

## June 2019 News Notes

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### Alumni Change Lives

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Chaoyang Zhang is a Ph.D student in the Geodetic Science program, advised by CK Shum. Here, he shares how Friends of Orton Hall and other funds helped him further his studies.

FOH supported my trip to China last fall; I attended three workshops. At the 3rd IAG HydroGeodesy workshop in Wuhan on June 29th, I presented a poster titled 'Assessment of GRACE Solutions for Hydrologic Terrestrial Water Storage Estimates'. On August 2nd, I gave an oral presentation entitled 'Assessment of GRACE Mascon and Level-2 Data Retrieved Terrestrial Water Storage Estimates Over the Yangtze Basin' at the International Symposium on Geodesy and Geodynamic (ISGG) held in Kunming. Finally, I gave a talk titled 'Swarm Temporal Gravity Field Estimates Using Acceleration Approach' at the 9th International Workshop on TibXS, in Zhangye on August 9th. During my trip last summer, I had the opportunity to listen and talk to experts from all over the world, and to learn about the latest progress in my field. It was also nice to talk with other young researchers, make new friends and meet some old friends. It was inspirational to share my ideas and receive feedback from different people of different backgrounds. Very helpful suggestions from colleagues and researchers showed me some new ways to further my own work. The work I presented helped me to receive the Junior Heiskanen Award (2019) and the NSF travel award to 2019 ISAES in Incheon, South Korea. I would like to express my sincere gratitude to FOH for these opportunities!

If you are interested in giving to support the Friends of Orton Hall or other funds, please visit our [giving page](#).



# 2019 Coral Bleaching Workshop

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Temperature stress is the single largest threat to coral reefs globally and is the focal topic of the newly established Coral Bleaching Research Coordination Network (CBRCN). The goal of the CBRCN is to work with the broader coral research community to develop protocol recommendations over the course of three workshops, and to facilitate interdisciplinary collaborative team formation. Developing a framework of best practices is key to moving the science of coral bleaching research forward faster and more efficiently, and facilitating large-scale data assimilation and meta-analysis. This is imperative given the ongoing coral bleaching crisis.



Dr. Grottoli (front row, second from left) pictured with attendees of the Ohio State Coral Bleaching Research Coordination Network workshop. Investigators attended the event from all across the globe.

On 22-24 May, the first workshop was held in the School of Earth Sciences. Twenty-seven investigators from the USA, Germany, and Australia assembled to develop best practice recommendations for 1) coral bleaching experimental designs so that results can be more easily compared among studies, and 2) baseline variable(s) that all studies should strive to include to facilitate cross study comparisons. The workshop was a success. The group achieved all goals and the outlines of two manuscripts were developed during the workshop. With writing tasks assigned, the goal is to submit both manuscripts for publication by the end of the summer. A webinar outlining the findings of the workshop will be presented later this summer as well.

The Director of the CBRCN is SES Professor Andrea Grottoli. For additional information, you can visit the [CBRCN website](#) or email Professor Grottoli directly at [grottoli.1@osu.edu](mailto:grottoli.1@osu.edu).



## Professor Cole Elected to GSA

Professor Dave Cole was recently elected as a Fellow of the Geological Society of America. The nominating citation reads:

“Professor Cole has been a global leader in geochemistry and mineralogy. His work includes seminal studies of subsurface fluid-mineral interactions. In addition, he has taken a leadership role in the understanding of carbon in the deep subsurface.”

