



ILLINOIS

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Keramos Annual Report  
Fall 2016 - Spring 2017

University of Illinois at  
Urbana-Champaign

**Chapter Advisor Executive Summary 2016-2017**  
**Professor Waltraud M. Kriven**

The Keramos Illinois chapter has reached new levels of success in the past year. Diligent work by the executive board has resulted in an improvement in the quality of events hosted. As a result, member participation has also increased. Time-tested events such as professor luncheons, community service through Destination Technology, and professional development workshops were not simply hosted in the same format as previous years; instead, each event was thoroughly reviewed and improved. For example, an optimized sign-up procedure for professor luncheons enabled more students to interact with Materials Science and Engineering (MatSE) faculty members than ever before, improving the student-faculty relationship.

Several awards were received by the chapter, including Illinois winning the Annual Mug Drop Competition again (courtesy of Michael Hu) and most aesthetically pleasing disc (Elisabeth Lang) at the 2016 Materials Science and Technology Conference in Salt Lake City, Utah. An Oobleck demo won 3rd place in the “Just for Fun” category at Engineering Open House, a massive demonstration of projects from every department in the College of Engineering. Additionally, a successful Ceramic Rose fundraiser was held, raising over \$240. The Ceramic Rose fundraiser consisted of beautifully colored glazed ceramic “roses” and rose petal vases being made by Keramos students which were widely bought by office staff, faculty and students passing by the Keramos table on the University Quad outside of the students Union. The Faculty Auction fund raising activity will again take place before the end of semester, in conjunction with the Materials Advantage student group. The 23<sup>rd</sup> Annual Keane-Kriven dinner which is a sit down three course banquet for 12-14 students and raises over \$600 each year will again take place before the end of semester.

An ongoing initiative of Keramos Illinois is increased communication between current members, the MatSE department, and MatSE alumni. The executive board has been working very closely with the department in sharing course feedback

from members, and video calls with MatSE alumni who have been hosted at several general meetings. An alumni mentorship program is also in development.

Keramos Illinois continues to grow and improve, and I am certain that the outgoing and incoming executive boards will work together to ensure a smooth transition in leadership and uninterrupted progress.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. M. Kriven".

W. M. Kriven  
Faculty Advisor, Keramos

## **Annual Plan for Upcoming Year**

The Keramos chapter at the University of Illinois at Urbana-Champaign has continued to thrive and grow with events tailored to drive the professional development of students while increasing the connection between students and faculty. For the upcoming year, Keramos plans to continue hosting general meetings and other events for the entire MatSE department. After experiencing positive results with the new organization of our executive board, we have decided to stick with the same format for the upcoming year. There will be two presidents for the upcoming year, with one serving during the fall semester and one during the spring semester. We expect a smooth transition between both semesters. We plan on continuing weekly play with clay sessions and monthly professor luncheons, as these are highlights of Keramos Illinois. To increase the focus on professional development, there will be a particular emphasis on starting an alumni mentorship program where alumni will be able to give students advice about careers and graduate school. Events that are thoroughly appreciated such as mock interviews, resume reviews, and info sessions during the recruiting season will continue to be hosted. We would like to plan an etiquette dinner as we gained plenty of interest for this during the school year. Additionally, Keramos Illinois plans to take tours of several companies to give students some insight into the corporate world. Our overall goal is to increase student participation in events to build upon and establish new marks of success for the University of Illinois Keramos chapter.

**Officers for 2017-2018**

**President (Fall 2017)**

Heer Majithia



**President (Spring 2018)**

Elisabeth Lang



**Vice President**

Audrey Lee



**Treasurer**

Eric Krupinski



**Professional Chair**

Ethan Wisniewski



**Herald & Secretary**

Jeff Schooler



**Herald & Webmaster**

Jose Mancias



## Current Members

**Advisor:** Waltraud M. Kriven

### Spring 2014 Initiates

Soham Ali	Melissa Goetter	Anna Jedralski	Athena Lin	Samantha Tatar
Justin Betancourt	Shamalee Goonetilleke	Samuel Kaufman	Qing Lin	Julia Zuo
Adam Brown	Zachary Hoffman	Deepa Kote	Deepak Mani	
Suraj Dhanak	Steven Hoppe	Diane Kuai	Grace Pakeltis	
Brendan Eng	Michael Hu	Kacper Lachowski	Cameron Rosenthal	

