
SPARC
ALUMNI

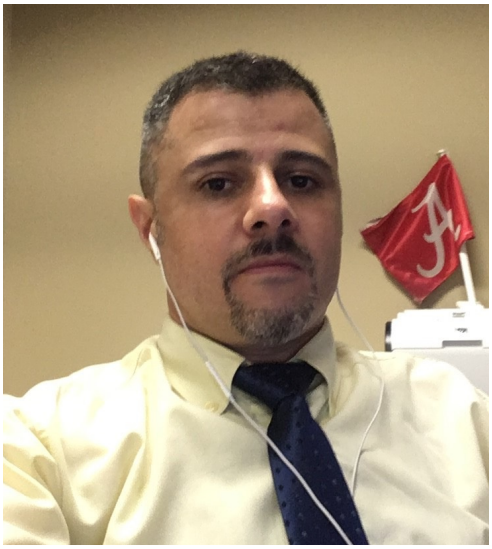
Adetoyese Feyisola (Mubarak)

During Mubarak's time working on the Research Grant from SPARC with Dr. Oghenekome Onokpise, he worked primarily on "Pollinator Diversity, Abundance And Agronomic Performance Of Winter Brassica Carinata In An Agroforestry System."

Currently, he works in the Pharmaceutical industry, specifically Tolmar. Inc in Colorado. Mubarak works as a Quality Assurance Specialist where he oversees various production steps in manufacturing various branded products (mainly Eligard and Fensolvi) and making sure they follow the FDA, cGMP, and much more.

Co-Advisor: Dr. Alex Bolques.

Ahmet Manisali



Ahmet mentored senior year chemical engineering students in the 'Biofuels and Bioproducts' laboratory in production of aviation fuel and Nylon 1313 from carinata oil. Prepared students to present during the 'Capstone Design Project Poster Showcase' at USF.

After earning his Ph.D. in Chemical Engineering, he is currently teaching 'Chemical Engineering Senior Year Design I and II' as well as 'Unit Operations Laboratory' courses in the Department of Chemical and Biological Engineering at the University of Alabama since August 2019.

Advisor: Dr. George Philippidis.

Benjamin Christ

In Ben's words: "My time with SPARC reaffirmed my passion of working with diverse individuals and teams in various ways...whether it was facilitating virtual All Team Meetings; or planning the SPARC Tank exercise at the SPARC meetings in Tampa. I truly valued my time with SPARC and feel honored to have been a part of such a meaningful project.

Ben is a facilitator and strategic planner at Impact by Design (IbD), a non-profit consulting firm that partners with mission-driven organizations to help increase their impact for people, animals, and the environment. He works with teams around the world from organizations of all sizes, providing them with frameworks and processes to help them achieve their goals.

Chris Gorman

During his time with SPARC, Chris contributed to the carinata disease management plan by investigating the optimal environmental parameters necessary for the development of Sclerotinia Stem Rot working with Dr Kira Bowen at the University of Auburn.

He is now working at the USDA-ARS Temperate Tree Fruit and Vegetable Research Unit in Wapato, WA. He conducts molecular diagnostics of insect vectored potato pathogens in the Columbia Basin of Washington and Oregon. Notable pathogens and the diseases they cause are Beet Leafhopper Transmitted Virescent Agent (BLTVA) and Candidatus Liberibacter solanacearum.

Advisor: Dr. Kira Bowen.

Daniel Perondi

Daniel's major work in SPARC was to support the study where he evaluated the impact of double-cropping systems with carinata and summer crops such as peanut and cotton. He and others also evaluated optimum sowing dates for carinata in the Southeastern US using crop models.

Currently, he is a postdoctoral researcher in the electrical and computer engineering department at North Carolina State University. His research focuses on the development of heterogeneous agricultural data management platforms and decision-support systems.

Advisor: Dr. Clyde Fraisse.

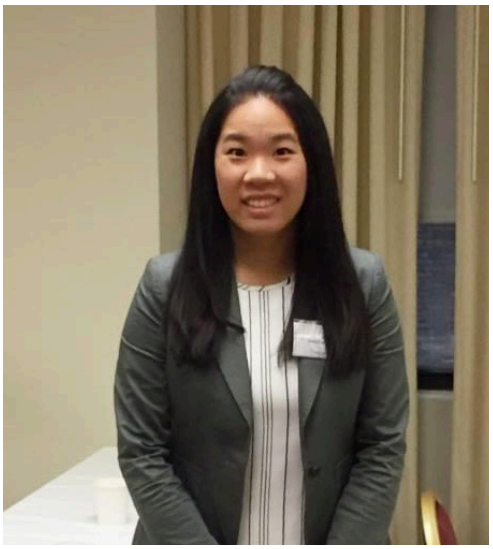
Ehab Ammar

Ehab's work in SPARC focused on exploring the sustainable biochemical conversion of carinata meal to fermentable sugars. He also demonstrated that these sugars could serve as renewable raw materials for the sustainable production of succinic and propionic acid through microbial fermentation by different microorganisms.

