Upcoming Seminar Series

THURSDAY, MARCH 9, 2023 AT 12:00 PM ET

**GEORGE KANTOR,
RESEARCH PROFESSOR AT CARNEGIE MELLON
UNIVERSITY'S ROBOTICS INSTITUTE
TO PRESENT**

**ROBOTICS FOR AGRICULTURE: MOVING FROM
PERCEPTION TO ACTION
[FLYER]**

Welcome

Alexander Fuerst (IU)
Victoria de Bella (UW)
Sharyu Deshmukh (OSU)
Archit Karunakaran (UW)
Daniel Della Vecchia (RPI)
Jinghan Yao (OSU)
Md Saidul Hoque Anik (IU)
Samuel Khuvis (OSC)
Srivardhan Reddy Kalli (OSU)
Kishore Prakash Sailaja (OSU)
Troy Ruemping (IC-FOODS)
Paul Hoover (SDSC)
Hadeel Almaimani (CWRU)
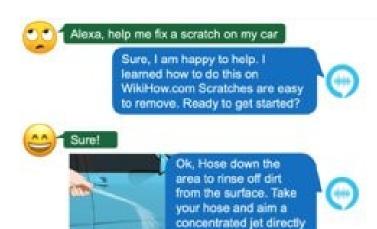David Siedband (IC-FOODS)
Julie Wernert (IU)
Qiyang Ding (TACC)

Say Hi to our New Members !

Team Spotlight

Alexa Prize TaskBot Challenge Winner

Third-place winner and the only award-winning team in the US with an undergrad student as co-lead !!

ICICLE students built a task-oriented dialogue system to assist users in cooking and home improvement tasks. Only ten teams were selected to participate across the world.

> Alexa, help me fix a scratch on my car
>
> Sure, I am happy to help. I learned how to do this on WikiHow.com Scratches are easy to remove. Ready to get started?
>
> Sure!
>
> Ok, Hose down the area to rinse off dirt from the surface. Take your hose and aim a concentrated jet directly onto the scratches.
>
> Won't it make the scratches worse?
>
> Don't worry, spraying the fine scratches won't make them worse or damage your paint

Shijie Chen*, Ziru Chen*, Xiang Deng, Ashley Lewis, Lingbo Mo, Samuel Stevens, Zhen Wang, Xiang Yue, Tianshu Zhang, Yu Su, Huan Sun, "Bootstrapping a User-Centered Task-Oriented Dialogue System," 1st Proceedings of Alexa Prize TaskBot 2022. (*Student co-leads)

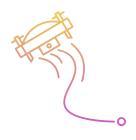## ICICLE RESEARCH FOCUSES ON DEVELOPING RESILIENT EDGE ARCHITECTURE FOR AUTONOMOUS DRONE SWARMS

Jenna Kline, PhD student at The Ohio State University traveled to Mpala Research Center, Kenya to conduct biological field research as part of the Experiential Introduction to Imageomics course. During her visit, she collaborated with students and faculty from The Ohio State University, Virginia Tech, Princeton, and Tulane University to study the behavior of zebras and giraffes using drones. Her ICICLE research focuses on developing resilient edge architecture for autonomous drone swarms for digital agriculture and animal ecology.

Jenna said "I was very excited to get hands-on experience and learn how drones can help ecologists to better collect data. As you can see from the photos, the drone allowed us to collect much clearer video footage of the zebras compared to traditional methods of data collection using hand-held cameras". She is currently working with a team to build an end-to-end pipeline that will automatically identify individual animals and behaviors from the drone videos using computer vision and machine learning. In addition, she is using the drone data to create drone swarms that can carry out these flights autonomously.

Please feel free to contact Jenna Kline at kline.377@osu.edu to discuss her on-going research.

OPPORTUNITY TO JOIN AN ONLINE COMMUNITY NETWORK

ICICLE will soon launch an online community network "*ICICLE Next Generaton (NextGens)*" open to all ICICLE students (High School, Undergraduate, Graduate, PhD) to help them stay connected and represents what they are as professionals in our organization !

Community network goals:
- Offer a place where issues we face as historically underrepresented NextGens within ICICLE are presented and discussed.
- Valuable content is shared and connections to our faculty are fostered via panels and more...
- Networking opportunities are provided.
- Provide a place for connections across institutions
- Professional development opportunities to be responsive to the needs of the network members.

Questions, please contact Maureen Biggers

ICICLE'S BI-WEEKLY TIPS ON ALLYSHIP RECAP

The Broader Impact Backbone Network team sends out two tips every other Tuesday in video format on how we, here at ICICLE, can become better allies

TO PROMOTE AN AWARE , INCLUSIVE , AND MORE DIVERSE COMMUNITY

Browse all Biweekly Tips for Allyship here

RECENT PRESENTATIONS & PUBLICATIONS

PRESENTATIONS

- Ziwei Li, Hong-You Chen, Han Wei Shen, Wei-Lun Chao, "Understanding Federated Learning through Loss Landscape Visualizations: A Pilot Study", Workshop on Federated Learning: Recent Advances and New Challenges (in Conjunction with NeurIPS 2022), Dec 2, 2022 [PDF]

PUBLICATIONS

- Vallabhajosyula, Swathi, and Rajiv Ramnath. "Establishing a Generalizable Framework for Generating Cost-Aware Training Data and Building Unique Context-Aware Walltime Prediction Regression Models." 20th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA 2022). December 2022

For all ICICLE Presentations & Publications, click **here**