



Caryopsis

Cereals & Grains Student Association Newsletter



Hello Student Members of Cereals and Grains Association!

Whew! I think we can comfortably say that none of us saw 2020 coming, but looking back now from 2021, I am happy to report we made it! 2020 came with a set of challenges that forced us all to change the way we think about what meetings are, how to socialize best, and how to stay productive in the face of a global pandemic, and Cereals and Grains was no exception.

With over 100 years of history as an organization, Cereals and Grains continued to adapt in 2020, responding to the global changes by hosting its first-ever virtual conference and launching a video-based student research competition. By all measures, both were successful and continued to deliver the science and networking that people have come to expect from Cereals and Grains. This format also offered our members unique opportunities to participate from all over the world, showing off our organization's true internationalism. As we start to poke our heads out quarantine and lockdowns, I am honored to serve as the Chair of the Student Association, and I am excited about how we can leverage what we have learned over the past year.

After graduating from Kansas State University in 2016, I spent a year learning Mandarin Chinese in Taiwan prior to starting my career at Bimbo Bakeries. After two years working in lean six sigma based process improvement, I return to school at Purdue University, where I am a Ph.D. student in the lab of Dr. Jozef Kokini. My research involves using bioinformatics to model pea protein structure and gain insight into its function. This is coupled with developing an understanding of the changes pea protein undergoes due to cold denaturation. Ultimately, this work will lead to an improved understanding of gels and emulsions formed from cold denatured protein.

Unfortunately, the Student Product Development Competition was canceled in 2020 as the result of moving to a virtual format. A **Student Video Research Competition** was launched in its place, and in its first year had more than a dozen entries with a grand prize of \$1,500! In 2021 we will continue this competition, so start thinking about how to best represent your research in a short 3-minute video. As the student wing of the organization, we are often looked to as the future of Cereals and Grains, so we encourage everyone to be as active as possible and recruit their friends. The more diversity of ideas and exchange of research, the stronger all of our work will become. Follow us on Facebook, Twitter, and LinkedIn to stay involved and aware of the exciting events we have planned for this year!

- Harrison Dale Brent Helmick, 2020-2021 Student Association Chair



Eda Ceren Kaya - Student Association Vice Chair



Eda Ceren Kaya obtained her bachelor's degree from the Department of Food Engineering at Middle East Technical University, Ankara, Turkey, in July 2017. Immediately after graduation, Kaya started to work on her Master's degree in the same program. At the same time, she started to work in Unilever Turkey Supply Chain Department as Strategic Demand Planner between 2017-2018. She obtained her M.Sc. from Middle East Technical University in September 2019. Her Master's degree thesis and published article were related to chia seeds and formulation and characterization of high pressure processed (HPP) nano-emulsion systems. She started her Ph.D. in Food Science Institute of Animal Science and Industry Department of Kansas State University in January 2020. She is working with Assistant Professor Dr. Umut Yucel. Her research interest focuses on sustainable and biodegradable food applications. She is working on a project entitled "Sorghum grain, protein

characterization, and development of packaging film from sorghum Distiller's dried grains with solubles (DDGS)" funded by the Seed Grant Program of Global Food Systems and supported by USDA. To relax and enjoy, Eda loves to write short stories and go hiking. Also, she loves to take pictures of nature.

Jayani Maddakandage Dona - Product Development Competition Chair

Jayani is a Ph.D. student in the Cereal Science Program at North Dakota State University under Dr. Senay Simsek's supervision. Her research focus is on dietary fiber and the gut microbiome. She has been actively involved with the Cereals & Grains Student Association, working as the Product Development Competition Vice-chair in 2020. Jayani was a finalist in Nutrition Division Best Student Paper Award at Cereals and Grains 20. She also participated in the Student Product Development Competition at Cereals and Grains 19, representing North Dakota State University, and was awarded second place. She is excited to be serving as the Product Development Competition Chair.



Cyprian Syeunda - Product Development Competition Co-Vice Chair



Cyprian is a doctorate student in the Department of Food Science and Technology at Texas A & M University. He is under the tutelage of Dr. Joseph Awika in the Cereal Quality Laboratory, where he is also a teaching assistant. Prior to joining Texas A&M, Cyprian studied for his bachelor's and master's degree in Food Science in Kenya. He worked as an analyst with Intertek, focusing on the importation and export of Agri-commodities. His research currently focuses on the synergistic interaction of pulse and cereal flavonoids on their bioavailability and human health promotion. Consequently, he presented a poster at the annual Cereal and Grains Association meeting 2020 on the "Formation of Maillard reaction products and antioxidants from starch-free bran subjected to microwave energy". He enjoys listening to music and going on a Safari.



