



THROUGH FIRE TO PERFECTION: The purpose of this Fraternity shall be to provide recognition, distinction and honor to those persons in ceramics whose scholarship and character qualify them for such recognition.

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Grand Master Potter's Message

Greetings Keramos members! It was my great honor to take over as the Grand Master Potter (aka Keramos President) at MS&T in Portland last October. I was called in off the bench to join the Board just a couple of short years ago when a previous officer was unable to continue, and the support of my fellow officers made for a smooth on-ramp. While I've been continuously engaged with Keramos activities of some sort since my undergraduate days, being on the national Board and getting a broader view of the enthusiasm, professionalism, and spirit of service from each Chapter, Board member, and volunteer really reminds me of how special this Fraternity is.

Despite 2020 being a complete mess for the world overall, Keramos has weathered the storms quite well. We continue to nurture new members through our existing chapters and currently growing despite the dearth of focused ceramics educational programs across the US. In fact, we have added two new chapters in recent years (Colorado School of Mines and Virginia Tech), recently welcomed back a reinvigorated chapter at the Pennsylvania State University, and are working on another revived chapter to be announced soon! We are able to keep the spirit of Keramos alive and thriving precisely because we offer something that can be difficult for students to find in today's broad materials departments: a focused and unwaveringly supportive community of people who share an interest in ceramic materials and the ceramics profession. As Keramos members, you already know the value of this community, but it is worth stating explicitly: the people are what make our profession home. As students see this, they are eager to join. Perhaps even more in the days of constant electronic communication via screens of all sizes, actual face-to-face interactions are still the most valuable for long-lasting relationships, and this is exactly why we need everyone in the Fraternity to keep paying your annual membership dues (and any additional donations, of course) so that once travel becomes feasible again we can use these funds to help support travel of delegates from each of the student Chapters to participate in the Convocation and related activities at MS&T each year.



With that in mind, the Board and our Chapters are looking forward to the virtual MS&T Conference and Exhibition including the ACerS Annual Meeting, Keramos Convocation, student competitions, and far more excitement than can be contained in a single Zoom window. We will continue to use the Keragram and our convenient new domain (keramos.org) to keep you informed of the activities of the Fraternity. Please don't be afraid to reach out to any of the students and/or Board members if you have any questions or comments.

Thank you for your continued support of Keramos!

Fraternally yours,
Prof. Geoff Brennecka, Keramos President
Colorado School of Mines, geoff.brennecka@mines.edu

Treasurer Report

Hello from your new Treasurer for the Keramos National Board. For the past three years, I have served on the Board as your Recording Secretary. During that time, I have enjoyed getting to know more about Keramos and each of the student chapters. I continue to be amazed by the excellent work each of the chapters does, in their community outreach and their support of their fellow students and Keramos members. I am excited to be transitioning into the role of Treasurer and look forward to continuing to aid the chapters in all of their activities. Please don't forget to do your part in helping our chapters by paying your annual dues!

[Kathleen Cissel](#), Keramos Treasurer
Battelle Memorial Institute

Recording Secretary

Hello! It is great to have the opportunity to join the Keramos Board, starting as your Recording Secretary for the coming year. Becoming a member of the board feels full circle for me, as I served as Keramos Chapter president back at Missouri S&T in 2001-2002.

Now, a little bit about me... I am a graduate from Missouri University of Science and Technology with a B.S. in Ceramic Engineering and an M.S. Engineering Management. I have been working in the semi-conductor industry at Applied Materials in Supplier Engineering since 2018. My current focus is to work technical ceramic suppliers in material development, qualification, validation. Prior to Applied, I worked in the technical ceramics industry for 11 years with CoorsTek and in the flat glass industry for 3 years at PPG. Over the years, I have been in various roles in process and quality engineering, as well as in operational excellence, project management and supervisory management.

When I am not working, I love being outdoors ~ hiking and camping, playing ultimate frisbee, and spending time with friends and family. Living Portland, Oregon we can be playing on the beach and within 2 hours be hiking in the mountains. It is a great place to live!

I hope my industry background and previous Keramos experience will add a fresh perspective to the board for the coming years! I am looking forward to supporting Keramos and the Student Chapters. **See you around!**

Holly Bentley, Keramos Recording Secretary
Applied Materials
hollyrbentley@gmail.com

Keramos Convocation and Activities at MS&T 2019, Portland, Oregon

Keramos activities at MS&T 2019 began with a breakfast meeting of the Board of Directors at the Portland Marriott Downtown hotel where we prepared for Convocation, discussed general fraternity business, and welcomed Holly Bentley as our new Recording Secretary. We continue to streamline the processes associated with our new relationship with the Ceramics and Glass Industry Foundation (CGIF) in order to maximize benefit to chapters and their communities while minimizing unnecessary burden without sacrificing accountability. With this in mind, we are shifting to a single annual proposal cycles for CGIF-sponsored Keramos chapter activities that better aligns with the academic year and the realities of rotating chapter officer chains. In parallel, the Keramos Board continues to make a concerted effort to enhance the overall financial situation via fundraising activities.

