have select people who specialize in calibrating Lidar data. We have specialists who digitize breaklines, edit LAS file formatted information to produce accurate digital elevation models or DEMs, produce our final products, extract building footprints, generate metadata, and more. It takes a diverse team with a variety of backgrounds to make a successful project.

AN INTERVIEW

When you're not working on your research, what do you do in your free time?

I firmly believe in the “work hard, play hard” motto. I take my hobbies very seriously because it is my way of decompressing from the stresses of everyday life. They allow me to think critically, problem solve and assess risk – all important life skills that can apply to work. My wife and I enjoy climbing mountains in Colorado. We have climbed all 58 of the 14,000+ foot mountains (14ers) in the state and I am currently ticking off the centennials, the highest hundred peaks. I enjoy ski mountaineering which is generally a miserable experience but emphasizes perseverance and strengthens my determination. I am a well-rounded rock climber and I focus on multi-pitch trad climbing. I do a fair bit of aid climbing as well and have climbed all of the Fisher Towers outside of Moab, Utah – a personal goal that took years to accomplish. I have been skydiving for roughly 13 years and BASE jumping (or parachuting from fixed objects) for over 10 years. That sport has its ups and downs but has taught me much about life, risk, and perspective. My typical summertime post-work decompression starts with a light dog walk and then some moderate rock climbing in one of many canyons on the front range of Colorado; and then, if the winds feel light, I might hike up the backside of a cliff and throw myself off of it.

What advice would you give a young researcher just starting out in your field?

The only advice that I can realistically give anyone is just to enjoy life. Do what makes you happy. Have dreams. Want something bigger. Do what makes you feel good!

What has been your most fulfilling accomplishment as a scientist / engineer? Why?

I do not know if I have a “most fulfilling” accomplishment thus far in my career, but I do have one instance of feeling like I made a difference. I worked as a cartographic technician many years ago and for months I was working on a JOG (Joint Operations Graphic) covering a portion of Pakistan. A couple months after the work was complete, and delivered to NGA, I realized the significance of a small BUA (built-up area) tint in the south east corner of the map labeled as Abbottabad.

What do you think are the most pressing needs to be met in science in the coming years?

I believe that we need to reintroduce the scientific method to the population at large. We need to teach younger people to think critically and test their ideas before forming conclusions.



How has being a part of the ASPRS Rising Stars Program benefited you?

Participating in the Rising Stars Program has helped integrate me into the larger geospatial industry. I've attended events and conferences during which I have met other professionals and I have gained insight on technology, operations, and issues that other firms grapple with. It has also allowed me to collaborate with other young geospatial professionals who, I believe, will be guiding the industry in just a few years. I am excited to hear their ideas and I look forward to the possibilities that will present themselves. Overall, the program has pushed my personal and professional motivation to contribute more to the industry and to be a leader.

What books are you currently reading for pleasure?

My favorite books are non-fiction and science-based. I have read a lot of psychology and sociology books over the years because I am fascinated by the predictability of human behavior. I also love books about complex astrophysics and thus the last book I read was Neil deGrasse Tyson's *Astrophysics for People in a Hurry*. Now most of the “books” I read are project scopes. But, if I am enjoying a day at the beach, I might just crack open the USGS Lidar Base Specification.