

MAY 2021 | ISSUE 3

AEDE IMPACT

News, Research, Profiles and Ways to Connect

Message from Dr. Tim Haab

As we wrap up another year of classes, it is tempting to reflect back and think about all of the challenges. And I am sure the number of challenges our students, faculty, staff, and partners have faced far outnumbers my ability to list those challenges here. So instead, I would like to ask all of us to reflect on what we have learned from the past year.

I hope we have all learned to place a little more trust in research, a little more trust in science, and a little more trust in experts.

I hope we have all learned to be a little more caring, a little more understanding, and a little more tolerant.

I hope we have all learned that what previously caused us stress, what we used to worry about, what we used to fear, might not be what is important.

I hope you each take time for yourself this summer.

Take care of yourself, take a break, take care of each other, and we will see you all back on campus in the fall.

Dr. Tim Haab
Professor, AEDE Chair, Dean's Chair,
Leader of the CFAES Knowledge



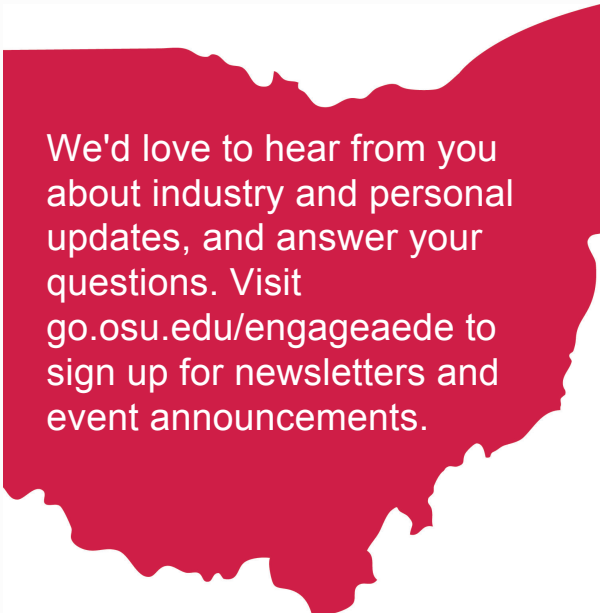
"Take care of yourself, take a break, take care of each other, and we will see you all back on campus in the fall."



AEDE IN THE NEWS

- **Slowing climate change rooted in trees, Brent Sohngen, April 14, 2021, Morning Ag Clips**
- **Pa. lawmakers want to extend shelf life of milk, Brian Roe, March 31, 2021, WKBN**
- **Report exposes power gap at US universities, Joyce Chen, March 25, 2021, Nature**
- **Column: You waste more than \$1,000 of food a year. Chew on that, Brian Roe, March 23, 2021, LA Times**

WAYS TO ENGAGE



We'd love to hear from you about industry and personal updates, and answer your questions. Visit go.osu.edu/engageaede to sign up for newsletters and event announcements.

CONGRATULATIONS AEDE FACULTY

- Dr. Zoë Plakias and fellow researchers receive National Institute of Food and Agriculture grant to study the impact of farm to school legislation on farmers, supply chain business, rural communities, and economics.
- Dr. Sathya Gopalakrishnan receives the 2021 Ohio State University President and Provost's Award for Distinguished Faculty Service for her work in co-founding and directing the STEAM Factory.
- Dr. Ani Katchova began her service as an Associate Editor for the Agricultural Finance Review, the top field journal in Agricultural Finance.

FACULTY PROFILE: DR. ANNA PARKMAN



Dr. Anna Parkman came to academia from the business world where she gained practical experience in finance, management, and human resources. She also developed a large network of colleagues whom she now brings into the classroom to enhance student learning and help them make connections in industry.

For Parkman, teaching is about interacting with students and tapping into their curiosity, ambition, and drive which in turn, inspires her to bridge classroom learning with real-world experience. In addition to teaching, Parkman serves as Undergraduate Program Leader and Internship Advisor.

“Teaching is dynamic and synergistic. You’re never prepared for the interactions and conversations that occur in a classroom and it is really exciting,” said Parkman. “Their interests drive me to find guest speakers that will help them see the many options available in industry.”

She says that agribusiness and applied economics majors have passion and they have

work experience, either on family farms or with family businesses. They also have had internships.

“When our students interview for an internship or a job, they have real work experiences and academic courses to back up their skill set,” said Parkman.

Parkman explained that the department focuses on ensuring students know what they need to know to be successful on the job, but also how to take what they have learned and use it.


“That is the applied in Agribusiness and Applied Economics,” said Parkman. “It has to have utility to society and to the business no matter what sector.”

As an advisor, Parkman also works with students to help them identify their strengths and unearth gaps in their skill set, so they can find opportunities on campus to address them.

Senior Blake Adams said she relied on Dr. Parkman’s guidance throughout her time at Ohio State.

