



KAS Newsletter

Kentucky Academy of Science

Fostering Scientific Discovery and Understanding in Kentucky

Winter, 2018

THINGS GOING ON WITH KAS

Join a KAS Committee

Are you looking for a way to get a little more involved with the KAS community of scientists? Help us advance our mission by joining a committee!

Membership Committee. The committee shall periodically review and update, if necessary, criteria and procedures for membership and provide leadership in devising and implementing recruitment activities. It shall be the goal of the Committee to increase membership through active programs of outreach to non-members.

Public Engagement Committee. The committee shall develop communications plans that include engaging the public in the work of the Academy and increasing the presence of the Academy with stakeholders and citizens in Kentucky.

Annual Meetings Committee. The President Elect shall serve as Chair of the Annual Meetings committee. The Program Coordinator shall serve as Vice-Chair. Other members shall be the Local Arrangements Chair, Junior Academy Director, Executive Director. This Committee shall be responsible for the programs of the Annual Meeting and for the Junior Academy.

Internal Communications Committee. The Internal Communications Committee shall develop mechanisms to publicize Academy events, including annual and special meetings of the Academy and the spring symposium of Junior Academy.

Grants and Awards Committee. The committee shall be responsible for overseeing all awards. The committee shall be responsible for recommending new award categories or eliminating existing grants and awards. The committee shall be responsible for evaluating research proposals and distributing funds and shall have accountability in the use of research funds.



KAS Seeking New Newsletter Editor

We are very grateful to Crystal Simons for her service as our Newsletter Editor throughout the past year.

Crystal is moving on, and we're on the lookout for someone new to help us assemble our newsletter 3x per year. No artistic talent or graphic design software needed – we have a module in our Memberleap database system that will help us assemble & send news to members.

KAS Newsletters come out in January, May and September.

Interested in helping? Email executivedirector@kyscience.org

Call for Summer Undergraduate Research (REU) Announcements

Are you hosting Research Experiences for Undergraduates (REU's) or other research students this summer? KAS compiles listings of Kentucky opportunities for Summer Research for Undergraduates at our website.

Please send your announcement with URL and closing date to executivedirector@kyscience.org

Then check our listings, at www.kyscience.org, under "Membership"

Kentucky Junior Academy of Science April 28

The Kentucky Junior Academy of Science meeting will be held Saturday April 28 at Kentucky State University. The Junior Academy meeting is open to any middle or high school student in Kentucky who would like to present their research.

Registration is only \$5. Participants make 10 minute PowerPoint presentations and answer questions from judges. Participants are also required to submit a research paper. Participants must submit an abstract and research paper by the registration deadline of March 20.

More details at https://www.kyscience.org/kentucky_junior_academy_of_sci.php



Pictured above is the KJAS 2017 participants

Check KAS for Job & Volunteer Opportunities

We keep listings of current science job openings and volunteer opportunities around Kentucky & the region. Check our website for postings and share YOUR job or volunteer posting with us so we can share it with your fellow members. Job and volunteer listings are at www.kyscience.org, under “Membership”



Posters at the Capitol Thursday February 8

(link is <http://www.murraystate.edu/headermenu/administration/Provost/orca/events/posters-at-capitol.aspx>)

The program runs from 9:00 a.m. until 3:00 p.m., with special remarks in the Capitol Building Rotunda at 10:45 a.m. Undergraduates from all our public institutions will be displaying posters to showcase for legislators the breadth and quality of undergraduate research happening all over Kentucky.

Upcoming Volunteer Opportunities

Professional members, we need judges for the Junior Academy of Science meeting
April 28 at Kentucky State University in Frankfort
(https://www.kyscience.org/kentucky_junior_academy_of_sci.php)

And, consider volunteering as a judge at a science fair near you—

Northern KY Regional at NKU is Feb 24
(<https://sefnk.org/>)

Central KY at UK is March 24
ckrsef@gmail.com

Louisville Regional Science & Engineering Fair is March 3 (www.lrsef.org)

DuPont Manual Science Fair (Louisville) is March 10
<https://dupontmanual.stemwizard.com/>

Kentucky Science & Engineering Fair is March 24 at ECU
(<http://kysciencefair.org/>)

Volunteering for the Kentucky Science Center

Engineers week - February 23-24

present an activity or demonstration relating to Engineering, or volunteer to help with an existing activity (students welcome! And recall that Engineering is interpreted very broadly)

Brain Days- March 16-17, 2018

-present an activity or demonstration relating to Brains, or volunteer to help with an existing activity (students welcome!)