Edil Vidal Torres - Product Development Competition Co-Vice Chair



Edil is a Food Technologist Technician in the Department of Plant Sciences at North Dakota State University in Dr. Senay Simsek's wheat quality lab. She is originally from the Dominican Republic and completed her Master's degree in Food Science and Technology at the University of Puerto Rico Mayaguez Campus. Her research focused on the characterization of two alternative crops, Quinoa and Amaranth. She was an intern student in Dr. Simsek's lab during the summer of 2018, where she completed most of her research analysis. 2019 was her first year participating in the Cereals & Grains annual meetings and presented two posters at the 2019 meeting in Denver, Colorado. "It is a privilege to me to be part of the Cereals & Grains Student Association and collaborate with the team as the Product Development Competition Vice-Chair".

Michelle Oppong Siaw - Fundraising Chair

Michelle is a Ph.D. candidate in the Department of Food Science at the University of Arkansas under the advisement of Dr. Ya-Jane Wang. Michelle is working on how to apply a material science approach to improve rice processing performance. The rice industry experiences high economic losses due to rice breakage during milling. Her research hopes to address this issue by studying certain microstructural defects in the rice grain which might be causing these breakages. This study's ultimate goal is to build a more sustainable rice industry by reducing waste and improving rice's economic value. She earned her undergraduate degree in Food Science and Technology from the Kwame Nkrumah University of Science and Technology in Ghana. Later she obtained her MPhil degree in the same university. Her hobbies are reading and watching movies. She is honored to serve as the Cereals & Grains Student Fundraising chair.



Sushmita Karki – Online Communicator



Sushmita Karki is currently doing a Master's in the Food Science program under Dr. Clifford Hall's guidance at South Dakota State University (SDSU). She is originally from Nepal and joined SDSU in January 2020. She has earned her B-Tech degree in Food Technology from Tribhuvan University, Nepal. Her research focuses on a storage study. Her study involves the impact of storage and different varieties on proximate composition and functionality of dry peas stored in different treatment conditions, i.e., accelerated temperature and relative humidity for several months. Knowledge from this research will help maintain the high-quality of dry peas by providing information to producers regarding how storage affects quality and how long dry peas can be retained before quality is affected. She loves to travel, listen to music, and spend time with her friends. She is honored to join the Cereals & Grains Student Association.



Kübra Tuluk – Student Representative



Kübra is a Ph.D. Candidate in the Department of Food Engineering at Ege University, Turkey. She is under the advisement of Dr. Seher Kumcuoglu. Her research has focused on investigating implications of enzymes on dough rheology and bread quality, development of pulse-based food products, production and evaluation of traditional sourdough products such as tarhana, and the quality of cereal-based food products. For her Ph.D. she is focusing on the development of novel food products using extrusion technology. Kübra earned her B.S. degree in the department of Food Engineering from Selcuk University, Turkey. After that, she received her M.S. degree in the Department of Food Engineering from Ege University, Turkey. She was also an exchange student for one semester in her M.S. education in the Department of Quality of Agricultural Products at the Czech University of Life Science Prague, Czech Republic. Kübra enjoys meeting with friends, arranging social events, volunteering for food science-related associations,

trying different cuisines, traveling, and involving as a volunteer for associations to protect street animals. She is honored and excited to continue being part of the Cereals & Grains Student Association and collaborate with the team as the European Representative.

Azin Sadat - Student Representative

Azin Sadat is a Ph.D. candidate in the Department of Food Science at the University of Guelph under Dr. Iris Joye's supervision. The prestigious Ontario Trillium Scholarship fully funds her project. Her research focuses on the structure and interactions of cereal proteins in complex food matrices. In this context, she explores the potential of non-invasive but underutilized techniques such as fluorescence and vibrational spectroscopy to study the (sub/supra-) molecular properties of cereal proteins in a complex matrix. Her project is important to the cereal industry as it will lead to the development of innovative tools to study complex systems and shed light on the protein structures that are crucial to cereal product quality. She presented part of her research at the Cereals and Grains annual meeting in 2020. She was selected as the winner of the Best Student Paper (oral presentation) award given by the Protein Division. She was also awarded second place at the IFT20 student poster competition. She is excited to serve as the Student Representative for Canada/North America at Cereals and Grains Student Association.