### Fall 2014 Initiates

Andrew Buhl	Jai Karnik	Emily Lindgren	Sean O'Neill	Mantian Xue
Kirsty Feng	Joanna Lin	Anisa Nuanes	Dustin Reisberg	

### Spring 2015 Initiates

Kyle Berglund	Frank Kelley	David Schmit	Xiaolan Sun
Emily Foley	Bridgette LaFaye	John Shimanek	Jize Zhang
Philip Kagebein	Yiyue Luo	Lauren Smith	

### Fall 2015 Initiates

Vasyl Bruchko	Benjamin Fiszbein	Katherine Jennings	Kyle McKillop	Perry Ross
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### Spring 2016 Initiates

Collin Anderson	Sarah Gurns	Audrey Lee	Benjamin Perkinson
Christopher Beck	Joshua Khazanov	Brittany Lung	Mitchell Schroeder
Piush Behera	Nayung Kim	Heer Majithia	Michael Toriyama
Erica Belvin	Elisabeth Lang	Devon Papanicolas	Brendan Wolan

### Fall 2016 Initiates

Naomi Benson	Jacob Maher	Mauna Pudukollu	Whitney Tso
Mary Jablowicz	Caelin Muir	Daniel Rosenthal	Ethan Wisniewski
Sai Komaragiri	Shunya Namiki	Jeffrey Schooler	Murtaza Zohair
Eric Krupinski	Monica Paul	Jai Sharma	

### Spring 2017 Initiates

Humza Ahmad	Kevin Halloran	Jiwoo Lee	Jarod Meyer	Justin Silberman
Dylan Blake	Lukas Janavicius	Matthew Lee	Sarah Pirih	Edward Thomas
Julia Brodecki	Aneesh Jonelagadda	Samuel Li	Alexander Prather	Jingyi Wen
En Ju Cho	Namita Kulkarni	Megke Ma	Paige Prendergast	Hongtao Yang
Kelsey Golk	Bao Lam	Jose Mancias	Julia Schultz	

# Initiation Class Pictures

Spring 2016



Fall 2016



Spring 2017





## Treasurer's Report

During the 2016-2017 academic school year, the Keramos chapter at the University of Illinois at Urbana-Champaign took in a total of \$2897.25 from initiation dues and the Ceramic Rose Fundraiser while totaling \$2061.99 of expenses from different events held throughout the year, such as general meetings, social and professional events, and the MS&T conference. The University of Illinois chapter experienced net gain of \$835.26. Our resulting balance is currently \$7865.35. Please note that further expenses after April 15, 2017 are not included in the report.

<b>Fall 2016</b>	<b>Date</b>	<b>Transaction</b>	<b>Income</b>	<b>Expenses</b>
	9/4/2016	MS&T Travel Costs		\$1,067.14
	9/6/2016	Ice Cream Social		\$15.56
	9/6/2016	T-Shirts Purchase		\$105.00
	9/20/2016	National Dues		\$390.00
	10/23/2016	Keramos Travel Grant	\$376.00	
	11/13/2016	Keramos Initiate Fees	\$ 750.00	
	11/13/2016	Initiation Social		\$86.00
	11/28/2016	Engineering Council Reimbursement	\$280.00	
	12/2/2016	Department Reimbursement MS&T	\$300.00	
	12/5/2016	Gripe Session	\$ 34.10	
	11/28/2016	Total	\$ 1,406.00	\$1,663.70

<b>Spring 2017</b>	<b>Date</b>	<b>Transaction</b>	<b>Income</b>	<b>Expenses</b>
	2/14/2017	Ceramics Fund Raiser	\$241.25	
	2/15/2017	February GM		\$ 145.00
	3/7/2017	Keramos Website		\$50.00
	3/13/2017	EOH Pizza		\$ 80.03
	4/9/2017	Keramos Dues	\$1,250.00	
	4/9/2017	Keramos Initiate Fees		\$ 123.26
	2/14/2017	Total	\$1,491.25	\$ 398.29

<b>Initial Balance</b>	<b>Total Expenses</b>	<b>Total Income</b>	<b>Net Income</b>	<b>Resulting Balance</b>
\$7,030.09	\$2,061.99	\$ 2,897.25	\$835.26	\$ 7,865.35

## Chapter Activities

### Educational Outreach

One of the most challenging courses in the MatSE curriculum to become accustomed to is the first semester junior materials lab (MSE 307). This is often the first course in which students must write full, thorough lab reports independently. At the beginning of the school year, we held a tutorial session for students in MSE 307 so they could learn the basics of writing a lab report, including data analysis, lab report structure, general writing tips, and a list of things to do. This review session was greatly appreciated by students as it gave them an idea of what to include in lab reports before they had their first lab report due.