He is with Corteva Agriscience Global Business Center in Johnston, Iowa at their protein core facility. He is a fermentation scientist leading the fermentation activities in the facility. His main focus is to develop high cell density processes for the sustainable production of recombinant proteins by microbial fermentation using state of the art systems.

Advisor: Dr. George Philippids.

Enlin Lo



Enlin's SPARC research focused on optimizing parameters for converting carinata meal to hydrolysate rich in fermentable sugars. Such sugars can enhance sustainability and reduce the cost of bioproduct manufacturing in the carinata bioeconomy.

Presently she focuses on algae strain development using agricultural hydrolysates, recycling media, and conducting random mutagenesis and adaptive laboratory evolution. When she graduates with a PhD in May 2022, she will join LanzaTech.

Advisor: Dr. George Philippidis.

Farhad Masum

As a postdoctoral researcher at the University of Georgia, Farhad worked on technoeconomic and lifecycle assessment of jet fuel production from carinata. He also worked on identifying factors influencing growers' decision to adopt carinata.

Farhad is currently is a research scientist in the Argonne National Laboratory where he performs lifecycle assessment of various biofuel pathways.

Advisors: Dr. Greg Colson & Dr. Puneet Dwivedi.

Fernando Oreja

Fernado worked on establishing and maintaining carinata experiments testing phytotoxic effects of different herbicides (quizalofop, linuron) at different stages, and collecting data from those experiments.

He will be soon moving to Oregon State University for the next phase of his research career.

Advisor: Dr. Ramon Leon.

Hanxi Bao

Hanxi developed a chemical process to depolymerize lignin to produce monomeric products. She then applied optimization algorithms on this industrial process to achieve optimal control.

She is currently a data science manager at NBCUniversal. She runs advanced media optimizations to solve planning issues across all media platforms.

Advisor: Dr. Zhaohui Tong.

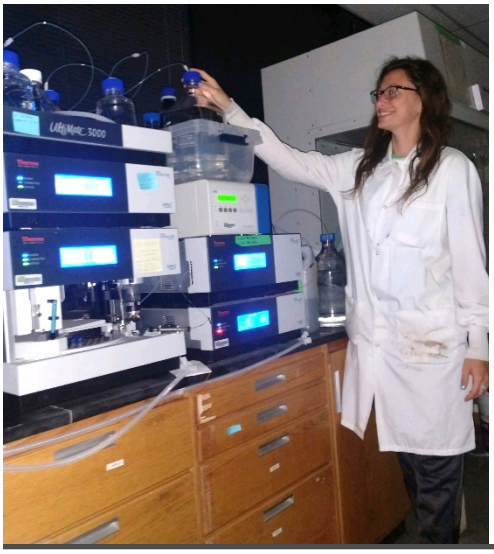
Jessica Baldwin

The major work of Jessica Baldwin in SPARC was identifying insects associated with the winter/spring growth of carinata, and quantifying the impact of defoliation during the vegetative, flowering, and early pod development stages of the crop.

Currently, she is working in the Forest Health Dynamics lab at Auburn University as a research associate. Jessica hopes to continue working in the field, enjoying nature for many years to come.

Advisor: Dr. Silvana Moraes.

Jessica Martin



Jessica's SPARC research focuses on the development of organic acids from carinata meal though pretreatment, hydrolysis, and fermentation using a biochemical process to increase the value of the meal and enhance the overall economics of carinata.

Jessica is currently an instructor for undergraduate organic chemistry labs at University of South Florida and serves as a teaching mentor for incoming graduate assistants while also conducting researching in lab.

Advisor: Dr. George Philippids.

Joseph Hunter

NC STATE UNIVERSITY

While working with SPARC, Joseph assisted in planting and spraying carinata for herbicide tolerance.

Since graduating, he has been working as a research biologist at Agricultural Systems Associates conducting efficacy and GLP field trials. Attached is a photo of Joseph working with honeybees at their field site.

Advisor: Dr. Ramon Leon.