Elyssa Chan – Student Representative



Elyssa is a M.Sc. student in the Department of Food and Human Nutritional Sciences at the University of Manitoba. Her program is in Food Science, and she is under the advisement of Dr. Filiz Koksel. Her research focuses on developing low moisture pea protein-based texturized vegetable protein (TVP) using extrusion technology. Furthermore, she will analyze the TVP's techno-functional and physical properties to determine its suitability as a meat extender in an animal protein-based patty. Elyssa obtained her undergraduate degree from the University of Manitoba in Food Science with a minor in Business Management. During her 2019-2020 term, she was a lead organizer in C&G's first Virtual Student Video Competition. Elyssa is excited to serve her second year as the Canadian Student Representative for Cereal and Grains student association.



Dinesh Kumar Ravi – Student Representative



Dinesh Kumar is a B.Tech candidate in the Department of Food Technology at Kongu Engineering College in India under the advisement of Dr. R. Baskar. He works on the characterization and modification of cereal products' microstructural and textural properties to improve oral processing, as well as tribology shear using different hydrocolloids and nano-emulsions. He worked as Research Fellow in CSIR- CFTRI, and he is working as a reviewer in Just Agriculture Publication. Dinesh loves to travel to new places as well as to explore new cultures. He likes to try new cuisines. Dinesh Kumar is honored and excited to serve as Student Representative for USA/North America of Cereals & Grains Student Association.

Shpresa Musa - University Representative

Shpresa is a second-year master's student in the Department of Food Science and Technology at the University of Nebraska-Lincoln. She is working under the advisement of Dr. Andréia Bianchini and Dr. Jayne Stratton. Her research is focused on pre-milling interventions for improving the microbiological quality of wheat, as well as functional properties. Her research focuses on the combination of steam and organic acids in reducing the microbial load of wheat. Her interests include food safety and food quality of cereal and cereal-based products. She has received a B.S. in Food Engineering and Technology from the University of Mitrovica in Kosovo. She was also an exchange student for one semester in the Department of Food Technology at Van Hall Larenstein in the Netherlands. Besides her professional work, she has been part of various programs and training in the past. This is going to be her first year serving at Cereals & Grains Student Association. She sees this as an excellent opportunity to meet new people who share the same interest as she does and expand her network in the U.S. and outside.



Ana Magallanes López – Secretary-Treasurer



Ana is a Cereal Science Ph.D. candidate in the Department of Plant Sciences at North Dakota State University (NDSU). She is under the advice of Dr. Senay Simsek. Ana majored in Agro-Industrial Engineering from Chapingo Autonomous University in Mexico in 2015. She got her Master's degree from NDSU in Cereal Science in 2018, working with wet milling on deoxynivalenol contaminated wheat. For her Ph.D., she focuses on evaluating the immunomodulatory properties of bean soluble dietary fiber using cell models. Regarding Cereals & Grains, she has presented her research with posters at the 2017, 2019, and 2020 annual meetings. In 2018, she was awarded second place in the Best Student Research Paper Competition. In 2020, she was awarded "Best relationship to the theme" in the Student Research Video Competition. Ana is honored and excited to continue being part of the Cereals & Grains student association, spreading the word to encourage more student participation.



Student Product Development Competition

The Student Association organizes the Cereals & Grains Student Product Development Competition (PDC). This is an extraordinary opportunity for the best and brightest students worldwide to compete and showcase their unique ideas for grain-based products.



Please stay tuned for more details on schedule, eligibility, and awards!

Student Research Video Competition

The Cereals & Grains Association will continue to host the Student Research Video Competition. This is a fantastic opportunity for students to create a video of 3 minutes in length that summarizes their research's significance and how it fits in the food system.



More details will be posted on the Cereals & Grains Association webpage and the Student Association social media.

To be updated with the current happenings for the Cereals & Grains Student Association, don't forget to like or follow us on:



Twitter

Cereals and Grains Student Association @CerealsGrainsSA



Facebook

Cereals and Grains Student Association @CerealsGrainsSD



LinkedIn

Cereals and Grains Student Association

Feel free to reach out if you would like to announce or promote anything through the Student Association!

