



Official Newsletter
of Keramos:
The National Professional
Ceramic Engineering Fraternity

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of the General Secretary:
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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.

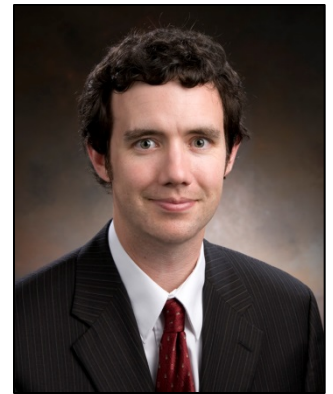
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President's Message

Greetings Keramos members. I'm excited to begin my term as President (or Grand Master Potter) of Keramos this fall. My time thus far on the Keramos Board of Directors has been a rewarding experience. I'm consistently impressed by the enthusiasm, professionalism, and spirit of service that I see exhibited by each Keramos Chapter.

A quick background on myself: I graduated from Alfred University in 2000, including a stint as treasurer of the AU Chapter. Hopefully the soda machines are still running there, as they were an excellent source of income for the Chapter. I then completed my M.S. and Ph.D. in ceramics with Prof. John Hellmann at Penn State, including a brief but much enjoyed study in Japan on an NSF fellowship. I'm now at Savannah River National Laboratory in South Carolina, where I work on a team developing glass and ceramic compositions for the safe immobilization of nuclear wastes. I spend the rest of my time trying to keep up with our six-year-old twins and renovating our house.



I'm looking forward to another strong year for Keramos. Our monthly teleconferences have been successful in improving communications among the leadership at our Chapters and the Board of Directors. The Board is undertaking a significant effort to update our membership database, led by our new General Secretary, Dr. Jeff Smith, and the Missouri University of Science and Technology Chapter.

Keramos will celebrate two significant milestones in 2015: the induction of our 10,000th member, and the 100th year anniversary of the Alpha Chapter at the University of Illinois. The Board and the University of Illinois Chapter are working to put together celebratory events, and you'll be hearing more from us about these, including an invitation later in this Keragram.

As always, your dues and donations are much appreciated by our student members who we're able to fund to attend our annual convocation along with the Materials Science and Technology Conference and Exhibition. We'll continue to use the Keragram to keep you informed of all their accomplishments. You'll note on the form at the end of this Keragram, as well as on the PayPal link at the Keramos website, that you can now select electronic delivery of the Keragram. This will help us conserve funds to further our support of student members. We'll continue to offer print versions if you'd prefer. Please help us by sending your updated postal and email address.

Thank you for your continued support of Keramos.

Dr. Kevin M. Fox, President; kevin.fox@srnl.doe.gov

2014 Convocation – MS&T 2014 in Pittsburgh, PA

Keramos recently held its annual Convocation and Business Meeting at the Materials Science and Technology 2014 Conference. Nineteen student delegates representing seven of the Chapters attended the meeting. The student delegates began the meeting by discussing best practices and any issues at their Chapters. Sean Locker of Alfred University was elected as the new student representative to the Board of Directors. The students also recommended that the Board amend the fraternity by-laws to clarify that students with freshman status may participate in Keramos activities, but may not yet be inducted as members.

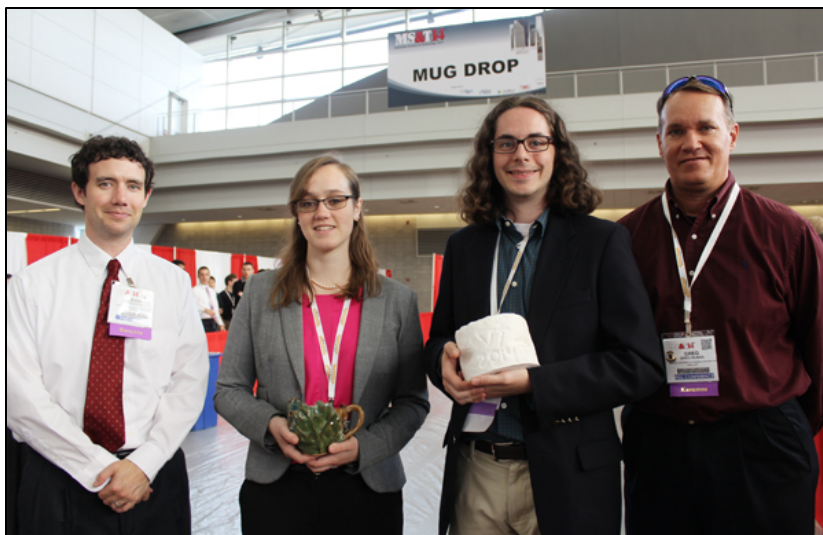
A highlight of the Convocation was the presentation of awards. The Most Improved Chapter Award was given to the University of Illinois Chapter. The Keramos Ruby Award for Achievement was given to the Alfred University, Iowa State University, and Clemson University Chapters. The Keramos Sapphire Award for High Achievement was given to the University of Arizona and University of Illinois Chapters. The Keramos Diamond Award for High Achievement was given to the Missouri University of Science and Technology and Pennsylvania State University Chapters. And finally, the Most Outstanding Chapter Award was given to the Missouri University of Science and Technology Chapter.

