

**27th Annual
Kansas City**

**MATHEMATICS
TECHNOLOGY
EXPO**

*Friday & Saturday
October 6 – 7, 2017*

**PRELIMINARY PROGRAM
& REGISTRATION**

www.kcmathtechexpo.org

**27th Annual
Kansas City
Mathematics Technology EXPO**

**3rd floor Haag Hall, University of Missouri – Kansas City,
Kansas City, MO**

Friday & Saturday, October 6 – 7, 2017

*We thank Johnson County Community College for
funding the paper and printing of mailings and handouts.*

FRIDAY, October 6, 2017

EXPO Registration: Friday, 8:00 am – 2:00 pm

Complimentary continental breakfast 3rd floor Haag Hall registration area

SESSION 1: Introductions and Keynote Speaker

Friday, 8:30 am – 9:50 am

Does technology actually aid explanation?

Grant Sanderson

3blue1brown.com and Khan Academy

SESSION 2: *Friday, 10:00 a.m. – 10:45 a.m.*

2A. *A Beginner's Guide to Using R in the Probability & Statistics Classroom*

Brian Hollenbeck, Emporia State University, Emporia, KS

***Participants are encouraged to bring their own laptops and play in the RStudio environment themselves. It will be beneficial to download R and RStudio in advance.*

2B. *Using Photography and GeoGebra to Facilitate the Teaching of Mathematics*

Nora Strasser, Friends University, Wichita, KS

2C. *Teaching Mathematics with Technology through Lecture and Student Activities*

Kimberly Kinder, Missouri University of Science and Technology, Rolla, MO

2D. *Using Overleaf to Build Students' Proof Writing Skills*

Chad Wiley, Emporia State University, Emporia, KS

SESSION 3: *Friday, 10:45 a.m. – 11:30 a.m.*

Exhibitors: This time is provided especially for EXPO participants to visit the Exhibitors and the MAA book sale in the 2nd and 3rd floor lobbies of Haag Hall. The Exhibitors Area will also be open at other times during the EXPO.

SESSION 4: *Friday, 11:30 am – 12:15 pm*

4A. *Rare and Historical Mathematics Books at Linda Hall Library*

Benjamin Gross & Cindy Rogers, Linda Hall Library

This is a hands-on special viewing of the books at Linda Hall Library arranged for the EXPO. It is not a tour. Participants may go anytime 11:30 – 12:15. (Will repeat at 3:30 Friday)

4B. *Lightning Talks (5 – 7 minutes each)*

- ***Plickers – Collecting Instantaneous Assessment Data in the Classroom with Only One Mobile Device***

Kristi Karber, University of Central Oklahoma, Edmond, OK

- *And more....*

4C. *Exploring Mathematics in Virtual Reality*

Tom Mahoney, Emporia State University, Emporia, KS

4D. *The Right Software for Your Data Analysis*

Steve Klassen, Missouri Western State University, Saint Joseph, MO

4E. *Engaging Online Students Through Technology*

Glenn Rice, Missouri Western State University, St. Joseph, MO

LUNCH: *Friday, 12:15 pm – 1:30 pm*

Swinney Gym North Lobby

SESSION 5: *Friday, 1:30 pm – 2:15 pm*

5A. *Which One Doesn't Belong? and Other Ambiguous Math Questions*

Christopher Danielson, Normandale Community College,
Bloomington, MN, and Desmos

5B. *Teaching a Course on Mathematics in Computer Graphics using Ray-Tracing Software*

Cynthia Huffman, Pittsburg State University, Pittsburg, KS

5C/6C. WORKSHOP: *Down and Dirty with Bayesian Statistics and Python (1:30 pm – 3:15 pm)*

Gavin Waters, Missouri Western State University, St. Joseph, MO

**Please install Anaconda 64 bit python 3+ on your laptop if you want to play along.

5D. *Soaring Through Developmental Math Using Hawkes Learning and Peer Tutoring*

Shawnda Bradshaw and Haleigh Collier, College of the Ozarks, Point Lookout, MO

SESSION 6: *Friday, 2:30 pm – 3:15 pm*

6A. *Using Innovative Online Teaching Resources to Enhance Inquiry-based Mathematics Lessons*

Steve Obenhaus & Carrie La Voy, University of Kansas, Lawrence, KS

6B. *Desmos: Advanced Tips & Tricks*

Tom Mahoney, Emporia State University, Emporia, KS

**Participants are encouraged to bring a laptop or tablet.

6D. *Resources to Help You Gamify Your Math Class*

Heather Miller and Erica Hart, EverFi

POST-SESSION: *Friday, 3:30 pm*

PS A. *Rare and Historical Mathematics Books at Linda Hall Library*

Benjamin Gross & Cindy Rogers, Linda Hall Library

This is a hands-on viewing of the books, not a tour. Participants may go anytime 3:30 – 5:00. (This is a repeat of session 4A.)

