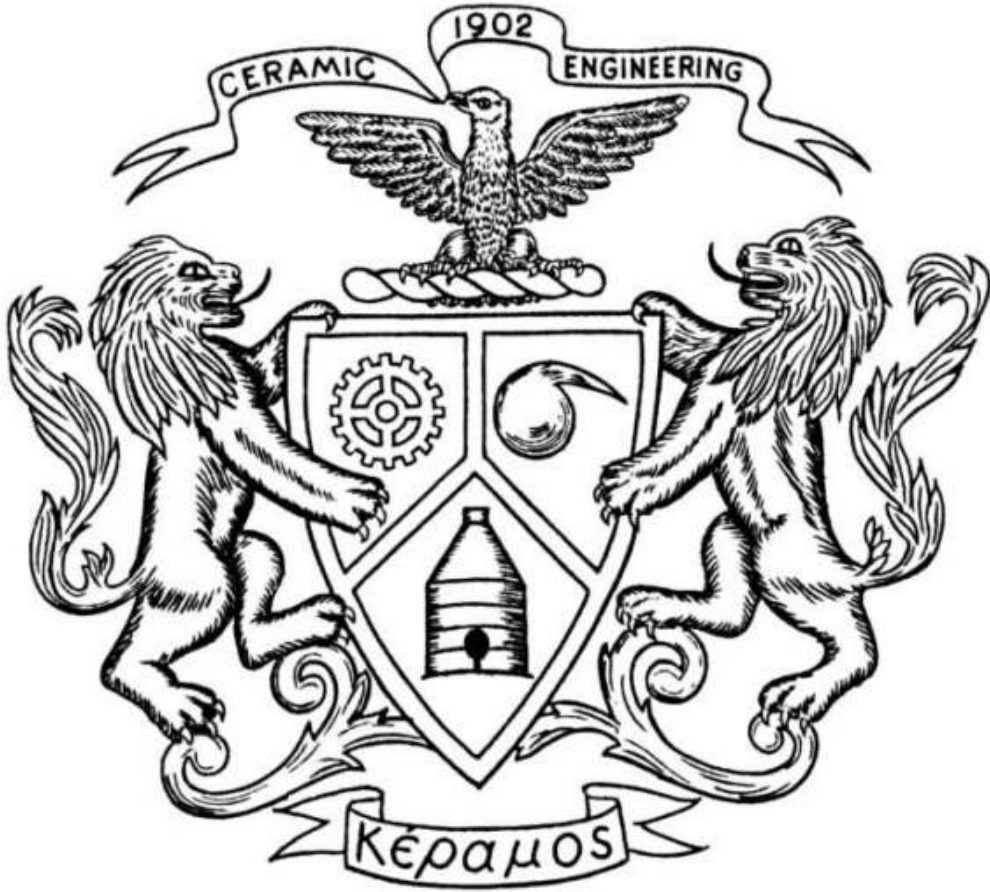


# The Colorado Chapter of Keramos



**2020-2021 Annual Report**

## **Keragram Summary Article**

The Colorado School of Mines Keramos chapter experienced a year unlike any other. While we were unable to hold any of our in person events, there were still opportunities to pursue professional development, outreach, and social events.

The chapter's memorable moments exist mostly within the outreach events that we participated in, the CSM Glass Shop's continued success, and in camaraderie earned. The chapter participated in Celebration of Mines, the Adams County Career Expo and a multi-school panel for high school students. In these events members spread the word about ceramic engineering and Keramos. The glass shop saw a transition in leadership as well as continued success in running its class, Soda Lime Saturday events, and amazingly successful fundraising sales. More updates and pictures can be found under @HappyLittleGlassShop on Instagram. Keramos members are majorly supportive of the shop as teaching assistants and volunteers. Our wonderful shop managers also serve on the chapter's executive board.

There were some plans that remained on hold due to COVID-19 restrictions; two years ago this chapter began planning a materials science demonstration day for K-12 educators. This was possible due to a generous grant from CGIF. The funds remain earmarked for that event and as restrictions begin to lift, hopefully it can take place within the 2021-2022 academic year.

This year our chapter persevered through a changed academic and social experience. Our members showed commitment to each other, academic achievement, and Keramos. Next year, we look forward to an enthusiastic new president and a year full of opportunity.