Upcoming Events

March 16th and 17th – Brain Days at the Kentucky Science Center



April 13th – Neuroscience Day at the University of Louisville

Outreach & Education efforts to Improve Science Literacy in Kentucky

On March 16th and 17th, the Kentucky Science Center will be hosting Brain Days.

Attendees have the opportunity to meet real scientists and clinicians, and visit more than 20 interactive stations scattered throughout the three floors of the Kentucky Science Center, including:

- Comparative neuroanatomy - see real brains from humans, sheep, mice, rats, fruit flies and worms.
- Brains of our ancestors – see casts representing different stages of human evolution.
- Histology of the brain and spinal cord using microscopes.
- Dimensions of neuroscience - size comparisons in humans and other animals.
- Action potentials – the electrical signals that your nerve cells use to communicate.
- The tools of the trade: the novel technologies used to study neuroscience.
- Brain surgery and deep brain stimulation.
- Diseases and disorders of the nervous system, including spinal cord injury and traumatic brain injury, and the exciting research being done here at the University of Louisville to treat these conditions.
- Illusions, and weird ways to hack your nervous system.
- The importance of wearing helmets to protect your brain at the Bicycle Rodeo.
- For the younger crowd, there were opportunities to color brains and neurons, make a brain hat, and Build-a-Neuron out of Styrofoam balls, pipe cleaners, and beads.

This event is organized by members of the Kentucky Academy of Science, the Louisville Chapter of the Society for Neuroscience, and the Kentucky Science Center. At this time we are inviting other members of KAS to volunteer in one of our stations, or to create new ones.

Past participants have included members from non-neuroscience fields who have developed a neuroscience-related demonstration (e.g. UofL Anthropology department demonstration of changes in the brain sizes of our ancestors using skull casts). For more information, or to volunteer for this event, please contact Kris Rau: kris.rau@louisville.edu

Sigma Xi Grants-in-Aid of Research (GIAR) Program

Undergraduate and graduate students are invited to apply for this research funding. The deadline to submit applications for the spring 2018 grant cycle is March 15, 2018 at 11:59 pm Pacific Time.

Applications are being accepted in the following disciplines:

Anthropology
Behavioral Ecology
Cell Biology and Biochemistry
Chemistry
Climate Science (NEW)
Computer Science and Mathematics
Conservation Biology
Ecology
Engineering
Hydrology and Geomorphology
Paleontology and Sedimentation
Petrology and Geochemistry
Physics and Astronomy
Physiology and Functional Morphology
Psychology
Systematics and Evolutionary Biology
Tectonics and Geophysics

Watch a recording of Sigma Xi's Google Hangout, "How to Submit Your Best Grant Application," to learn about the Grants-in-Aid of Research application review process.

If you have any questions, please contact us by sending an email to giar@sigmaxi.org.



SciLine Launched Fall 2017

This fall saw the launch of “SciLine,” a new, philanthropically funded, editorially independent service for journalists, hosted by the American Association for the Advancement of Science. SciLine connects journalists working on science-related stories with experts who can articulately explain science-related findings in the news and provide evidence-based context.

For journalists, SciLine is a one-stop shop to reach the scientific expertise they need on deadline, along with other reporting tools the startup service is developing. For scientists, it's an opportunity to help ensure that advances in their field are accurately reflected in the news, to the public, and for decision makers. Academy members can help this effort by providing the SciLine team with names, contact information, and area of expertise for scientists who, in your opinion, share the twin qualities of being both expert in their domain and excellent, articulate communicators.

SciLine will reach out to these potential scientistcommunicators to assess their interest in being included in the database of experts to whom SciLine refers inquiring journalists.

SciLine is being led by Rick Weiss, who has more than three decades of experience in journalism and strategic communications, including 15 years as a science reporter at the Washington Post. Learn more at www.sciline.org or email the team at sciline@aaas.org.