The morning continued with the annual Keramos Chapter Convocation, during which the chapter representatives discussed their activities and accomplishments for the year. Once again, the Missouri Chapter (Missouri S&T) was awarded the title of Best Chapter for 2019, while the New Jersey Chapter (Rutgers) took home Most Improved Chapter award. The



assembled representatives also discussed rule changes and clarifications for the competitions and for the chapters. Notably, the chapters voted to reword the requirements for chapter membership to avoid excluding first- and second-year students. Convocation also featured an address from Prof. Susan Trolier-McKinstry from the Pennsylvania State University, the recipient of the 2019 Greaves-Walker Roll of Honor award and a presentation from Career Speaker Patrick Schroeder from Hewlett-Packard. Susan discussed the value of hard work and perseverance, while Patrick's message focused more on keeping your eyes open to new opportunities that may not seem obvious during school.

The highlight of every MS&T is the certainly the student competitions on Tuesday. Each of the Ceramic Mug Drop Contest and the Disc Golf Competition had more than two dozen entries! The Most Aesthetic Mug this year was a gorgeous intricate glazed mug from Cwi Jing Jing while a handful of mugs performed respectably, surviving of Wuhan University of Technology multiple drops from > 60cm. In the end though, only Alissa Reynold's mug from Missouri S&T survived, refusing to break even after a drop from 450cm! The Most Aesthetic Disc award went to Harrison Jones from Virginia Tech, and also took home first place in the Ceramic Disc Golf competition throwing 8 meters



National Student Chapter Representative

This year the role of National Student Representative has definitely changed as the year went. With it though, came many wonderful experiences that have brought the organization closer and more accessible. Earlier this year we adapted the national bylaws that now allows for younger members to be involved to allow more time for growth and participation as an undergraduate. A significant portion of the work this year was figuring out how to create options for students to still compete in the student competitions when the MS&T Conference is virtual. We have worked with ACerS and are proud to have a new category for students to compete in if they do not have access to lab equipment. This opens the door for much more creativity and reminds us of how ceramic processing started, fire and clay (or whatever else the students can come up with).

This year we are also very excited to welcome back Penn State into Keramos as they have decided to revive chapter operations. The future is bright for students even in these abnormal times so expect even greater things to come next year!

Anthony Luebbert
Missouri Science & Technology
National Chapter Representative

Rutgers Chapter Article

This past year has been another successful and lively period for The Rutgers University, New Brunswick Chapter. Our informal outreach events such as game, movie and study nights have served to further advertise our chapter and build relations between our own members and other students and faculty within the Materials Science and Engineering (MSE) department. The chapter has been an active partner by volunteering at recruitment events such as Major's Night and Honors Academy department showcases, as well as lab tours, and outreach events such as the return of our interactive

glass slump molding event and in person meetings with students from a neighboring high school. Additionally, we have continued our efforts towards retaining engagement with alumni from the chapter, growing our LinkedIn group to 16 members over the past year and continuing to advertise and encourage graduating members to join and participate. (<https://www.linkedin.com/groups/12235300/>)

Being awarded the Ceramics and Glass Industry Foundation grant for the 2019-2020 academic year has allowed our chapter to continue hosting our well-received interactive open house for local prospective high school students. This event hosted by our chapter featured the ability for these students to shape and personalize panes of glass via slump molding, exposing them to both the artistic and scientific aspects of glass properties under the guidance of Keramos members and faculty. This was then followed by an opportunity to speak with our department chair about aspects of study within materials science and engineering as well as potential career trajectories within the field. We then incorporated a new aspect this year to this event with touring other active laboratories within the department, such the Additive Manufacturing Stereolithography labs to showcase the wide breadth of research areas within not only the department but materials science as a whole.



Some events were unfortunately canceled due to the COVID-19 outbreak. Yet, the chapter is excited for when they will be able to engage with local communities again to continue spreading awareness of glass and ceramics sciences!

Mug Drop and Disc Competitions, 2020 version!

The annual mug drop and ceramic disc (golf? toss?) competitions are still happening in 2020 despite MS&T being completely remote. See <https://www.matscitech.org/MST20/Students/MST20/students.aspx> for more details.

Missouri S&T Kera-Gram



S&T goes to Portland

Missouri S&T went to this years MS&T conference from September 28th to October 2nd in Portland, OR this year. With ___ in attendance S&T sent the most students out of any school. In student competitions: the team of Alissa Reynolds and Nicholas Timme won the mug drop competition with drop distance of 450cm, our speaker Bailey Rickets recieved second place for her talk on the reuse of glass cullet, Cam Berkley recieved third place with his throwing ability in the disk golf competition, domesday recieved 3rd place, and Keramos recieved diamond chapter award and most outstanding chapter.