*Samantha Baumann*  
President  
2020-2021

## **Chapter Advisor Executive Summary**

The greatest value of organizations like Keramos comes from the networking and associated personal connections. 2020-21 was a year in which friends, colleagues, and family alike were reduced to 2-dimensional faces on a screen, making the connectivity of groups such as Keramos simultaneously more difficult and more valuable. Naturally, many of the chapter reports for this year--and ours is no exception--will spend the majority of their words describing unrealized and/or scaled-back plans with a disappointed tone and an eye towards accomplishing more in future years. What impressed me most about the Colorado chapter this year, though, was not the specific activities they were able to host or the planning of events postponed, but their commitment to keeping members of the Colorado chapter as well as other Keramos chapters connected. Though severely restricted in its operation, our glass shop remained open and served as a valuable outlet for members. When meetings and social events were forced online anyway, the chapter reached out to other Keramos chapters for nation-wide movie events. Instead of simply continuing with the remote version of business as usual or using zoom fatigue as an excuse to simply pause everything for the year, the chapter instead made conscious decisions about what they could do well given the new boundary conditions and focused their limited attention on these activities.

The Colorado chapter continues to impress me with their ideas, implementation, and enthusiasm, regardless of the situation, and I am truly honored to serve as the chapter advisor.

*Geoff Brennecka*

Keramos advisor  
Associate Professor and Fryrear Chair for Innovation  
Colorado School of Mines

## **Annual Plan for the Upcoming Academic Year**

The ongoing COVID-19 pandemic has left the Colorado School of Mines Keramos chapter changed, but resilient. The inability to host in-person meetings and events have hindered recruitment efforts, but Keramos stands strong, like alumina under compressive stress. We have participated in several outreach and social activities, such as a high school panel in conjunction with the Colorado School of Mines Materials Advantage chapter. A highlight of these outreach events was participation in a career expo for Adams County, where Keramos members had the opportunity to talk to hundreds of students about opportunities in materials science and ceramics, including video demonstrations of glassblowing.

As more of the campus community is vaccinated and unprecedented times become precedented, Keramos looks forward to resuming in-person social events and outreach activities. Of particular interest in new activities, Keramos hopes to launch in the coming months a greater incorporation of pottery to our program, brought by some potter's wheels which will arrive this coming semester. We also anticipate a continuation of the campus glass shop's demonstrations and outreach events like Soda Lime Saturday, and hope to have even greater integration of the glass shop with Keramos programs and membership. These events will bolster recruitment efforts and help reinvigorate Keramos at the Colorado School of Mines.

Keramos also looks forward to using the generous grant from the Ceramics and Glass Industry Foundation to follow through with the K-12 educator outreach day. As conferences such as MS&T return to normal functioning, we hope to send many members to facilitate connections and learning in the wonderful world of ceramics. Additionally, we hope to more fully take advantage of programs that the American Ceramic Society offers to connect students to internships and jobs.

As a chapter, the Colorado School of Mines Keramos chapter anticipates a coming year of growth, of renewal, of solidifying our connections to new students and each other, and developing ourselves as students, ceramists, and friends.

*Aidan Ravnik*  
President Elect  
2021-2022

## List of Officers

<b>Outgoing Officers (2020-2021)</b>				
<b>Position</b>	<b>Name</b>	<b>Email</b>	<b>Address</b>	<b>Phone</b>
President	Samantha Baumann	[REDACTED]	[REDACTED]	[REDACTED]
Vice President	Emma Braun	[REDACTED]	[REDACTED]	[REDACTED]
Treasurer	Addison Wong	[REDACTED]	[REDACTED]	[REDACTED]
Secretary	April Garlin	[REDACTED]	[REDACTED]	[REDACTED]
Herald	Shannon Rogers	[REDACTED]	[REDACTED]	[REDACTED]
Glass Shop Managers	Abigail Morrow	[REDACTED]	[REDACTED]	[REDACTED]
	Alexa Rennert	[REDACTED]	[REDACTED]	[REDACTED]
<b>Incoming Officers (2021-2022)</b>				
<b>Position</b>	<b>Name</b>	<b>Email</b>	<b>Address</b>	<b>Phone</b>
President	Aidan Ravnik	[REDACTED]	[REDACTED]	[REDACTED]
Vice President	TBD	TBD	TBD	TBD
Treasurer	TBD	TBD	TBD	TBD
Secretary	Abigail Morrow	[REDACTED]	[REDACTED]	[REDACTED]
Herald	Shannon Rogers	[REDACTED]	[REDACTED]	[REDACTED]
Glass Shop Managers	Abigail Morrow	[REDACTED]	[REDACTED]	[REDACTED]
	Alexa Rennert	[REDACTED]	[REDACTED]	[REDACTED]