Annual Meeting Photos



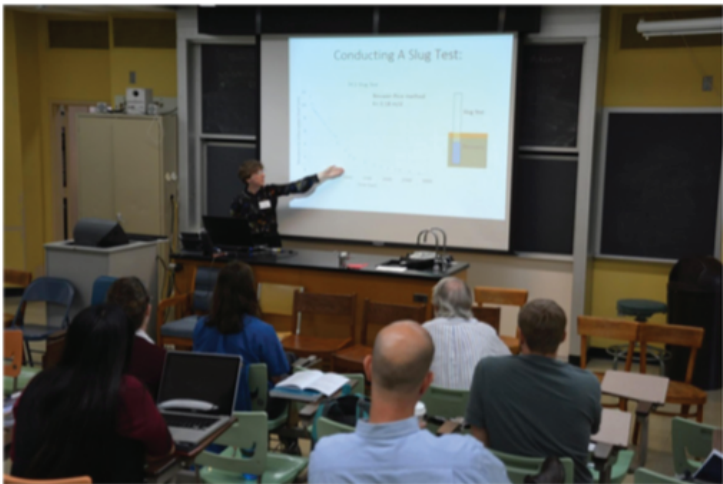
Social media photo contest winner



Keynote Jeffrey Bennett



Exhibitors joined us from all over the Commonwealth



148 presenters gave talks about their research



188 presenters gave poster presentations about their research

See dozens more photos from the 2017 KAS Annual Meeting in Murray :
https://www.kyscience.org/kas_annual_meeting.php

2018 KAS Affiliates

Enhanced Affiliates- Complimentary Membership for faculty, staff, and students:

- Alice Lloyd College
- Asbury University
- Bellarmino University
- Berea College
- Brescia University
- Campbellsville University
- Centre College
- Eastern Kentucky University
- Georgetown College
- Kentucky Community and Technical College System
- Kentucky State University
- Midway University
- Morehead State University
- Murray State University
- Northern Kentucky University

- Spalding University
- Thomas More College
- Transylvania University
- University of Kentucky
- University of Louisville
- University of Pikeville

Regular Affiliates

- Lumins Associates
- Lindsey Wilson College
- Kentucky Wesleyan College
- University of the Cumberlands
- Wood Hudson Cancer Research Laboratory

2018 Annual Meeting Competition Winners

c= co-presenters

Section	Category	Place	Last name	First Name	Affiliation
Agriculture	Undergraduate poster	1	Fulkerson	Spencer	Murray State
Agriculture	Undergraduate poster	2	Franklin	Harry	Murray State
Agriculture	Undergraduate poster	3	Hagan	Kelly	Asbury University
Agriculture	Undergraduate oral	1	Kessler	Samuel	Gatton Academy /WKU
Agriculture	Undergraduate oral	2	Cook	Emily	Murray State
Agriculture	Undergraduate oral	3	Barnett	Audrey	WKU
Agriculture	Graduate oral	1	<u>Thapa Magar</u>	<u>Srijana</u>	KSU
Agriculture	Graduate oral	2	Mason	Thomas	KSU
Agriculture	Graduate oral	3	<u>Govindasamy</u>	<u>Sathya</u>	KSU
Anthropology and Sociology	Graduate oral	1	Cox	Mallory	U of L
Anthropology and Sociology	Graduate oral	2	Gibson	Mason	WKU
Botany	Undergraduate poster	1	Horton	Taylor	Murray State
Botany	Undergraduate poster	2	<u>Heitzman</u>	Nellie	Transylvania University
Cellular & Molecular Biology	Undergraduate poster	1	<u>Ammerman</u>	Samuel	NKU
Cellular &	Undergraduate	2	<u>Bahnsen</u>	Morgan	KBRIN
Molecular Biology	poster				
Cellular & Molecular Biology	Undergraduate poster	3	Thomas	Maggie	NKU
Cellular & Molecular Biology	Undergraduate oral	1	Hawkins	Brittani	Murray State
Cellular & Molecular Biology	Undergraduate oral	2	<u>Szalanczy</u>	Alexandria	Centre College
Cellular & Molecular Biology	Undergraduate oral	3	<u>Pullum</u>	<u>Keelee</u>	Gatton Academy /WKU
Cellular & Molecular Biology	Graduate oral	1	<u>Hammrich</u>	Dylan	Murray State
Cellular & Molecular Biology	Graduate oral	2	<u>Aromiwura</u>	<u>Afolasayo</u>	WKU
Cellular & Molecular Biology	Graduate oral	3	Hoard	Tyler	Murray State

