



# Seminar

CESAAM, Egerton University and the College of Agriculture and Food Sciences (CAFS)- Florida Agricultural and Mechanical University, USA invites you for a one-day seminar.

Venue: ARC Hotel, Egerton University

Date: 8<sup>th</sup> June 2022



Harriett A. Paul



Dr. Lucy Ngatia



Dr. M. B. Sheikh



C. Nindo, PhD CFS



Satya Dev, PhD

## **Presenters**

*Lucy Ngatia, Ph.D.*

*Caleb Nindo, Ph.D.*

*Satya Dev, Ph.D.*

*Basha Sheikh, Ph.D.*

*Harriett Paul, MASS*

## **Presentation Topics**

Environmental Safety and Climate Change Mitigation

Food Processing Technologies to Enhance Food Security & Promote Value Addition

Affordable Farm Level Value Addition Techniques

Aflatoxins: Health Hazards, Contamination and Management

Building Partnerships to Promote Global Education, Research and International Agricultural Development Engagement in Kenya



**PROGRAMME FOR SEMINAR BY VISITING SCIENTISTS FROM FLORIDA A&M UNIVERSITY, USA ON 8<sup>TH</sup> JUNE 2022 AT ARC HOTEL.**

<b>Date</b>	<b>Time</b>	<b>Description</b>	<b>Responsibility</b>
<b>Wednesday 8<sup>th</sup> June 2022</b>	<b>8:30-9:00am</b>	<b>Arrival and Registration</b>	<b>Mr. Lawrence Ochieng</b>
	<b>9:00-10:30am</b>	<b>Presentation 1: Environmental Safety and Climate Change Mitigations Dr. Lucy W. Ngatia, Ph.D, FAMU</b>	<b>Prof. Joshua Ogendo</b>
	<b>10:30-11:00am</b>	<b>Health Break</b>	<b>ARC Hotel</b>
	<b>11:00-12:00pm</b>	<b>Presentation 2: Aflatoxins: Health Hazards, Contamination and Management. Dr. Mehboob B.Sheikh, Ph.D, FAMU</b>	<b>Prof. Joshua Ogendo</b>
	<b>12:00-1:00pm</b>	<b>Presentation 3: Food Processing Technologies to Enhance Food Security &amp; Promote Value Addition Dr. Caleb Nindo, Ph.D, UMES</b>	<b>Prof. Joshua Ogendo</b>
	<b>1:00-2:00pm</b>	<b>Lunch</b>	<b>ARC Hotel</b>
	<b>2:00-3:00pm</b>	<b>Presentation 4: Building Partnerships to Promote Global Education, Research and International Agricultural Development Engagement in Kenya Ms. Harriett A. Paul, MASS, FAMU</b>	<b>Prof. Joshua Ogendo</b>
	<b>3:00-4:00pm</b>	<b>Session with EGU students</b>	<b>Prof. Joshua Ogendo</b>
<b>4:00-5:00pm</b>	<b>Presentation 5: Affordable Farm Level Value Addition Techniques. Dr. Satya Dev, PhD, FAMU</b>	<b>Prof. Joshua Ogendo</b>	

## Profiles.

### Harriett A. Paul

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Director, International Agriculture & Center for International Agricultural Trade Development Research and Training

**Expertise:** Public Policy & International Ag Project Management

**Institution:** Florida A&M University (FAMU)



Harriett Paul is Director, Office of International Agriculture and Center for International Agricultural Trade Development Research and Training and teaches Service Learning in International Agriculture at Florida Agricultural & Mechanical University (FAMU) in Tallahassee, Florida. A social scientist, she holds a Masters in Applied Social Sciences from FAMU. Ms. Paul provides the institutional leadership for FAMU's partnership with Egerton University. During her career, she has served in both the public and private sector. She has held posts in the U.S. national government as a U.S. Senate staffer with expertise in intergovernmental relations and public policy; in the international private sector as an International Marketing Specialist in Haiti; and most recently in the U.S. Non-profit community as the

Founder and President of the Marialla V. Magloire Foundation, Inc., a 501 (c) 3 public charity. She has spent more than 30 years in higher education in international agricultural development as a Principal and Co-Principal Investigator. Ms. Paul has designed and implemented numerous international education, workforce development, institutional capacity building, food security, and economic growth programs funded by various donors (USAID, USDA, USDOE, POA, MC, CNFA, IESC). These programs have improved the quality of life of disadvantaged and under-served people globally, particularly small and medium scale farmers with a special focus on women and youth. She is an Association of Public and Land Grant Universities Food Systems Leadership Fellow. Her work currently is focused in the Caribbean, Southern Africa, East Africa, West Africa, Asia, Europe, and Florida.

