**2023 CNAS Undergraduate Research Symposium (UGRS) Presenter Instructions**

Dear 2023 CNAS UGRS presenters,

We are excited to have you participate in our hybrid conference. This document contains comprehensive information on how to prepare and play a part as a presenter in this conference.

**April 19, 12:00 noon is the deadline for abstract and video submission (April 5 is first day of submission).**

Things to do before the symposium.

**A. Submit your abstract**

First, please contact your research advisor to ask about the general format of an abstract in your research field. After completing your abstract, ask your advisor to check the science and format of your abstract.

❖ Abstracts may not be longer than 200 words

**B. Working with your Faculty advisor, record a short video, approximately 4 MINUTES OR LESS IN LENGTH – your ADVISOR will submit the video to CNAS for our Symposium YouTube channel when it is complete.**

❖ Be sure to practice your message/video prior to filming.

❖ Your video can be a smartphone (or similar device) recording of your presentation, a portion of your research (fieldwork or lab experiment "in action" or similar demonstration), or even a Zoom recording of your poster (as a shared-screen slide) with simply a 'voice-over' explaining it. Please be mindful that your face is well lit, and your background is not disturbing.

❖ Recording a video: We recommend recording your video using Zoom meeting software (or with a smartphone, tablet, or web cam).

• The video should convey why you chose your project and the take home message of your findings. Your audience may be a non-scientist and so be mindful to explain your subject knowledge in an easy-to-understand manner.

• The quality of the video production will not be judged, but the message on your research should be clear to viewers.

❖ Send a copy of the video to your faculty advisor. The FACULTY ADVISOR will email the final version of the video on to Gale Lininger, galelininger@missouristate.edu, CNAS office staff for upload to the CNAS UGRS YouTube site. Students may wish to keep a copy of this video for their own YouTube channels or other future records.

**C. You will then need an In-Person version of your Poster. For the In-Person poster session:**

❖ Abstracts may not be longer than 200 words. (WORD document - see format examples on next page) – Times New Roman 12 pt font

**All displays must be set up by 12:00 noon on Friday, April 28. They will remain posted until 3:15 PM**

**Presenters and Judges (only) will be allowed in the Poster area from 12:00 noon to 1:30 pm** (this is the time for judging to occur and presenters must be present to answer questions). To make this more comfortable for you, we anticipate having pizza or similar lunch foods provided for you in the room during this time.

**From 1:45–3:15 pm – the campus community and general public are invited to view your poster and ask you questions, so please plan on staying during that time too.**

**At 3:30 pm, our Awards ceremony will begin and the award winners in each category will be announced.**

❖ Poster display boards will be provided; therefore, **you must limit the size of your poster to 58 inches in width x 46 inches in height. [PLEASE NOTE – this is a new size from previous years due to new display kiosks]!**

❖ Presenters will bring their own presentation materials. Your display will be secured to the display board using either Velcro 'dots,' tape, binder clips, or similar devices. Only materials that are attachable to the display board are allowed. Appropriate adhesive/attachment materials will be provided when you check-in to set-up your poster.

**D. EXAMPLE ABSTRACTS FORMAT FOR IN-PERSON POSTERS:**

## GENERATIONAL EXPOSURE TO CERIUM OXIDE NANOPARTICLES ALTERS PERFORMANCE OF WHEAT EXPOSED TO PERFLUOROOCTANESULFONIC ACID

Preston Clubb. Chemistry and Biochemistry. Faculty Advisor: Cyren Rico

This study investigated the effects of generational treatments of wheat with cerium oxide nanoparticles (CeO2-NPs) followed by exposure to perfluorooctanesulfonic acid (PFOS). Wheat was grown for 21 days (short-term exposure) or 90 days (long-term exposure) in soil with PFOS (50 ppm). Biomass production, chlorophyll content, enzyme activity, and membrane damage were measured at short-term exposure, while elemental concentration of grains harvested from long-term study was analyzed. Results showed that generational exposure to CeO2-NPs improved chlorophyll content but reduced concentrations of important macro- and micro-elements in the grains. The data seems to suggest that continuous exposures to contaminants could negatively affect the nutritional quality and grain elemental composition in succeeding generations.

## INTELLIGENT TRAFFIC INTERSECTION MONITORING VIA LIVE CAMERA

Tyler Songer, John Meents, Guvanch Garryyev, Robert Safford, Cameron Briggs. Computer Science, Faculty Advisor: Mohammed Y. Belkhouche

This project aims to accurately track and monitor a city traffic intersection via a live camera feed. We used the publicly accessible Springfield city traffic intersection cameras as our main sample source, provided by Ozark Traffic. We track the position of all cars within view of the camera using a machine learning algorithm to detect them. We log statistics such as the number of cars and data specific to the cars. Expanding on the information gathered, we can accurately log different forms of traffic.