Left: Alissa and the winning mug Alice
Right: Members of Keramos Exec with new wall art



Dr. O'Malley Named President of AIST



A big congratulations to our own Dr Ronald O'Malley who was named president of the Association of Iron and Steel Technology for the following year. Regarding his experience in AIST, he said "I have been an active member of AIST since its inception and served in many volunteer roles over the years on several technical committees, in roles such as conference planning, technical training, publications, awards, committee chair and board member. I was approached by the board to consider entering the executive board rotation shortly after I joined Missouri S&T, which is a 5 year appointment that rotates into the presidential position." Dr O'Malley is most excited to travel the globe talking with steelmakers about both AIST and the exciting research happening here in Rolla, MO.

What's to come?

Tis the season for haloween fun and as always Keramos will be holding our annual Skeramos event. We are going to a haunted maze followed by pumpkin carving and a scary movie. On the professional side of things, Keramos is planning on taking headshots and beginning a program called Keramocktails and Snackamos where students are encouraged to spend some time studying together in the McNutt Commons with food and drinks. We will see all of you next month! Enjoy the Keraspooks season.



Left: Our secretary, Clare Sabeta, with her rabbit Honeybun getting into the Halloween Spirit.



Student & Alumni Spotlight

Each month we will be focusing on one student and one alum to share about their experiences.



My name is Nicole, I am a (super) senior in Ceramic Engineering and am the 2019-2020 Keramos Missouri chapter president. I was also the 2018-2019 Keramos VP am a Zeta Tau Alpha Alumnae, am past Material Advantage outreach chair, and am a PRO (Preview, Registration, and Orientation) Leader. Some of my best memories from being in Keramos are with the 2018-2019 and 2019-2020 E-boards, Dr Smith and other students on the board have your back through anything and have shown so much love and support towards me and each other. After college, I will be getting married in Colorado in July 2020 and have accepted a job with Pratt & Whitney in East Hartford, CT as a member of their materials rotational program. I also have two of the cutest cats on the planet named Lucie and Feta. Some of my hobbies include fitness, hiking, sewing/crafting, and perpetually planning my next tattoo.



This month's alumni is Olivia Rodell, graduated May 2019. Here are some of her words: "I want to start this off by saying in case you're wondering Dr Hilmas only 15004 days until I hit retirement age. I currently work at Radiac Abrasives as a Vitrified Development Engineer. My position falls within the R&D department, a place I never thought I would call home. Most of my work is on projects incorporating new materials into our process, improvement upon current products, and helping to solve issues that cause scrap. I was Herald for Keramos, Outreach chair for MA, and struck fear in many of those reading this right now as their TA for both mud lab and glass lab. I have a lot of fond memories from my time in the MSE department. I spent many, many hours lurking the halls of McNutt working, studying, and goofing around in the commons. I also spent a large handful of hours on Friday nights grading lab notebooks and reports at an undisclosed off-campus location with my fellow mud lab TAs and the occasional professors who would drop by."

Help out the Next Generation of Ceramic Engineers

The Board of Directors uses fraternity funds to send students to the annual Keramos Convocation at the Materials Science and Technology Conference each fall. We need your help in maintaining our ability to help students become new leaders in the ceramic engineering profession. We've established a PayPal account via the Keramos web page to make it easy to pay your \$10 annual membership dues, and additional donations are greatly appreciated. You may also continue to pay dues by mail to the General Secretary, using the form at the end of the Keragram. Thank you for your continued support of Keramos!

Stay Connected with Keramos

Keramos is working to improve its online presence for better communication with students and alumni members. Check out the Keramos web page, hosted by the American Ceramic Society:



<http://ceramics.org/classes/keramos>

<http://keramos.org>

We have updated the page with annual reports from each of our chapters, so that you can keep up with their impressive efforts in professional development and outreach.

Keramos has also established a group on LinkedIn to better communicate with our alumni members. It's available here:



<https://www.linkedin.com/groups/3573516>

We're using this group to hold a discussion about the value of Keramos to our members, and we would very much like to have your input.

Alumni Support

Our alumni play a crucial role in enabling the fraternity to continue to advance and promote professional development for the students. We are very grateful for your continued support – it is making a significant impact for the future. A special thanks to the alumni listed below who have contributed beyond their annual dues:

Ryan Wilkerson

Ted Taylor

Holly Bentley

Geoff Brennecka

Annual Dues

Annual Dues are \$10. Make check payable to “Keramos Fraternity”. If you have not paid your dues this year through ACerS or via PayPal (see link at (<http://ceramics.org/classes/keramos>), please fill in this coupon and mail to the General Secretary.

Jeffrey D. Smith
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Rolla, MO 65409

Keramos Dues and Comments:

Name: _____

Address: _____

City, State & Zip: _____

Email: _____

Annual Dues (\$10) _____

Donation: _____

Message: _____