## List of Active Members

Active Undergraduate Members			
Name	Initiation Date	Email	Phone Number
Addison Wong	Spring 2018	[REDACTED]	[REDACTED]
Samantha Baumann	Fall 2019	[REDACTED]	[REDACTED]
April Garlin	Fall 2019	[REDACTED]	[REDACTED]
Alexa Rennert	Spring 2021	[REDACTED]	[REDACTED]
Grace Rome	Spring 2020	[REDACTED]	[REDACTED]
Michael Thuis	Fall 2018	[REDACTED]	[REDACTED]
Gillian Lefevre	Spring 2021	[REDACTED]	
Aidan Ravnik	Spring 2021	[REDACTED]	[REDACTED]
Abigail Morrow	Spring 2021	[REDACTED]	[REDACTED]
Kevin Miles	Spring 2020	[REDACTED]	

Active Graduate Members			
Name	Initiation Date	Email	Phone Number
Shannon Rogers	April 2018 (Alfred University)	[REDACTED]	[REDACTED]
Brian Davis	Spring 2018	[REDACTED]	
Emma Braun	Spring 2020	[REDACTED]	[REDACTED]
Jacob Ivy	Spring 2013	[REDACTED]	[REDACTED]
Michael Walden	Fall 2013	[REDACTED]	



## Honorary Member

It is with great enthusiasm that the Colorado School of Mines Keramos Chapter would like to nominate Hot Shop Supervisor, Sarah Harling as their honorary member during the 2020-2021 school year. Having recently joined the Mines community to share her expertise in fabrication and material design, Sarah has already made an impact both in the classrooms of the Metallurgical and Materials Engineering department as well as the Mines campus with a passion for sharing her knowledge and experience.

Sarah Harling is a Chicago native who earned her Bachelor's in Fine Arts degree in Sculpture from The Art Institute of Chicago. While studying foundry there, she fabricated her first cupola furnace for iron casting and won an award for producing the hottest metal at the National Conference on Cast Iron Art and Practices in Birmingham, Alabama. After working on the south side of Chicago in a WW2 era foundry, her interest turned toward industry and she pursued an Associates in Welding Technology from Harper College of Trades in Palatine, IL. Later she returned to the Art Institute of Chicago to teach cupola fabrication and foundry before moving to Colorado where she continued to work in welding and the art casting industry. She found her way back to teaching through an invitation to teach sculpture at University of Colorado Denver, and welding at Emily Griffith Technical College. She came to Mines through a senior design project building a cupola and teaching a foundry metallurgy lab section. In her current role as hot shop supervisor, she assists with research projects in welding and casting, and serves as technical support and maintenance for the hot shop and welding labs. Sarah continues to work as an artist, and her sculpture was recently featured in Studio Visit Magazine. Since being at Colorado School of Mines, Sarah has begun supervising research and hot workspaces dedicated to welding, forging, casting, and glassblowing as well as designing programs for students on campus to participate in and learn more about materials.



On behalf of the Keramos Chapter at Colorado School of Mines, we believe that inducting Sarah Harling would be a benefit to our chapter and the national chapter. Her continued outreach to make Materials science more possible for people beyond engineering has proven effective, and her passion for teaching is invaluable. As a member from a non-engineering background, she would be able to teach towards aspects of material science in an interdisciplinary way that has the potential to create connections beyond academia via her industrial and artistic experience.



## **Treasurer's Report**

Keramos' funds were organized into two accounts for the 2020-2021 academic year, the student activities account and the hot glass shop account. The student activities account contains Keramos dues, fundraising sales, and club purchases. The hot glass shop account contains sales made outside of university fundraising events and is used for glass shop maintenance and purchases.

Due to the Covid-19 pandemic, national Keramos dues were waived and not collected for the 2020-2021 academic year. Throughout the academic year, the hot glass shop held multiple sales that were very successful. All of the funds made through the glass shop sales were deposited into the student activities account through SAIL as they were of fundraising nature. This is reflected in the high balance in the student activities account. Throughout the year, the glass shop required a few purchases to maintain equipment and replace broken tools. Mainly, a couple of new punties were purchased to replace broken and old ones. These purchases are the reason for the decrease in the hot glass shop account balance. These purchases were in addition to the typical expenses of the glass shop including the purchases of clear glass, colored frit, and typical maintenance.

The report below shows the initial and final balances of the two accounts managed by Keramos. The initial balances are from the previous annual Keramos report and the final balances are from April 2021.

