

Education Research & Outreach Newsletter

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Back to School with the EROL

As classes resume this fall, the Danforth Center's Education Research and Outreach Laboratory (EROL) is here to support educators with a wide variety of student activities and research experiences and teacher professional development.

Our newsletter subscribers also receive emails full of many opportunities for student research, access to educational technologies, and engaging science outreach events. If you are interested in these programs or have any questions about them, please keep an eye out for these emails!

If you have any other questions or would like to get in touch with the EROL, please contact us at Education@danforthcenter.org.



DONALD DANFORTH
PLANT SCIENCE CENTER



Raspberry Pi Jam

This month, the Danforth Center hosted its first Raspberry Pi Jam since January 2020! The event saw some 227 attendees who had the opportunity to tour the Center, learn to solder, and explore a wide variety of information and activities provided by presenters from organizations across the St. Louis area.

The Education Research and Outreach Lab had three activities to offer Raspberry Pi Jam attendees this year. Our new virtual reality (VR) station demonstrated the potential of VR as a form of educational technology.

The Ozobots station from previous Jams made a return to teach attendees the basics of computer programming and robotics. Ozobots are little robots are programmed through simple, hand-drawn color codes that allow them to perform all kinds of neat tricks, and allow our visitors' creativity to shine!

Also returning to this Jam was the Raspberry Pi piano with fruit and vegetable "piano keys". This activity allowed visitors to play an instrument that is powered by a Raspberry Pi microcomputer, a common tool among scientists at the Danforth Center. The piano combines plant science and computer science concepts, while also demonstrating the artistic aspects of science.

The Raspberry Pi Jam will be returning next year, and the EROL will have plenty of activities to offer attendees once again. Be sure to stop by next year, and keep an eye out in the coming months for information about the date!



*Lab member Harini
Gottumukkula with visitors at the
Ozobot station.*



*Lab member Parag Bhatt with
visitors at the virtual reality
station.*



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Party with the Plants

Last month, another annual Danforth Center event had a long awaited return: Party with the Plants, hosted by the Danforth Center Young Friends, marked the culmination of the 2022 Danforth Center Grow Challenge.

The Grow Challenge this year raised almost \$115,000 in support of the Danforth Center's STEM education and outreach initiatives, particularly our partnership with the Jackie-Joyner Kersee Foundation Food, Agriculture and Nutrition Innovation Center.

Party with the Plants was a night of socializing and celebrating this fundraising effort, complete with hors d'oeuvres, live music, and even an appearance from four-time Olympian Jackie Joyner-Kersee herself. The EROL was in attendance to showcase some of the education and outreach efforts that will be supported by the funds raised from the Grow Challenge.

Our lab set up a station where party attendees could explore the lab's augmented and virtual reality (AVR) educational technology. Our zSpace systems showed guests an augmented reality lab dissection, and the virtual reality headsets took guests to a simulated greenhouse to learn about plant biology.

Be sure to join us for next year's Party with the Plants! Keep an eye on the Danforth Center website for the earliest updates on the date of the event.



The EROL team at Party with the Plants with the lab's augmented and virtual reality (AVR) technology on display.



Lab member Harini Gottumukkula showing off the zSpace augmented reality system.



Lab member Parag Bhatt guiding attendees through a virtual reality demonstration with Oculus headsets.

New Publication from the EROL

Initial Development and Validation of the Plant Awareness Disparity Index

Journal: CBE—Life Sciences Education

Author: Kathryn M. Parsley, Bernie J. Daigle, and Jaime L. Sabel

Plant awareness disparity (PAD), formerly known as plant blindness, is the idea that people tend not to notice plants in their own environment. This phenomenon can be detrimental to plant science education. Interventions to address this issue have been proposed, but an instrument to measure PAD is necessary to determine their efficacy. This paper presents such an instrument: the Plant Awareness Disparity Index (PAD-I).