In October, Keramos sent several volunteers to help with Destination Technology, a program for bright and upcoming middle school students. We traveled to Peoria, Illinois and explained the concept and significance of water filtration and assisted students with making their own water filters. Additionally, Keramos helped Women in Math, Science, and Engineering with Introduce a Girl to Engineering Day. We talked with prospective high school girls and parents about materials science and engineering while presenting a nitinol spring demo. We demonstrated the shape memory alloy properties of nitinol and explained the phase transformations as well as the principles of fatigue.

The executive board has been working closely with the MatSE department in gathering feedback about courses and online testing, which has been introduced into a majority of the materials science & engineering curriculum. We have brainstormed methods to foster more communication between students and faculty by having students fill out an online form before general meetings and presenting the feedback to the department.

## Engineering Open House

An annual tradition at the University of Illinois at Urbana-Champaign is Engineering Open House, which occurs on two days in the middle of March to promote engineering and science to students throughout Illinois and the surrounding areas. Students of all ages come to the University of Illinois to learn and interact with the different demos that are hosted by the engineering societies, research groups, as well as several company exhibits. Exhibits are judged in several categories to determine which ones win awards.

Keramos hosted Oobleck and Candy Fiber Pull demos this year. Oobleck is a demo that we have done in the past that students enjoy, while the Candy Fiber Pull was a new demo based on the Materials Science Classroom Kit prepared by the President's Council of Student Advisors. We educated students about the Non-Newtonian properties of Oobleck, emphasizing shear thinning while discussing its practical applications. We let kids, students, and adults play around with the Oobleck so they could see first-hand how the rate of the shear force applied affects the flow of the Oobleck, which is composed of cornstarch and water. Our Oobleck demo won 3rd place in the 'Just for Fun Hands-On' EOH exhibit category. The Candy Fiber Pull was also a very successful demo that students enjoyed. We heated jolly ranchers in a beaker on a hot plate and pulled out the jolly rancher 'fibers' to explain how glass fibers are formed as well as some of their practical applications.



## Professional Development

Keramos held a resume review session at the end of August, where several upperclassmen volunteered to provide valuable feedback to underclassmen on how to improve their resumes in

preparation for the Fall Engineering Career Fairs at the University of Illinois. Underclassmen rotated between several upperclassmen to gain additional feedback and insight on how to improve their resumes. Obtaining multiple perspectives and feedback from several students who had experience from multiple career fairs was very beneficial for the attendees.



At the beginning of September, Keramos held an internship panel, where five upperclassmen discussed their internship experiences from the previous summer and gave advice to attendees about how to prepare for and succeed in an internship. The panelists also gave advice about the steps to obtaining an internship, whether it be through a career fair or applying online.



During recruiting season in the Fall, Keramos hosted several tech talks from companies looking to recruit Materials Science and Engineering majors. We had recruiters discuss about working at their respective companies while answering questions from students. In September, we hosted an

info session for General Electric and a tech talk for 3M, and in October, we hosted an info session for Steel Dynamics.

In November, we hosted an I-Link and LinkedIn tutorial session. I-Link is the University of Illinois system that students can use to search and apply for jobs and internships as well as schedule appointments to go over resumes and conduct mock interviews. We showed students how to use all the features of I-Link as well as how to setup a profile on LinkedIn to ensure professional success.

In February, we hosted a research panel where five different materials science and engineering students discussed about the research that they were currently conducting and why they thought it was beneficial. The panelists discussed how they obtained the research and general advice for asking professors to join their research groups.

Every month, Keramos co-hosts with the MatSE department a lunch with several professors in which students get to interact and ask questions to professors about classes, grad school, and general life choices. This allows an opportunity for undergraduate students to talk to Materials Science and Engineering professors outside of class in a much more relaxed setting.