The Greaves-Walker Role of Honor was given to Dr. Carlo Pantano, Distinguished Professor of Materials Science and Engineering and Director of the Materials Research Institute at Pennsylvania State University. Dr. Dick Brow, Curators' Professor of Ceramic Engineering at Missouri University of Science and Technology, gave an entertaining and enlightening presentation as the Career Speaker at the close of the meeting.

The Mug Drop and the new Disc Golf competitions continue to be one of the highlights of all of the student activities at the annual meeting. This year's Mug Drop contest included 18 ceramic mugs from 6 universities. The Most Aesthetic mug award (\$100) went to Sam Swayne from Virginia Tech. The winner of the dropping portion of the contest (\$100) was Josh Marrett, also from Virginia Tech, whose mug hit with a large thud at a height of 90 cm. His mug then chipped enough not to hold water after a drop height of 100 cm. The second annual disc golf competition continues to be a resounding success! We had 9 discs from 3 universities. Several of the ceramic discs were successfully tossed into a disc golf basket from a distance of 5 meters. However, at the 7 meter mark, only Noveen Delaram of the University of Connecticut made the successful toss. Noveen then tried to set a new record with a toss at 8 meters but failed with his disk catastrophically breaking. 'Best Looking Disc' went to Allie Clark also of UConn. Additional photos from both contests and videos taken by ACerS may be found at the link below.



Keramos treasurer Brian Gilmore, Pioneer Natural Resources, with Most Aesthetic Disc winner Allie Clark of the University of Connecticut. Credit: ACerS



From left: Keramos vice president Kevin Fox, Savannah River National Laboratory; Most Aesthetic Mug winner Samantha Swayne, Virginia Tech; overall Mug Drop champ Josh Marrett, Virginia Tech; and Keramos president Greg Hilmas, Missouri University of Science & Technology. Credit: ACerS

<http://ceramics.org/ceramic-tech-today/your-last-dose-of-mst14-material-advantage-mug-drop-and-disc-golf-contests-with-video>

Welcome from the new Recording Secretary of Keramos

Hello, my name is Melissa Teague and I am excited to be joining the Keramos Board as Recording Secretary. I joined Keramos in 2004 as an undergraduate at University of Missouri-Rolla (now Missouri University of Science and Technology) and enjoyed my time as active student member. I received my BS and MS from Rolla in ceramic engineering, and my PhD from Colorado School of Mines in 2013 in Material Science (they didn't have Ceramic Engineering). I am currently a research staff member at Idaho National Laboratory working on a variety of irradiated fuel (yes ceramics (UO₂) power ALL nuclear plants, and provide 20% of US electricity). I am looking forward to serving Keramos and helping promote the ceramics profession; I am passionate about the field and enjoy working with students.



Dr. Melissa C. Teague, Recording Secretary; melissa.teague@inl.gov

A Special Invitation from the University of Illinois at Urbana-Champaign Keramos-Alpha Chapter

Dear Keramos Members,

On February 15, 1915, the University of Illinois at Urbana-Champaign was nationally recognized as the Keramos-Alpha Chapter. Since then, our chapter has grown to nearly 150 members as a professional society.

To celebrate 100 years of growth, please join us on Saturday, February 21, at the I Hotel and Conference Center in Champaign, IL. Banquet tickets are \$15 until January 16, and then \$20 until February 6. Please RSVP on our website, www.keramosillinois.org/centennial-celebration, and purchase your ticket online or send a check payable to "Keramos Illinois Chapter" to: Keramos, MatSE Department, University of Illinois, 1304 W. Green Street, Urbana, IL, 61801.

More information about the weekend is available on the Keramos website, including hotel information and a basic itinerary. If you have any questions, please contact Illinois Keramos president Mike Sarantos (saranto2@illinois.edu).



News from the Alfred University Chapter

Over the past year, the involvement of our members in the Alfred University Chapter of Keramos has increased at an impressive rate. Last year's executive board did a fantastic job at really revitalizing our previously lack-luster Chapter. A much larger number of events have been put together and hosted by Keramos than in the past due to this substantial improvement in member participation. Members are truly getting involved and loving it now!