Joseph Iboyi

UF UNIVERSITY of FLORIDA

Joseph Iboyi's research work with SPARC focused on improving nitrogen use efficiency and refining the best agronomic management practices to maximize the yield potential of carinata. Joseph also led research that investigated the possibility of double cropping carinata into summer crop rotations. This research is the basis of Joseph's dissertation.

Joseph is currently writing his dissertation and preparing manuscripts for submission to journals. He has accepted an offer to join Dr. David Wright's research group at the UF/IFAS North Florida Research and Education Center in Quincy, FL, as a postdoctoral research associate after his defense, continuing his work in refining nitrogen management in row crops.

Advisor: Dr. Mike Mulvaney.

Kazi Ullah

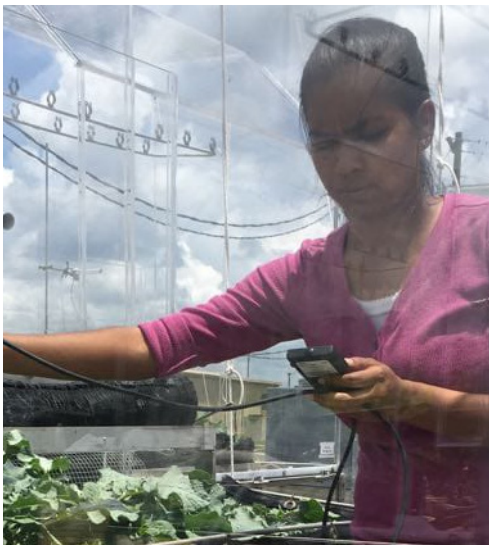
UNIVERSITY OF GEORGIA

In Kazi's PhD work, he accomplished research on carianta crop adoption modelling and its supply chain for producing sustainable aviation fuel.

Kazi will join the University of Buffalo Department of Geography as a Postdoctoral Research Associate sometime in May. He is planning to extend his current PhD research to design a sustainable bioenergy landscape.

Advisor: Dr. Puneet Dwivedi.

Leela Persaud



Leela conducted screening trials for various carinata genotypes to look for adaptability under Mississippi climatic conditions. Her thesis was titled: Thermotolerance classification of Brassica carinata genotypes using germination assay and vegetative growth parameters.

Currently she is working as a research scientist in the Special Project Unit at the National Agricultural Research and Extension Institute (NAREI), an arm of the Ministry of Agriculture in Guyana. She is presently conducting screening trials for various non-traditional crops (Irish potato, onion, carrot, etc.) for adaptation under local conditions for commercial production to reduce imports. She hopes to pursue a doctoral degree in the future.

Advisor: Dr. Bisoondat Macoon.

Magdalini Tsarpali

Magdalini's work in SPARC was to valorize carinata by converting carinata meal (CM) to a liquid product rich in glucose (hydrolysate) and a solid product rich in carbon (hydrochar). A detailed analysis of the surface properties of CM hydrochar identified valuable characteristics that render it a promising renewable adsorbent that could replace fossil-derived activated carbon.

She is a Chemical Engineer and recently defended her Ph.D. dissertation. When she graduates in May 2022 she hopes to land a career with industry related to sustainable biobased products, nanomaterials or catalysis.

Advisor: Dr. George Philippidis.

Mahesh Bashyal

Mahesh Bashyal's research work with SPARC focused on carinata nitrogen management and cycling in cotton-peanut cropping systems in the southeastern United States.

Currently, Mahesh is preparing to defend his Ph.D. dissertation work and is also preparing manuscripts for journal submission. He has accepted an offer to pursue postdoctoral work on a soil health project with Drs. Rao and Ogram at the University of Florida and plans to join the lab in August, 2022.

Advisor: Dr. Mike Mulvaney.

Manuel Camacho

NC STATE UNIVERSITY

As part of his Ph.D. dissertation, Manuel conducted field experiments to evaluate herbicide carryover risk for carinata establishment. His work confirmed that imazapic persisted in the soil for a longer time than flumioxazin and moved deeper into the soil profile.

Currently, he resides in his beloved Costa Rica, enjoying the weather, the landscapes, the "Pura Vida" lifestyle, and most importantly: his family, which he missed a lot during his time in the US. He is back at his alma mater, The University of Costa Rica, as an assistant professor at the School of Agronomy. His research will focus on soil physics while collaborating with other areas in agronomy.

Advisor: Dr. Ramon Leon.

Nahal Hoghooghi

UNIVERSITY OF GEORGIA

Nahal joined the SPARC system metrics team in 2017. She simulated the potential effects of carinata integration into southeast US cropping systems on stream hydrology and water quality in south-central Georgia at Little River Experimental Watershed.