## **Fundraising**

After successfully holding the first Ceramic Rose Fundraiser during Valentine's Day last year, we decided to host the fundraiser again this year. These roses never wilt! This year, we molded larger roses, used a variety of glazes, and experimental with rose petal vases. The fundraiser was a huge success, as we raised over \$240! We sold the roses to all students attending the University of Illinois at Urbana-Champaign, who really thought that the idea was unique. We are sure that they made someone's Valentine's Day special.



## Play with Clay

Play with Clay has been one of the most popular events for our chapter, as initiates need at least 4 hours of Play with Clay sessions to fulfill part of their initiation requirements. The executive board has strongly recommended to initiates that they work on a project two hours at a time, as this will allow them sufficient time to successfully finish a project. One new element that we explored was glass fusing. We were able to develop interesting projects using this method. Additionally, we have been using the new pottery wheel that we purchased last year to work on various projects while testing new slip recipes. An innovative measure that our heralds have looked into is adding “smart” capabilities to one of our kilns. With these added features, future heralds will be able to check temperatures and change firing cycles from anywhere in the world with an internet connection. This will reduce our turnaround time for projects. We also created a new crest that was recently used during the Spring 2017 Initiation ceremony.

As a chapter, we have spent significantly more time educating our members about the hazards of silica while promoting laboratory safety. To reinforce our safety culture, the heralds received qualitative respirator fit testing at the beginning of the year.



## Service

In the fall, several members at Keramos volunteered for I-Link, a national day of service that University of Illinois hosts to help clean up around campus and around the Champaign-Urbana community. Keramos was assigned to volunteering at the Champaign Fluids Event Center, where we helped to clean up around the resale store, set up equipment for an event they were hosting, and helped deliver food orders. It was a great experience giving back to the community and the people at the Champaign Fluids Event Center were very grateful for our service. In October, we volunteered at the sustainable student farms, helping with the cultivation and harvesting of crops. In November, we held a holiday food drive where we collected canned and nonperishable goods and donated them to the Eastern Illinois Food Bank.

## **Alumni Engagement**

Keramos has been very active this year in increasing alumni involvement within the Materials Science and Engineering community at the University of Illinois. One event that Keramos hosted earlier in the year was an alumni speed networking session, in which several alumni rotated between tables to talk about their MatSE experiences, job life, and grad school advice with both undergraduate and graduate materials science and engineering students. Our executive board has looked into creating an alumni mentorship program that would connect students to alumni who can answer their questions about MatSE classes as well as give advice to students searching for jobs and/or applying to grad school.

For the February and March general meetings, Keramos hosted several alumni speakers who gave advice and answered questions that students had about Materials Science and Engineering, jobs, college advice, and grad school. The two alumni speakers were Kyle Wilcoxon and Julia Benson. Students who attended these meetings enjoyed talking with alumni speakers and thought the advice they gave was extremely valuable. The alumni talks were hosted via google hangouts, with anyone in the audience having the ability to ask questions.



## **MS&T Convocation and Business Meeting**

The University of Illinois chapter sent twelve students to the 2016 Materials Science & Technology Conference (MS&T) in Salt Lake City, Utah. The attendees networked with students from other universities and participated in events such as annual chapter convocation and meetings, student speaking contest, mug drop, and the disc golf competition. The University of Illinois Keramos chapter was represented by Michael Hu, Dustin Reisberg, Devon Papanicolas, Elisabeth Lang, and Kyle McKillop. Our chapter received the Sapphire Chapter Award at the annual Keramos convocation. At the business meeting, our chapter discussed things that worked

well for us in the past as well as methods to improve participation in Keramos. The convocation was concluded by career speaker Lora Rothen of DuCO Ceramics, who gave great insight into her experiences as well as inspiring advice about ceramics engineering.

We prepared three mugs this year for the annual mug drop competition. Michael Hu and Devon Papanicolas prepared mugs for dropping and Elisabeth Lang prepared a mug for aesthetics. Michael and Devon won first [and second] place in the mug drop contest. Also prepared were four disc golf entries by Phil Kagebein, Elisabeth Lang, Sean O'Neill, and Dustin Reisberg. All four were made throwing and judged for aesthetics. The disc designed by Elisabeth Lang won the award for the most aesthetic disc. Additionally, Athena Lin represented the University of Illinois in the student speaking contest and did a fantastic job talking about carbon fiber research.