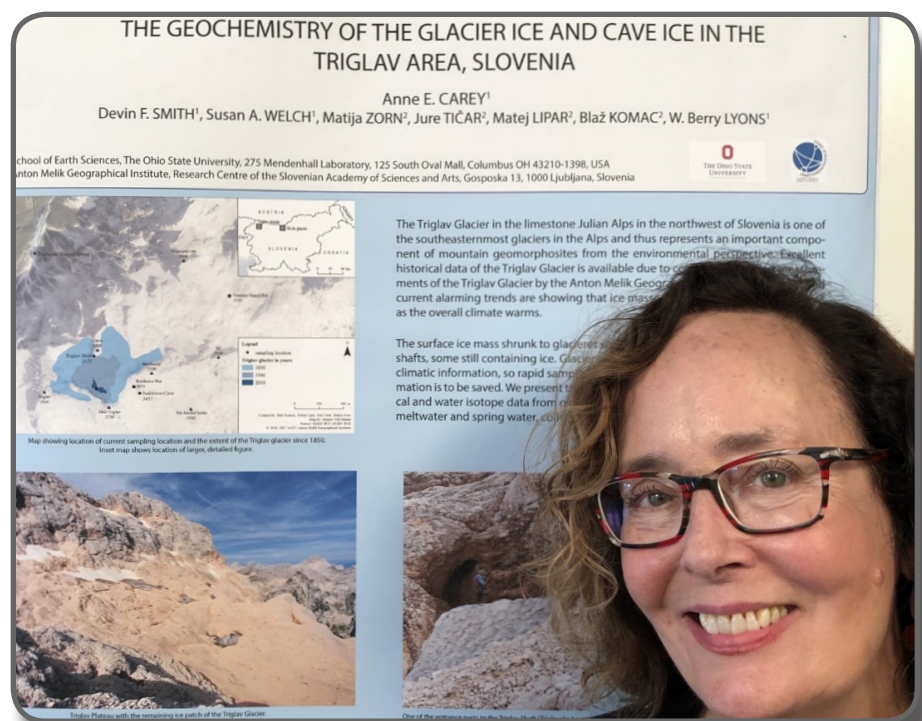
Congratulations, Professor Cole!



## Karst Hydrogeology Conference

As part of Professor Anne Carey's 2019 Faculty Exchange Program fellowship from Ohio State's Slovene Research Initiative, she and Dr. Berry Lyons participated in the 27th annual International Karstological School conference on Karst Hydrogeology Research Trends and Applications in June 2019.

Professor Carey presented a poster on ongoing research with colleagues from the Slovenian Academy of Sciences and Arts Anton Melik Geographical Institute. Ph.D. student Devin Smith and research scientist Sue Welch were also authors on the poster. Although most of the data presented were on cave ice, some of the data on the poster are from samples collected on the Triglav glacier and nearby caves. The Triglav Mountain region is a national symbol for the country of Slovenia.



# SAM PERRY

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## WHERE HAS YOUR DEGREE TAKEN YOU?

My SES degree has led to a position at the University of Notre Dame, working on a doctorate degree under Professor Peter Burns in the department of Civil & Environmental Engineering and Earth Science. Professor Burns' group is a mix of chemists and geologists working on understanding the basic science of the actinide elements. Our group is interested in new discoveries that will spark innovation in the nuclear power industry and improve our ability to remediate radionuclide contaminated sites, such as the Hanfordsite in Washington.

My research within the group is mostly focused on uranium mineralogy. I am investigating the thermal stability of several uranium minerals with a high temperature calorimeter such that we can better examine the relationship between a mineral's complexity and its thermodynamic properties. Additionally, I am working to build a database of uranium mineral localities for use in nuclear forensics and in exploring the fundamental formation mechanisms of uranyl minerals. I am also investigating the interactions between synthetic layered double hydroxides and uranyl peroxide nanoclusters for use in environmental remediation at contaminated sites, such as Fukushima Daiichi.

## MOST MEMORABLE EXPERIENCE AS AN SES STUDENT?

I think my most memorable experience was the opportunity to travel to Baltimore to present my research results at the 2015 GSA meeting. I was also able to attend many talks on cutting edge research in many geologic fields.

Although it was intimidating to meet so many experts in the actinide field, the experience was enlightening, and one I would highly recommend to any undergraduate performing research in the SES.

*Don't allow yourself to be discouraged or distracted. It's easy to be intimidated by your competition, but in the end, graduate programs will be assessing you, not your classmates.*



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