She is now with Tetra Tech Consulting as an environmental scientist- water quality modeler. She is am part of the southeast water group in Atlanta, GA but working remotely from IL.

Advisor: Dr. Brian Bledsoe.

Omid Karami

UNIVERSITY OF GEORGIA

Omid worked on optimal crop rotation for carinata in Georgia from an environmental-economic perspective. He also worked on a supply chain model to meet a portion of Atlanta airport jet fuel demand from carinata-based SAF.

Currently, Omid is working as a postdoc at Purdue University Department of Agricultural Economics. Here his is also working on SAF production in the United States and multiple other projects including a water economics project funded by the World Bank.

Advisor: Dr. Puneet Dwivedi.

Paul Cockson

NC STATE UNIVERSITY

Paul made significant contributions toward developing nutrient sufficiency ranges and a nutrient deficiency diagnostic guide for carinata during his time with SPARC. Since graduating from NC State University, he accepted a position at the University of Kentucky. He is currently working with industrial hemp in the department of Plant and Soil Sciences.

Paul says that since he is now working with a high protein oilseed like industrial hemp, he finds himself drawing heavily on his knowledge and experiences gained working with carinata.

Advisor: Dr. Brian Whipker.

Rogerio Noia

NC STATE UNIVERSITY

The objective of Rogerios' work in SPARC was to quantify climatic risk and find ways to minimize it in carinata rotations with cotton and peanut in the southeastern US.

Currently he is a researcher at the Chair of Digital Agriculture at the Technical University of Munich. His main research area is the analysis of cropping systems to quantify the effects of climate variability and change on food production, particularly wheat.

Advisor: Dr. Clyde Fraisse.

Ruby Tiwari

UF UNIVERSITY of FLORIDA

Ruby was involved in investigating weed ecology and management of carinata cropping systems. She evaluated the influence of carinata on winter and summer weed populations in SE rotation systems. During the two years with SPARC, she conducted field and lab research, shared research at national and international meetings, and published journal and extension articles. In her words: "I always feel blessed to be a part of SPARC".

Currently, she is a PhD student in the Horticultural Sciences Department at the UF/IFAS-Southwest Florida Research and Education Center. She is focusing on improving pre-emergent herbicide efficacy and crop safety in raised bed tomato and strawberry plasticulture systems.

Advisor: Dr. Pratap Devkota.

Steven Shen

Steven graduated with a PhD in Chemistry from UF in December 2019. In SPARC, Steven focused on the method development on the extraction of sinapic acid from carinata meal. Furthermore, several series of tunable thermal properties bioplastics were synthesized from sinapic acid and its derivatives.

Steven works as a process engineer at Intel in Oregon. His typical workday as a process engineer is to make data driven and technical decisions on process and tools. Post-Covid he is starting to travel around the Portland area on culinary trips on his days off.

Advisor: Dr. Stephen Miller.

Ted Stansly

Ted has been working with carinata even before SPARC, while doing his Masters. His work was focused on glucosinolates (GSLs). He evaluated how GSLs accumulated in carinata over time and also how sulfur fertility impacted the production of GSLs and oil quality and quantity when grown in various environments. He also studied the resistance of carinata to root-knot nematodes through a process called biofumigation.

He is currently a postdoctoral researcher focusing on precision agriculture to integrate use of technology to better manage crops while reducing impact on the environment. In Ted's words: "Thank you for this opportunity and for all the people I have met while in SPARC!"

Advisor: Dr. David Wright.

Theresa Reinhardt

Theresa's lab was working on research that could improve weed management in the carinata, especially as it may relate to growing conditions in North Carolina. She worked on determining possible herbicide options, screening carinata varieties for herbicide tolerance, preparing herbicide injury diagnostic key, and developing models for weed emergence and phenology for optimal weed management timing.

Currently, she works as a researcher and teacher at the Czech University of Life Sciences in Prague. Theresa continues to work toward the application of weed biology to reduce herbicide inputs. In her words: "There is excellent opportunity for transferable knowledge between carinata and rapeseed."

Advisor: Dr. Ramon Leon.

Thinh Nguyen

Thinh was a graduate fellow working within the meal efficiency group in SPARC. His research entailed sustainable fractionation and valorization of valuable components from renewable resources like carinata defatted meal.

After graduating, he worked briefly in the fertilizer trade business in Mulhouse, France, before realizing that an academic career might be a better fit for him. He is on the lookout for postdoctoral opportunities with a focus on biorefineries.

Advisor: Dr. Jon Stewart.