This year has marked the beginning of many new events for our Chapter. We hosted our first "liquid nitrogen/break stuff" event. The event had a great turn out with students eager to break their items of choice. A cute little rubber ducky was one unfortunate victim of the liquid nitrogen, but definitely the members' favorite in terms of destruction. The final part of our event was to put the remaining liquid nitrogen into a sealed water bottle, and wait (at a safe distance, of course ☺). All eyes were drawn towards the Keramos demonstrations when an emphatic boom rang through the chemistry building! It's a shame nobody caught our post-explosion faces on camera, because they were a combination of shock, amazement, and "Are we going to get in trouble for this?", and quickly followed by laughter.

Another first-time event was a professor talk called "Ancient Engineering". The goal of the event was to expose 21st century engineers and scientists to the perspective of the last century engineers (aka, our bosses). For our first task Dr. Pilgrim, Professor of Materials Science and Engineering, had us solve a simple math problem using a slide rule. This proved to be a much more difficult task than any of us anticipated. Dr. Pilgrim also showed us "ancient" XRD patterns which were written out on what seemed to be strips of wax paper. This event was an eye opening experience to us that showed how the engineering world operated long before we were a part of it.

As usual, the member-favorite "Play with clay" events continued. Some members who are involved in ceramic art were happy to show the less experienced members how to throw on a wheel. This event is a fun time to try your hand at creating a masterpiece, or maybe even just a centered blob of clay, on the wheel. Some members proved to be fast learners, while others decided that making clay balls was more of their "calling". We are hoping that someday we will be throwing cups and bowls to a "fire-worthy" quality, however that day is not today. But as long as we are having fun then we are going to keep on playing with clay anyway! Perhaps next semester our skills will reach the highly sought after fire-worthy level!



Several new fundraising events were started this year. Engineers from all around began sporting snazzy Alfred University Inamori School of Engineering polos, which we began selling during the spring 2014 semester. This fall also marked the first late-night hot dog fundraiser. We cooked and sold hot dogs to fellow students that were craving some late night food on the weekend. Much to our surprise, we actually sold out of hot dogs in less than 2 hours, and had a blast while selling them too! Finally, by utilizing the only vending machines on campus permitted to sell Pepsi-products, we have found a strong steady source of income.

This chapter has shown some major improvement over the past year and we hope to continue doing so. As a group we are growing much closer and truly taking advantage of the learning experiences and other fun experiences we can do as a club. The future for Alfred University's chapter of Keramos is certainly a promising one!

News from the Pennsylvania State University Chapter

The Pennsylvania State University Chapter of Keramos has been busy this semester with social fraternity events, expanding academic knowledge, and developing professional skills in industry.

We started off the semester with a “Welcome Back” picnic to transition our members back into the school year. We grilled and played games to relax and catch up with friends after summer vacation. We will end the semester with our department holiday luncheon. Keramos coordinated a canned food drive for the undergraduates and a raffle drawing.

The main academic event this semester was attending the Material Science & Technology Conference 2014 (MS&T’14). This year, a total of 44 students from Penn State participated. Our students attended technical talks and supported our student speaker and student poster entrees.

After the busyness accompanying MS&T subsided, we hosted a graduate student panel, which provided insight on choosing a professor, transitioning to graduate life, and preparing for candidacy. In addition, Keramos also hosted a materials science professor at our meeting to talk about 3D printing. He explained the opportunities available to learn CAD drawing, building new printers, and experimenting with printing materials (possibly ceramic slurry extrusions).

Prior to the start of the fall semester, 15 students toured manufacturing plants and research centers of ArcelorMittal, Arkema, and Schott Glass. The students viewed the equipment and daily operations at each of the facilities and experienced potential post-college career options. Finally, ArcelorMittal visited campus and gave a company overview and talked about internship opportunities at the company. Next semester we will continue to encourage fraternity, increase our academic capacity, and expose our members to industry.



News from the Missouri University of Science and Technology Chapter

The Missouri S&T Chapter of Keramos has been focusing on a two major initiatives this semester: student involvement and professional development. To increase student involvement, our Chapter decided to create four committees: Outreach, Fundraising, Networking, and Website Creation. This was a bit of a risk, but it has paid off in spades. Our Website Creation committee has a website in beta as we speak; hopefully it will be fully ready by the next Keragram! Fundraising has started a new fundraising effort, ‘Minor Jobs for Major Cash,’ where Professors who need yard work or other house work donate to the Chapter in return for a few hours of student work. Networking has been faithfully hosting a social gathering or study night every month, and students in the Outreach committee have talked with high school students and their families about Ceramic Engineering at several Open House events and similar efforts. Many general student members have really stepped forward to help with and lead these committees, which have made this venture a huge success.