Chemistry: Analytical/Physical	Undergraduate poster	1	<u>Bracker</u>	Rachel	EKU
Chemistry: Analytical/Physical	Undergraduate poster	2	States	Nicole	Murray State
Chemistry: Analytical/Physical	Undergraduate poster	3	Flores	Tomas	Berea College
Chemistry: Analytical/Physical	Undergraduate oral	1	Lamb	Ryan	WKU
Chemistry: Analytical/Physical	Undergraduate oral	2	<u>Krempel</u>	Mara	WKU
Chemistry: Analytical/Physical	Undergraduate oral	3	Steward	Kayla	WKU
Chemistry: Analytical/Physical	Graduate oral	1	<u>Calabro</u>	Rosemary	UK
Chemistry: Analytical/Physical	Graduate oral	2	Jones	Konnor	WKU
Chemistry: Analytical/Physical	Graduate oral	3	<u>Berlanga</u>	Jesus Alejandro	WKU
Chemistry Organic / Inorganic	Undergraduate poster	1	<u>Kash</u>	Benjamin	WKU
Chemistry Organic / Inorganic	Undergraduate poster	2	Redden	Alexandra	Murray State
Chemistry Organic / Inorganic	Undergraduate poster	3	Millard	Lydia	KSU
Chemistry Organic / Inorganic	Undergraduate oral	1	<u>Nanney</u>	Jacob	Kentucky Wesleyan College
Chemistry Organic / Inorganic	Graduate oral	1	Gao	<u>Hongyan</u>	WKU
Chemistry Organic / Inorganic	Graduate oral	2	Malone	Jonathan	WKU

Computer & Information Sciences	Undergraduate poster	1	Sexton	Russell	Bellarmino University
Computer & Information Sciences	Undergraduate oral	1	<u>Rataiczak</u>	Devin	Bellarmino University
Computer & Information Sciences	Undergraduate oral	2	<u>Inocencio</u>	Harrison	UK
Ecology & Environmental Science	Undergraduate poster	1	Lawson	Jacob	U of L
Ecology & Environmental Science	Undergraduate poster	2	Pease	Jacob	Murray State
Ecology & Environmental Science	Undergraduate poster	3	Thompson	Keegan	U of L

Ecology & Environmental Science	Graduate oral	1	Maurya	Abhinav Kumar	U of L
Ecology & Environmental Science	Graduate oral	2	Freundlich	Grace	U of L
Ecology & Environmental Science	Graduate oral	3 (tie)	Kelly	Kaitlyn	EKU
Ecology & Environmental Science	Graduate oral	3 (tie)	Thomas	Samantha	WKU
Engineering	Undergraduate poster	1	Stoffel	Tyler	UK
Engineering	Undergraduate poster	2	Acharya	Madankrishna	KSU
Engineering	Undergraduate poster	3	Davis	Chance	Berea College
Engineering	Undergraduate oral	1	Gongora	Cavir	Murray State
Engineering	Undergraduate oral	2	Yee	Andrew	Murray State
Engineering	Undergraduate oral	3 (tie)	Ramkorun	Bhavesh	Berea College
Engineering	Undergraduate oral	3 (tie)	Garcia	Jordan	UK
Geography	Undergraduate poster	1	Hancock	Kenneth	Murray State
Geography	Undergraduate oral	1	Garrison	D'Andre	KSU
Geography	Undergraduate oral	2	Farrow	Tori	KSU
Geography	Undergraduate oral	3	Fox	Jason	WKU
Geography	Graduate oral	1	Shelley	James	WKU
Geography	Graduate oral	2	Sariyildiz	Oguz	KSU
Geology	Undergraduate poster	1	Karnes	Molly	Murray State
Geology	Undergraduate poster	2	Gerzan	Mallory	Murray State
Geology	Undergraduate poster	3 (co)	Olson	Roger	NKU
Geology	Undergraduate poster	3 (co)	Roenker	Ben	NKU
Geology	Undergraduate oral	1	Stribling	Selsey	EKU
Geology	Undergraduate oral	2	Bell	Addison	EKU
Geology	Undergraduate oral	3	Kelley	Laura	EKU
Geology	Graduate oral	1	Roberson	Randal	Murray State

