



Undergraduate Research Conference at Missouri S&T

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## 15th Annual Undergraduate Research Conference Winners

Missouri University of Science and Technology

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## **S&T announces Undergraduate Research Conference winners**

ROLLA, Mo. – Twenty seven students in eight categories received recognition and cash awards as winners of the 15th annual Undergraduate Research Conference at Missouri University of Science and Technology. The conference featured oral and poster exhibitions that represented work from students in nearly every major at Missouri S&T. First-place winners were awarded a cash prize of \$500. Second- and third-place finishers received \$250 and \$100, respectively.

During the conference, which was held in late April, over 100 Missouri S&T students presented their current research projects to the public. To view the complete list of students who participated along with their research abstracts, visit [academicsupport.mst.edu/experientiallearning/ugrc](http://academicsupport.mst.edu/experientiallearning/ugrc).

The following students won oral presentation awards.

Arts and humanities oral presentation session:

First place – Donald Morard III, a senior in history from Fulton, Missouri, for research titled “The Anti-Soviet Forest Brother’s Movement.” The research advisor is Dr. Shannon Fogg, chair and professor of history and political science.

Second place – Mark Allison, a sophomore in history from Cuba, Missouri, for research titled “Kings, Old Ironsides, Levelers and a Rump.” The research advisor is Dr. Michael Bruening, an associate professor of history and political science.

Engineering oral presentation session:

First place – Nicole Aldridge, a senior in computer engineering and computer science from Bloomington, Illinois; Daniel Ellerbrock, a senior in electrical and computer engineering from St. Charles, Missouri; and Chris Rowan, a senior in computer engineering from Belleville, Illinois, for research titled “Non-Volatile Memory and Associative Learning.” The research advisor is Dr. Donald Wunsch, the Mary K. Finley Missouri Distinguished Professor of Computer Engineering.

Second place – Jack Fletcher, a freshman in nuclear engineering from St. Louis, for research titled “CFD Modeling of Flow through Twisted Tape.” The research advisor is Dr. Gary Mueller, an associate professor of nuclear engineering.

Third place – Kaitlyne Powers, a senior in chemical engineering from Lake St. Louis, Missouri, for research titled “Cellular Hitchhiking of Nanoparticles.” The research advisor is Dr. Sutapa Barua, an assistant professor of chemical and biochemical engineering.

Sciences oral presentation session:

First place – Kelsey Brakensiek, a junior in chemistry from O’Fallon, Missouri, for research titled “Nuclear spin relaxation in NMR spectroscopy.” The research advisor is Dr. Klaus Woelk, an associate professor of chemistry.

Second place – Kaysi Lee, a sophomore in chemistry from St. Louis, for research titled “Optimizing D2O/H2O Ratio for NMR pH Measurements.” The research advisor is Dr. Klaus Woelk, an associate professor of chemistry.

The following students won poster presentation awards.

Arts and humanities poster presentation session:

First place – Paige Berg, a junior in aerospace engineering from Newton, Kansas, for research titled “Empress Josephine's Beheaded Statue.” The research advisor is Dr. Audra Merfeld-Langston, chair and associate professor of arts, languages and philosophy.

Second place – Mackenzie Shields, a freshman in history and technical communication from Desloge, Missouri, for research titled “Tracking Mass Ideology through IMDB's Top 250.” The research advisor is Dr. Andrew Tohline, an assistant professor of arts, languages and philosophy.

Third place – Michele White, a senior in electrical engineering from Pleasant Hill, Missouri, for research titled “Then vs. Now.” The research advisor is Dr. Diana Ahmad, Curators’ Distinguished Teaching Professor of history and political science.

Engineering poster presentation session:

First place – Alex Daues, a junior in chemical engineering from St. Louis; Steven Gibbons, a junior in chemical engineering from Florissant, Missouri; Zaid Haha, a senior in chemical engineering from Kansas City, Missouri; and Jasmine Monroe, a junior in chemical engineering from Barry, Illinois, for research titled “Extractive Metallurgy from Industrial Wastewater.” The research advisors are Dr. Muthanna Al-Dahhan, chair and professor of chemical and biochemical engineering, and Qusay Al-Obaidi, a Ph.D. student in chemical engineering.

Second place – Dibhya Barua, a freshman in computer engineering from Dhaka, Bangladesh, for research titled “PolyBall– a new adsorbent for the removal of endotoxin.” The research advisor is Dr. Sutapa Barua, an assistant professor of chemical and biochemical engineering.

Third place – Kayla Bruemmer, a junior in chemical engineering from Fair Grove, Missouri, for research titled “Resident-Time Distributions for Trickle Bed Reactors.” The research advisor is Humayun Shariff, a Ph.D. student in chemical engineering.

Research poster presentation session:

First place – Kaelyn Yarbrough, a senior in chemical engineering from Willard, Missouri, for research titled “Modeling of Structure-Controllable Optical Nanofluids.” The research advisor is Dr. Joontaek Park, an assistant professor of chemical and biochemical engineering.

Second place – Raelynn Twohy, a sophomore in biological sciences and psychology from St. Peter’s, Missouri, for research titled “Investigating the Effects of Concussion on Athletes.” The research advisor is Dr. Amy Belfi, an assistant professor of psychological science.

Third place – Devin Wood, a sophomore in chemistry from O’Fallon, Missouri, for research titled “Investigating Phosphorylation during Cytokinesis.” The research advisor is Dr. Katie Shannon, an associate teaching professor of biological sciences.

Sciences poster presentation session:

First place – Zachary Foulks, a junior in chemistry and biological sciences from Imperial, Missouri, for research titled “New Pheromone Bioassay and Spider Trap Testing.” The research advisor is Dr. Honglan Shi, a research professor of chemistry.

Second place – Alex Warhover, a senior in physics and computer science from St. Charles, Missouri, for research titled “Fractional Brownian Motion with an Absorbing Wall.” The research advisor is Dr. Thomas Vojta, chair and Curators’ Distinguished Professor of physics.

Third place – Katrina Compton, a junior in physics from Dixon, Missouri, for research titled “Characterization of Laser-Cooled Atomic Samples.” The research advisor is Dr. Daniel Fischer, an assistant professor of physics.

Social sciences poster presentation session:

First place – Ava Stroud, a senior in psychology from Country Club, Missouri, for research titled “Age-Related Differences in Voluntary Remembering.” The research advisor is Dr. Amy Belfi, an assistant professor of psychological science.

Second place – Kaelyn Kacirek, a junior in engineering management from Kansas City, Missouri, for research titled “The Famous Melodies Task.” The research advisor is Dr. Amy Belfi, an assistant professor of psychological science.

Third place – Sara Johnson, a senior in psychology from St. Louis, for research titled “Drinking and Sex Motives during Spring Break.” The research advisor is Dr. Amber Henslee, an associate professor of psychological science.

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