Aside from the amazing work done by our committees, our chapter also hosts at least one professional development seminar each month in the form of a ‘Lunch and Learn’. This year we have had Mike Carson from Kohler give a talk about his professional career; Myranda Ferris and John Waldo speak about their co-op and internship experiences; and next up is Dr. O’Malley, a campus professor, who is planning on speaking about how ceramics impact the steel industry. These seminars are both an excellent networking opportunity for interested students as well as a good medium for students to present their work to their peers.

We also helped organize a pit fire at a professor's house this November. Students spent a month making and bisque firing pieces out of raku body, which were then decorated with everything from metal oxides to flowers. Students filled the pit with their masterpieces, afterwards lighting a bonfire that would last days.

This semester, we will be initiating 15 outstanding new members! Each initiate has formed a clay plaque which is glazed in the Keramos colors, attended the Keramos etiquette dinner, and demonstrated a professional interest in Materials Science. The number of applicants really skyrocketed this year, so we will be having a second initiation next semester as well.



News from the University of Illinois Chapter

The UIUC Chapter of Keramos has had a jam packed semester, including focusing a lot on professional development and scholarship for our members. Every month, we host a Professor Lunch with our department where we have a couple of professors and a small group of students meet with each other and enjoy lunch in an informal setting. We are also hosting company information sessions including Maxim Integrated.

We have initiated 21 members into our Chapter, which brings our organization to over 135 members, 70 of which are active. As a Chapter, we are continuously growing, and finding new ways to work with many different organizations including our Material Advantage chapter by co-hosting events including the Department Auction, where students and professors auction off events or items for anyone to bid on. Some items include spots in a volleyball game against the professors or to rock-climb at a nearby facility on campus.

We have also increased our reach for our Play with Clay events including creating the foundation for a research course for material selection and design for mug drop and disc golf events at MS&T, where we brought over 8 members to the conference held in Pittsburgh this year.

Finally, we are expanding our alumni base where we are collaborating with the alumni director in our Materials Science and Engineering Department, where we hosted mugs for Homecoming and organizing a massive event celebrating 100 years of our Chapter's history, which will be held in February, 21 2015. Please take a look at our invitation in this Keragram!



Alumni Support

Our alumni play a crucial role in sustaining and 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. Thank you to those who sent in their dues and special thanks to the alumni listed below who have contributed beyond their annual dues:

Neil N. Ault	Janet E. Bailey	Joseph T. Bailey	Wate T. Bakker
Harris C. Barker	Clifton G. Bergeron	Marshall E. Bullard	John A. Cihon
Ronald V. Caporali	William Daniels	Richard E. Deno	Edward Duderstadt
Irwin Gordon	John F. Grant	William F. Hammetter	Joan Hellman
John R. Hellmann	Lyle A. Holmes	James J. Hurst	James R. Johnson
Ronald V. Kilgore	Donald E. Kraft	Jim McCauley	Thomas D. McGee
Edward E. Mueller	John F. Preston	John C. Pulver	Ralph Rose
Scott Robinson	Norman W. Severin	Ellis Smith	Ruth Sunderman
R. Francis Tatnall	Victor J. Tennery	Robert Thorson	Juris Verzemnieks
E. Thomas Weber	Christina Youngers		

Alumni Notes

We Want to Hear from You (Really! We do!)

Norman W. Severin – Congratulations Jeff! **Thomas D. McGee** – Hurray for Connecticut!! **Ellis Smith** – It’s true: Only the good die young. **John F. Preston** – Like the new look of the newsletter. **John R. Hellmann** – Keep up the great work. **Christina Youngers** – There were some great inspirational chapter updates in the June 2014 Keragram. Thanks! **Laura M. Haas** – Thank You! **Irwin Gordon** – Good luck to Bob Schwartz. **Donald E. Kraft** – I hope to visit the Ceramics building at University of Illinois sometime this fall. **John A. Cihon** – Enjoying Retirement – Go Buckeyes!! **Charles E. Chaille** – Nice to hear from Sonny and Bob. **James R. Johnson** – One of your “en masse” 40’s class. **William Daniels** – Donation to help with student chapter delegates!! **Ralph Rose** – Keep on Keeping on! **Janet E. Bailey** – Great job! Always glad to get newsletter! **Victor J. Tennery** – Keep up the good work - preserve our identity as ceramic engineers.

Jeffrey D. Smith
General Secretary
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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. Please indicate the manner in which you would like to receive future Keragrams as we now offer an e-mailed electronic version!

Keramos Dues and Comments:

Name: _____

Address: _____

City, State & Zip: _____

Email: _____

Future Keragrams: Paper Copy _____ Electronic Only _____

Annual Dues (\$10) _____ Donation: _____

Message: _____