*Student Activities (Account #1): 389542*

Initial Balance: \$3853.76

Final Balance: \$6243.64

*Hot Glass Shop (Account #2): 389915*

Initial Balance: \$4576.65

Final Balance: \$416.16

## **Chapter Activities**

### **Educational Outreach**

Despite challenges encountered over the course of the year due to school and public gathering requirements, the Colorado Keramos chapter was able to continue completing outreach activities to engage and encourage future generations toward STEM and specifically, ceramic engineering.

#### ***Celebration of Mines***

To begin the academic year, current members of Keramos participated in a virtual Celebration of Mines, an event where new and current students alike can attend and learn about different clubs and activities available on campus. Within a novel digital format, the chapter worked to convey their enthusiasm of materials and ceramics in new ways to garner members through a zoom panel during the celebration itself. They also provided a hype video for students to view and learn more about the chapter itself and what we do on campus even after the event itself. The event video can be viewed here: <https://youtu.be/5VsHBToZew8>.

#### ***Adams County Career Expo***

Keramos partnered with the Colorado School of Mines Materials Advantage Chapter (CSMMAC) to host a booth at the virtual Adams County Career Expo. Over the span of two days, hundreds of students from local school districts came to talk to representatives from a variety of different industries that the students may be interested in working in. Keramos represented the ceramics industry by showing the students videos of glassblowing, talking about pursuing a degree in Materials Science and demonstrating material properties through demonstrations. In lieu of smashing Prince Rupert's drops, the Colorado Keramos Chapter partnered with the Lamberson Group at Colorado School of Mines in the X-STRM lab who have the capability of filming high frame rate footage of glass fractures. Using this footage, the chapter was able to create an original video to show the students across the virtual platform. The video can be seen here: <https://youtu.be/qBApHbSVUEk>. The CSM Glass Shop also provided several glass pieces as prizes for the students who showed exceptional professionalism and interest in the Career Expo as determined by the hosts and presenters.

#### ***High School Panel***

This spring Keramos participated in a discussion panel hosted by the Colorado School of Mines Materials Advantage Chapter (CSMMAC). The motivation of this event was to answer questions for local high school students interested in materials science and engineering. The hour long session saw the discussion of how certain high school classes will aid in your college career; what being an engineering student at Colorado School of Mines is like; and why materials engineering is such an important field. Chapter members who sat on the panel promoted the presence of ceramics in our everyday lives, and exposed prospective students to that field of study.

## **Professional Development**

### ***Resume Info Session***

The Colorado School of Mines career fair provides extensive opportunities for students to talk with representatives from top companies in industry. In order to reap the full networking, internship, and career benefits it is important to be prepared. Keramos held an informational session to ensure that our members were ready for the digital event. There was constructive discussion regarding the logistics of a virtual fair; how to present yourself over video chat; and what to do before, during, and after the event to make the most of new connections. Subsequently, the floor was opened for members to share their resumes, advice, and personal experiences; One member in attendance shared their resume and described how to craft your resume for research and graduate school positions. This led to valuable discussion on how your resume may change based on your career objectives.



## **Service to Ceramics Community**

### ***Glass Shop Management***

The glass shop has successfully transitioned to operating under new management. After working under Emma Braun and April Garlin during the previous year, Alexa Rennert and Abigail Morrow have taken over the responsibilities of glass shop management. The previous managers still continue to provide a lot of support, but Alexa and Abigail are prepared to operate independently after Emma and April's graduation this year.

Despite restrictions on in-person activities, the glass shop has successfully completed its fourth year of operations. Both the fall and spring semesters saw completely full registration for the Art & Science of Glassblowing class, once again chosen by a lottery basis. The stellar team of teaching assistants has managed to further their own learning while teaching new students the fundamentals of glassblowing. Open shop studio times have remained as engaging as previous years. Many current and former students have participated in furthering their skills during these times. There has also been a growth in the number of shop users requesting training to supervise these open studio times. The glass shop's Instagram page is going strong and we are looking forward to developing it further in the future. It can be found under the username @happylittleglassshop.

### ***Soda Lime Saturdays***

Soda Lime Saturdays (SLS) have successfully continued with some slight modifications to allow for proper social distancing and adherence to campus COVID policies. The sign up slots have stayed at their increased level from last year, and have continued to be filled. To adhere to campus policy, current students in the glassblowing class were no longer required to assist at the SLS events. However, there remained a large volunteer turnout by the veteran shop users. Further changes due to restrictions included a shift in participants from the general campus population to more limited groups; Most SLS's were held as joint collaboration events with other Colorado School of Mines organizations, mainly the Society of Women in Engineering (SWE) and the Colorado School of Mines Material Advantage Chapter (CSMMAC). We hope to be able to offer SLS events to the rest of campus this coming fall.