## Collaboration with Material Advantage and AIST

In previous years, the student population has had issues distinguishing Keramos from Material Advantage and thought that two separate general meetings for both student organizations were redundant. During the past year, Keramos has been hosting joint monthly general meetings with Material Advantage in efforts to increase overall participation in both clubs. This has worked out rather successfully and the plan is to continue joint general meetings for the next school year.

In a collaborative effort with Material Advantage, we held a freshman mentorship program. This was done to help make freshmen feel more comfortable within the MatSE community and to help give them advice about school and classes. Several events were held to encourage mentor-mentee participation in Keramos events, such as an ice cream social held in September. Mentors and their mentees received points if they both attended a Keramos and/or Material Advantage event. Many Keramos members, including the executive board, volunteered to be mentors.

At the beginning of September, Keramos co-hosted a barbeque with Material Advantage for all undergraduate students in Materials Science and Engineering at the University of Illinois. Almost fifty materials science students showed up to eat some delicious hot dogs, hamburgers, and sides while discussing the materials science life. There were also games including football, frisbee, and volleyball. As part of the mentorship program, mentors who attended with their mentees received points.



Additionally, the February General Meeting was sponsored by AIST, the Association for Iron & Steel Technology. We thoroughly enjoyed them sponsoring the meeting and the pizza! At the general meeting, we discussed about the steel to students program and encouraged members to apply for AIST scholarships and the T.C. Graham Prize for coming up with a new application for

steel. Pictured below are the students who participated in the February general meeting sponsored by AIST.



## Social

In September, Keramos took a trip to Curtis Apple Orchard with Material Advantage. We spent time picking apples, enjoying some delicious apple doughnuts and apple cider, and finding our way through a giant corn maze.

In October, Keramos Illinois partnered with Biomedical Engineering Society to host a Capture the Flag tournament. The competition was very intense and participants developed strong communication and teamwork skills.

At the beginning of February, Keramos hosted ice skating at the campus skating arena. There was a large turnout of students who thoroughly enjoyed showing off their skills and socializing with other MatSEs, Even those who were new to ice skating had plenty of fun.



Later in February, Keramos partnered with Material Advantage to form a team for Engineering Week, where all the engineering societies at the University of Illinois participate in competitions and games to see which society can win the most points. Our team finished in second place in broomball.

Throughout the year, Keramos held MatSE happy hour on Fridays, where students could meet other MatSEs and enjoy discounted appetizers and age-appropriate drinks while socializing about courses and other things occurring on campus. Keramos partnered with Material Advantage to continue a tradition of a Fall and Spring Tour of Establishments, in which members of both societies visited campustown establishments. We hosted t-shirt contests during the Fall and Spring and had a prize for the person that developed the best t-shirt design.

### **Interchapter Communications**

Several of the events hosted this year by Keramos Illinois were inspired by other chapters that we met at the annual Convocation and Business Meeting or through monthly Keramos Teleconferences. We would like to thank everyone for their support and excellent ideas.

## Keragram

The Keramos chapter at the University of Illinois at Urbana-Champaign has continued to thrive the past year. We have had an increased focus on professional development, generating feedback between the student body and faculty, as well as increasing underclassmen participation in events. As a result, our chapter has continued to display significant growth, with about 40 new members initiated during the past academic year. With a new streamlined board, collaboration for events within the Materials Science and Engineering department has become much more efficient.

This had definitely been an award-winning year for our Keramos chapter. At the convocation, our chapter was presented with the Sapphire Chapter Award for strong performance. During the annual Materials Science and Technology Conference, we placed both first and second in the mug drop contest while one of our entries for the disc golf contest won the award for most aesthetic disc. Additionally, our Engineering Open House exhibit, Oobleck, won third place in the “Just for Fun Hands-on” category.



This past year, we hosted many events to prepare students for engineering career fairs, such as resume review sessions, company info sessions, and speed networking with alumni. Play with clay sessions and professor luncheons have continued to be popular among Materials Science and Engineering students. At play with clay sessions, we have explored glass forming techniques and extensively utilized our new pottery wheel.

We plan on expanding our array of professional events as well as undergraduate recruitment for next year. Our chapter has looked into companies and on-campus facilities that could sponsor an etiquette dinner. We believe the University of Illinois Keramos chapter will continue to display strong growth in the coming years.