PS B. *MAA-MO Project Next Fall Meeting*

Samuel Chamberlin, Park University,
& Azadeh Rafizadeh, William Jewell College

PS C. *KAMATYC Meeting*

(Interested KAMATYC and MOMATYC participants will go to supper together after the meetings.)

PS D. *MOMATYC Meeting*

(Interested MOMATYC and KAMATYC participants will go to supper together after the meetings.)

SATURDAY, October 7, 2017

EXPO Registration: *Saturday, 8:00 am – 11:00 am*

Complimentary continental breakfast 3rd floor Haag Hall registration area.

SESSION 7: Invited Speaker

Saturday, 8:30 am – 9:50 am

The New Basics: Arithmetic and Algebra with 21st Century Tools

Christopher Danielson

Normandale Community College, Bloomington, MN,
and Desmos

SESSION 8: *Saturday, 10:00 am – 10:45 am*

8A. Useful tools in making a class more visual

Grant Sanderson, 3blue1brown.com and Khan Academy

**Participants are encouraged to bring laptops.

8B. *Getting Familiar with Open Educational Resources (OER) in Mathematics*

Scott Curtis, University of Missouri - Kansas City, Miller Nichols Library, Kansas City, MO

SESSION 9: *Saturday, 11:00 am – 11:45 am*

9A. *Eliminate Video Post-Production with Open Broadcaster Software*

Tom Mahoney, Emporia State University, Emporia, KS

**Participants are encouraged to bring their laptops. Open

Broadcaster Software may be downloaded from obsproject.org.

9B. *Teaching Math Through the Digital Collections, On-line Catalogues, and Search Engines of Fine Arts Museums*

Natasha Rozhkovskaya, Kansas State University, Manhattan, KS

9C. *Using (Free) Web Tools to Engage the Flipped Classroom and Online Learning*

Chris Imm, Johnson County Community College, Overland Park, KS

LUNCH and Brainstorming: *Saturday, 11:45 am – 1:00 pm*

Swinney Gym North Lobby

Discussion Topic: Does Technology Actually Aid Presentation?

The EXPO 2017 Group

Chad Wiley (EXPO Chair 2017), Emporia State University,
Emporia, KS

Pam Cox (Presiders, Mailing List), Paragould High School,
Paragould, AR

Richard Delaware (Financial Secretary and Site Coordinator;
EXPO Chair 1993 – 1994), University of Missouri – Kansas City,
Kansas City, MO

Lisa Erickson (Publications), MidAmerica Nazarene University,
Olathe, KS

David Ewing (Special Speaker Contact), University of Central Missouri,
Warrensburg, MO

Rob Grondahl (Webmaster and Registration), Johnson County
Community College, Overland Park, KS

Nick Haverhals (Exhibitors), Avila University,
Kansas City, MO

Mark Hunter (Social Media and Publications), McPherson College,
McPherson, KS

Tom Mahoney (Recording Secretary, Local Transportation),
Emporia State University, Emporia, KS

Nora Strasser (Mailing List), Friends University,
Wichita, KS

Ian Young (Mailing List), Grandview High School,
Grandview, MO

An advance registration form is on the back page of this booklet.

Location and Parking – VERY IMPORTANT!

- Neighborhood parking is limited, due to neighborhood covenants.
- Parking is free on the UMKC campus on **Saturday**.
- There is **no free parking** at UMKC on **Friday** without a hangtag. A free parking hangtag will allow you to park in any lot. The hangtag will be mailed to you if you register by Wednesday, September 27, 2017. If you do not need it, help keep the EXPO costs down by indicating this when you register.

Direct Elevated Walkway to Haag Hall (site of the EXPO) from the Parking Garage: On the 3rd floor of the parking structure just south of Haag Hall there is a direct walkway crossing over to the 3rd floor of Haag Hall.

Lunch Buffets on both Friday and Saturday are included with your EXPO advance registration.

Advance registrations are due by Wednesday, September 27, 2017.

- Advance registration fee: \$85.00
- Registration fee at the EXPO: \$90.00
- College student registration fee: \$25.00

The advance registration fee includes two buffet lunches, two continental breakfasts, and free parking on both Friday and Saturday. A parking hangtag for Friday will be mailed.