Health Sciences	Undergraduate poster	1	Upton	Danielle	UPIKE
Health Sciences	Undergraduate poster	2	Arlinghaus	Kandis	KBRIN
Health Sciences	Undergraduate poster	3	Mason	Donniesa	NKU
Mathematics	Undergraduate oral	1	Gabhart	Austin	Gatton Academy /WKU
Microbiology	Undergraduate poster	1	Mabbubani	Rachel	U of L
Microbiology	Undergraduate poster	2	Siriano	Mark	Transylvania University
Microbiology	Undergraduate poster	3	Ford	Easton	U of L
Microbiology	Undergraduate	1	Goodrich	Sarah	NKU

Physics & Astronomy	Undergraduate poster	1	Banaszak	Alexander	WKU
Physics & Astronomy	Undergraduate poster	2	Adamick	John	NKU
Physics & Astronomy	Undergraduate poster	3	Henson	Alex	WKU
Physics & Astronomy	Undergraduate oral	1	Hauck	Sierra	Morehead State
Physics & Astronomy	Undergraduate oral	2	Kring	Carter	NKU
Physics & Astronomy	Undergraduate oral	3	Olivera Velarde	Daniela	Berea College
Physiology & Biochemistry	Undergraduate poster	1 (co)	Patty	Blaine	WKU
Physiology & Biochemistry	Undergraduate poster	1 (co)	Millay	Matthew	WKU
Physiology & Biochemistry	Undergraduate poster	2	Somasundaram	Eashwar	UK
Physiology & Biochemistry	Undergraduate poster	3	Altman	Emily	Georgetown College
Physiology & Biochemistry	Undergraduate oral	1	Damen	Kyle	Wood Hudson Cancer Research Laboratory
Physiology & Biochemistry	Undergraduate oral	2	Mamaril	Justen	NKU
Physiology & Biochemistry	Undergraduate oral	3	Stelzer	Dan	Wood Hudson Cancer Research Laboratory

Psychology	Undergraduate poster	1	Taulbee	Caitlin	Berea College
Psychology	Undergraduate poster	2	Ward	Brianna	Morehead State
Psychology	Undergraduate poster	3	Bedolla	Alicia	Berea College
Psychology	Undergraduate oral	1	Clark	Aaron	Berea College
Psychology	Undergraduate oral	2 (co)	Hopkins	Laura	Centre College
Psychology	Undergraduate oral	2 (co)	Stumpp	Nicole	Centre College
Psychology	Graduate oral	1	Gatewood	Hunter	Morehead State
Psychology	Graduate oral	2	Reese	Joseph	Morehead State
Psychology	Graduate oral	3	Cole	Karina	Morehead State
Science Education	Undergraduate poster	1	Valdes	Miguel	Berea College

Science Education	Undergraduate poster	2	Collett	Lucas	Berea College
Science Education	Undergraduate oral	1	Erskine	Joseph	Bellarmino University
Science Education	Graduate oral	1	Ray King	Katherine	U of L
Zoology	Undergraduate poster	1	Cappel	Katherine	Campbellsville University
Zoology	Undergraduate poster	2	Garman	Talon	Murray State
Zoology	Undergraduate poster	3	Stanback	Maddie	UK
Zoology	Undergraduate oral	1	Peng	Chi	Berea College
Zoology	Graduate oral	1	Laslie	Kathryn	WKU
Zoology	Graduate oral	2	Scalf	Cassandra	WKU

ANNOUNCEMENTS

KAS Centennial Monument Settles into its Permanent Home

In 2014, KAS commemorated our 100th year with a monument – and now it’s finally in place in the courtyard of the University of Kentucky’s Jacobs Science Building.

The Kentucky Academy of Science was founded at State University (now University of Kentucky) in 1914. It started with just a few dozen men and they’d probably be impressed to know that we have nearly 4000 member scientists today.