“I could always lean on her,” said Adams. “She always tries to point you in the right direction.”

Parkman shared that another rewarding part of her role is helping students negotiate first job offers and for those already in the workforce, help navigate next steps in their careers.

“Many AEDE students have multiple offers as they approach graduation,” said Parkman “It means a lot that they entrust me with those important conversations and decisions.” 

STUDENT PROFILES: FOOD RECOVERY NETWORK



Alex Carr and Kevin Uth each joined Ohio State’s Food Recovery Network (FRN) to make an immediate impact on issues that face their community every day: hunger and food waste. The student organization is advised by AEDE faculty member Dr. Brian Roe and is a chapter of a national nonprofit organization that unites students at colleges and universities to tackle these pressing issues.

Ohio State’s organization does that every day, collecting excess food from Ohio State’s dining halls — such as prepackaged meals, sandwiches, salads and fruit cups — and delivering it to food pantries and shelters around Columbus. COVID-19 put a lot of responsibility on their volunteers to keep the mission going during a critical time.

higher levels of food insecurity and hunger than ever before,” said Carr, FRN president and senior mechanical engineering major. “We’ve worked smarter and harder and even expanded our reach and aspirations.”

Membership has more than doubled and FRN has found creative ways to keep food that will go stale, out of landfills. It’s either composted on campus or used in creative food upcycling products.

They partnered with Seventh Son Brewery in Columbus to make a bagel beer out of excess bagels. Similarly, they’re currently working with another student organization, Know Food Waste, the Food Science and Technology Department and Ohio State’s Dining Services to create bagel chips. By partnering with other sustainability organizations around campus, FRN can develop partnerships with other clubs and sustainability efforts.

"A lot of people are experiencing even

The group just applied for a grant

through OSU's Initiative for Food and AgriCultural Transformation (InFACT) Leverage Grants Program that would allow them to upgrade and expand their technology platform to other chapters around the region.

"There's no limit to what we can do," said Uth, FRN's vice president and junior mechanical

engineering major. "All it takes is the effort and involvement to increase the scale of what's happening. We're looking at more ways to expand and feed more people — and that excites me because there are so many more who need help."



RESEARCH PROFILE: Should they stay or should they go?

Coastal residents have much to consider when navigating sea level change (SLC)

While climate scientists are not exactly sure how fast or high sea levels will rise, they agree on these principle impacts: submergence and flooding of coastal land, saltwater intrusion into surface waters and groundwater, increased erosion and overwhelmingly negative social and economic repercussions. They also agree the effects will be widespread, accelerate with time, and continue to reshape our world and influence where we live and work.

It is estimated that about four out of every five people living in east or south Asia will be impacted by sea-level rise by 2050. For those living in areas with increased flooding, and loss of agricultural land and clean drinking sources infiltrated by sea water, you would think the most logical thing would be to would move away from coastal areas.



A team of researchers, led by Dr. Andrew Bell at New York University, that includes AEDE's professor Joyce Chen, project just the opposite effect, especially in southeast Asia.

"Our projections show that low-lying areas in Bangladesh will likely gain more residents," says Chen.

So, why are residents moving into high-risk areas instead of away from them? Their recently published research tells the story of how economic reality is as influential as climate adaptation and resilience in deciding where people live and work.

To examine this phenomenon, the team developed an agent-based model (ABM) that simulates dynamic, multifaceted migration decisions in Bangladesh and overcomes the methodological issues related to oversimplified SLC migration and erroneous assumptions surrounding 'trapped' populations. The ABM allowed the researchers to integrate these competing migration pressures to evaluate the extent to which SLC should be assumed to redirect migration to inland areas.

Further, the ABM distinguished the contributions of economic constraints from social constraints on immobility by including a policy of credit provision to all agents during peak changes in exposure to SLC. This allowed them to evaluate some of the drivers of immobility.

The research team modeled multiple scenarios that ultimately showed residents move into areas impacted by sea level change due to economic and personal factors. While the decision to move to coastal areas is influenced by the increased availability of jobs that pay better than jobs in rural areas, some move because urban areas offer more access to credit that can be used to start and maintain businesses.

In reality, as more people flock to coastal cities, many will become trapped there due to continued economic and personal loss after each flood or deluge of water into their homes and businesses.

Chen says that access to credit is a commonly proposed policy lever for incentivizing migration in the face of climate risk. But in their models, when they increased access to credit, they found that the number of immobile agents actually rose. These findings imply that instead of a straightforward relationship between displacement and migration, projections need to consider the multiple constraints on, and preferences for, mobility.

So, what can be done to inform and support residents who are faced with the multi-faceted push, pull and mooring influences on migration at a household scale?

“Decision-makers seeking to affect migration outcomes around SLC should consider individual-level adaptive behaviors and motivations that evolve through time,” says Chen. “As well as the potential for unintended behavioral responses.”