### ***Glass Shop Sales***

This year the glass shop held two virtual sales, one in the fall semester featuring pumpkins and one in the spring semester featuring flowers and birds. These items were custom ordered by each customer, who filled out a form selecting their chosen design. These sales were very successful and brought a great deal of fundraising and attention to Keramos. Overall more than 50 pumpkins, 40 birds, and 20 flowers were made to each customer's specifications by glass shop users.

### ***Glass Shop Donations and Outreach***

The glass shop was able to do some virtual outreach during the 2020-2021 academic year. As many events were online-only, the glass shop was able to film some demonstrations with question and answer sessions for a variety of outreach events. We hope that our demonstrations at these events will sparked interest in Keramos, ceramics, and STEM in general for the young participants.

### ***Pottery Studio***

Keramos is leading the effort to introduce two new pottery wheels to the Mines campus for students to have fun with clay and share interest in ceramics. These wheels will be used in the future to fundraise with pottery items for sale.

### ***Alumni Engagement***

Several Keramos alumni currently attend the Colorado School of Mines for graduate school. As the Colorado chapter of Keramos alumni network continues to grow, so do opportunities for continued engagement. In the future we hope to invite these members to return, fostering a continued fraternity and network.

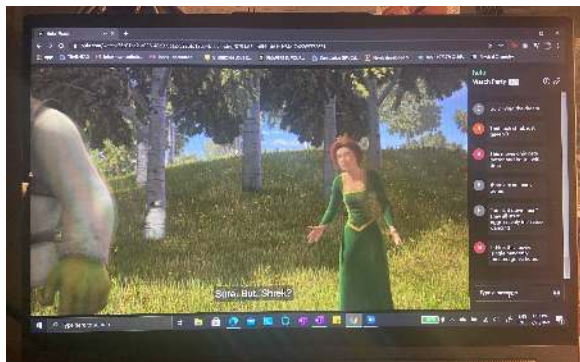
## **Participation at Annual Convocation and Business Meeting**

Our president attended the annual convocation and business meeting over Zoom. It proved a great opportunity to meet with other chapters in attendance to discuss bylaws, updates from each chapter, and other orders of business. We look forward to the possibility of seeing everybody in person at next year's events.

## **Interchapter Communications and Collaboration**

### ***Shre-Keramos (Sam)***

Last year's movie night was a resounding success, so the chapter attempted to replicate it. While only a few members were able to attend, it was phenomenal fun. Members watched Shrek utilizing Hulu's WatchParty feature. In the future the Colorado Chapter of Keramos would love to host this event again, making sure to find a time that is convenient for everybody.



### ***Monthly Phone Calls (Sam)***

On a monthly basis, the presidents of each Keramos chapter met over Zoom to share chapter updates and deal with varying orders of business. It was especially valuable this year to stay connected and share advice on chapter activities. Toward the end of the academic year, the MS&T competition rules were discussed.

## **Social Events**

### ***Holiday Movie Night***

To bring the chapter together over the holidays and provide a bit of stress relief before fall finals, a movie night was held. Utilizing Teleparty, a Netflix group app, members watched The Grinch. The application's chat feature allowed members to catch up with each other and share funny commentary on the movie.

### ***Plaque Making (Sam)***

Following tradition, new members crafted their very own Keramos plaques. The sessions were limited to small groups, but the process remained a fun, hands-on demonstration of the fundamental ideas of Keramos. Members familiarized themselves with the Keramos badge and saw firsthand the transformation of a block of clay to a glazed plaque.



## **Conclusion**

The 2020-2021 academic year was unique and unforgettable. Despite challenging circumstances and at times frustrating campus restrictions, The Colorado School of Mines chapter of Keramos continued to promote educational outreach, professional development, and service to the ceramics community. The CSM glass shop has continued its expansion, cementing itself as a fun campus community and a vehicle for Keramos outreach. Our outreach events were limited but successful and rewarding. It was especially gratifying to build a small cache of informational material that can be developed and utilized again in the future. As the COVID-19 situation continues to improve, and Colorado School of Mines looks forward to in person operation in the fall, the Colorado chapter of Keramos is excited to actualize plans and goals that have been infeasible this year. Despite the challenges this chapter faced, it stands proudly with members who are not just fellow scholars, but good friends.