There are some other surprising and entertaining stories about the history of KAS- read more here:

<https://www.kyscience.org/history.php>



Placement of Monument at UK



Centennial monument being housed at UK in 2014: Amanda Fuller, Don Frazier, Eric Jerde, KC Russell

2017 Annual Meeting

Murray State University was a fantastic host for our 2017 Annual meeting. If you didn’t join us, you missed a very popular poster session Friday night, a great keynote from Dr. Jeffrey Bennett on science communication, a bowling party, and hundreds of presentations from Kentucky researchers. Photos, competition winners, abstracts, and the full onl program are at our website https://www.kyscience.org/kas_annual_meeting.php



STEM Volunteers in K-12 Classrooms

Have you ever thought about sharing your enthusiasm for science with teachers or students in K12 classrooms? Some of the requests that come to our Science Speakers Bureau come from classroom teachers, and KAS can do a lot to build science teachers’ confidence and skills.

Washington DC has one of the best examples of a program sending scientists into K12 classrooms- Scientists help teachers and students in a variety of ways, according to what the teacher wants & needs. Read more & watch a video here:

<https://www.aaas.org/senior-scientists-and-engineers/programs-dc>

In Seattle, Fred Hutchinson Cancer Research Center’s Science Education Partnership puts middle and high school teachers through a “science boot camp,” provides them with kits for their classrooms, and matches them with a scientist with an ongoing research project:

<https://www.fredhutch.org/en/news/center-news/2017/07/-science-education-partnership-student-scientist-mentor.html>

If you’d like to visit a classroom near you, or if you’re interested in mentoring a K12 science teacher, get in touch: executivedirector@kyscience.org



2017 Annual Meeting Sponsors

KAS thanks the following sponsors for their support:



Platinum level sponsor: ASRC Michelin

Break Sponsors: Hancock Biological Station
Sullivan University

Silver level sponsors: ECM Biosciences
EKU College of Science

In-Kind sponsor: Kentucky Science Center



Kentucky Academy of Science

Submit your research to the
Journal of the Kentucky Academy of Science

- * Perfect publication venue for locally- and regionally-based research.
- * Theme issues encouraged.
- * Available in print and electronic form.
- * Articles are archived and searchable.
- * New co-Editors (Kelly Watson and Walter Borowski) strive for thorough review and rapid publication.

For more information, see the webpage:
https://www.kyscience.org/about_our_publications.php



Kelly Watson



Walter Borowski

2018 Governing Board

First Name	Last Name	Email	Association (e.g. institution/employer)	Board Position
Jennifer	Birriel	j.birriel@moreheadstate.edu	Morehead State University	President
Leslie	North	leslie.north@wku.edu	Western Kentucky University	President-Elect
Frank	Ettensohn	fettens@uky.edu	University of Kentucky	Vice President
Darrin	Smith	darrin.smith@eku.edu	Eastern Kentucky University	Past President
Rodney	King	rodney.king@wku.edu	Western Kentucky University	Treasurer
Amanda	Fuller	executivedirector@kyscience.org	Kentucky Academy of Science	Executive Director
Bruce	Griffis	bruce.griffis@kysu.edu	Kentucky State University	Junior Academy Co-chair
Ruth	Beattie	rebeat1@email.uky.edu	University of Kentucky	Junior Academy Co-chair
Crystal	Simons	csimons@bellarmine.edu	Bellarmino University	Newsletter Editor
Melony	Stambaugh	melonystambaugh11@gmail.com	Kentucky Community and Technical College System	Program Coordinator
Claire	Rinehart	claire.rinehart@wku.edu	Western Kentucky University	Webpage Editor
Nancy	Martin	nancymartin@louisville.edu	University of Louisville	Research Grants Chair
Maggie	Whitson	whitsonma@nku.edu	Northern Kentucky University	Biological Sciences Representative
Melanie	Hardin-Pierce	mhpier00@uky.edu	University of Kentucky	Biological Sciences Representative
Trenede	Garrison	garrisont2@nku.edu	Northern Kentucky University	Physical Sciences Representative
Richard	Gelderman	richard.gelderman@wku.edu	Western Kentucky University	Physical Sciences Representative
Kerrie	McDaniel	kerrie.mcdaniel@wku.edu	Western Kentucky University	Social & Behavioral Sciences Representative
Dirk	Grupe	d.grupe@moreheadstate.edu	Morehead State University	At Large Representative
Tracy	Hodge	hodget@berea.edu	Berea College	At Large Representative

Thank You ! See You Next Issue!