Rare and Historical Mathematics Books at Linda Hall Library

There are two separate opportunities for hands-on viewing of over a dozen books. Examples: the 1482 first printed copy of Euclid's *Elements*, the 1696 first calculus textbook of L'Hôpital, books by Newton, Agnesi, Galileo, and more. The books displayed vary each year, but a few classics will always be present.

Textbook, Hardware, and Software Exhibitors, and the MAA book sale

2nd and 3rd floor lobbies of Haag Hall on Friday, 8:00 am – 2:45 pm and Saturday, 8:00 am – 11:45 am. Not all exhibitors will be present on Saturday. EXPO exhibitor contact:

Nick Haverhals, nicolas.haverhals@avila.edu.

Registration at the EXPO is on the 3rd floor of Haag Hall

For further information about the EXPO, contact **Chad Wiley**, 2017 Math EXPO Chair, cwiley1@emporia.edu.

For specific questions about registration, contact **Rob Grondahl**, rgrondahl@jccc.edu.

View a video of our EXPO home at UMKC. Point your browser to www.kcmathtechexpo.org, hover over “Location and Parking,” and choose “Site Video tour”.

Housing Information – Don’t delay! See the EXPO web site, www.kcmathtechexpo.org, and click on “Hotel Information”.

A complimentary continental breakfast will be available in the Haag Hall 3rd floor lobby registration area both Friday and Saturday mornings.

Door prizes will be awarded following both the Keynote Speaker and the Invited Speaker talks.

Extra copies of handouts from talks are placed in the lobby area of 3rd floor Haag Hall.

Need a shuttle from the KCI airport? See <http://www.flykci.com/getting-to-from/ground-transportation/shuttle-services/>.

Interested in other events or activities in Kansas City after hours? See <https://www.visitkc.com/visitors/events>, and in particular, Crossroads Arts District First Fridays, at <http://kccrossroads.org/first-fridays/>.

MATHEMATICS TECHNOLOGY EXPO 2017
Registration Information

Advance registration fee: **\$85.00**
Registration fee at the EXPO: **\$90.00**
College student registration fee: **\$25.00**

Each advance registration fee includes two buffet lunches, two continental breakfasts, and free parking on both Friday and Saturday.

Advance registrations are due by **Wednesday, September 27, 2017**.

Either:

- (1) **MAIL** the registration form to: Rob Grondahl, Johnson County Community College, Overland Park, KS 66210, **or**
 - (2) **Register online** at: www.kcmathtechexpo.org
-

Payment Options:

- Online, using a credit card through PayPal.
- By US mail with a check, payable to "Math EXPO 2017".
- At the EXPO, with cash, check, or credit card.

**→ No refunds on advance registrations after ←
Monday, October 2, 2017**

Registration receipts will be placed in your EXPO packet.
Friday Parking hangtags will be mailed to you if you register before September 27, and provide a complete address.

Donations: The EXPO is recognized by the IRS as a 501(c)(3) non-profit organization. Any donations by an individual or business are therefore tax-deductible since no goods or services are received in exchange. (Note: EXPO registration is not tax deductible.) Donations can be made to the EXPO either on our website, or with the registration form at the right. A receipt for donations indicated on the registration form will be given in the EXPO packet.

MATHEMATICS TECHNOLOGY EXPO 2017

Advance Registration Form

Advance registrations are due by Wednesday, September 27, 2017.

Submit your advance registration by **one** of these two methods:

- (1) Complete the form below and mail it to: Rob Grondahl, Johnson County Community College, 12345 College Blvd., Overland Park, KS 66210, **or**
- (2) Register online at www.kcmathtechexpo.org. If you register online, a charge to your credit card will appear on your monthly statement from PayPal.

Name: _____

School: _____

Mailing address: _____
_____ [] home [] school

Daytime phone: _____

E-mail Address: _____

The EXPO 2017 Participant List will be compiled and a copy will be in each participant packet at the EXPO.

- If you do **not** want any of your information that is stated above to be printed in the Participant List, check here [].
- If you want **just your name** printed, check here [].

General advance registration: _____ registration(s) @ \$85.00 = _____

Speaker registration: _____ registration(s) @ \$60.00 = _____

Student registration: _____ registration(s) @ \$25.00 = _____

Tax deductible donation to the EXPO = _____

TOTAL Enclosed (Checks payable to: *Math EXPO 2017*) = _____

Check all appropriate boxes:

[] I will attend the free lunch: [] Friday [] Saturday

[] I will NOT need a free parking hangtag for Friday

[] I have enclosed a check.

Johnson County Community College

Attn: Box 29 Erickson

12345 College Blvd.

Overland Park, KS 66210-1299