**Contact:** [harriett.paul@fam.u.edu](mailto:harriett.paul@fam.u.edu)

**Website:** <https://cafs.fam.u.edu/departments-and-centers/international-agriculture/index.php#>

### Dr. Lucy Ngatia

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Dr. Lucy Ngatia is an Assistant Professor and Soil Biogeochemist at College of Agriculture and Food Sciences, FAMU. Dr. Ngatia is widely researched on climate change mitigation, eutrophication mitigation, nutrient cycling and heavy metals contamination. Her research has local, regional, national and international scope, cutting across Apalachicola National Forest wetlands, African savanna, Oklahoma water reservoirs, Ocala National Forest, Florida Everglades, Chipola Experimental Forest and Quincy farm. She has collaborated actively with researchers in several other disciplines across government agencies, Universities and private sector and trains undergraduates, graduates and Post-Doctoral associates. In addition, Dr.

Ngatia teaches Soil chemistry, Soil fertility, Nature and Properties of Soil and Soil and Water Conservation.

Contact: [lucy.ngatia@fam.u.edu](mailto:lucy.ngatia@fam.u.edu) Website [http://cafs.fam.u.edu/departments-and-centers/research/center-for-water-resources/center\\_faculty/Ngatia-Lucy.php](http://cafs.fam.u.edu/departments-and-centers/research/center-for-water-resources/center_faculty/Ngatia-Lucy.php)

## Dr. Mehboob Basha Sheikh

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Dr. Mehboob Basha Sheikh is a Professor of Biotechnology and Product Development at Florida A&M University. He possesses the academic background and expertise to successfully perform tasks related to Biotechnology, Food safety, Nutrigenomics. He has extensive background and knowledge in Biotechnology with specific training in biochemistry, plant physiology, genomics, proteomics, metabolomics, bioprocessing, aflatoxins and product development. He believes in multidisciplinary research and is involved in proteomics, metabolomics, developmental biology, biotic and abiotic stresses, food safety, instrumental analysis, bioinformatics, nutraceuticals, bioprocessing, value addition, bioactivity evaluation, and therapeutics. As a PI and co-PI on multiple USDA-, NIH-, Industry-, State- and University-funded grants, he has established groundwork for multidisciplinary research by incorporating cutting edge technologies in developmental biology, bioprocessing, bioactivity, cytotoxicity, analytical and instrumental analysis using in vitro cell culture systems to address issues relevant to inflammation, cancers, obesity, ageing, aflatoxins. During this collaborative project with Egerton University, Dr. Sheikh's research will focus on the Interrelationship between stilbenes producing ability and Aspergillus colonization of peanut (*Arachis hypogaea* L.) and the Efficacy of Effective Microorganisms (EM) to suppress aflatoxin-producing soil microflora for controlling Aspergillus invasion and aflatoxin contamination of peanut. Contact: [Mehboob.sheikh@famu.edu](mailto:Mehboob.sheikh@famu.edu)

## Caleb Nindo, PhD CFS

University of Maryland Eastern Shore, Princess Anne, MD 21853

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Dr. Caleb Nindo is Professor and Director of the Food and Agricultural Sciences PhD Program at the University of Maryland Eastern Shore - an 1890 Land-grant University (Princess Anne, Maryland, USA). Dr. Nindo's broader research interests are to investigate the application of novel food processing technologies to enhance food safety, maintain quality, and to develop products with longer shelf life. Some of the areas include food drying, development of edible films, and more recently, high pressure processing. He obtained his B.S. and M.S. degrees in Agricultural Engineering from University of Nairobi (Kenya), and PhD in Food Processing Engineering from Iwate University (Japan). He has many years of research and teaching in the areas of food/postharvest processing and is actively involved with international partners in developing countries to train students, find solutions to challenges that resource-poor farmers face.

Contact: [cinindo@umes.edu](mailto:cinindo@umes.edu)

## Satyanarayan Dev, PhD

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Dr. Satyanarayan Dev, is an Associate Professor in the Biological Systems Engineering Program at the College of Agriculture and Food Sciences in Florida A&M University

(FAMU) and an Adjunct Professor in the Department of Chemical and Biomedical Engineering at the FAMU-FSU Joint College of Engineering. He has an interdisciplinary background in biological engineering, food science, microbiology, and food engineering. His research interests are in the areas of Agtech, bioenergy, food safety, pathogen detection, nutraceuticals and functional foods. His research projects have focused on bioenergy, bioprocessing, process optimization, modeling and simulation of processing operations, electromagnetic equipment design for food and

bioprocessing focusing on food safety, value addition, nutritional quality, sustainable cold chain, thermo as well as biochemical conversion of biomass, among others. He has recently been involved in research projects dealing with the equipment design such as:

1. Design and development of LiDAR drones and MASER and SASER drone swarms for sustainable environmental monitoring and control.
2. Design and scale up of bioprocess equipment for sustainable energy systems,
3. Optimization and scale up using electro-technology for sustainable refrigeration systems,
4. Pasteurization of in-shell eggs,
5. Electrolyzed oxidizing water for clean-in-place food safety applications,
6. Assessment of nutritional quality processed using conventional and non-conventional techniques,
7. Design of heat treatment apparatus for enhancing the quality and extend the shelf life of fruits and vegetables using Computational Fluid Dynamics Approaches.
8. Novel pretreatments for drying,
9. Microwave assisted thermochemical conversion of biomass
10. Fuzzy Logic Indicator-based Modeling Approach for forest biomass harvesting
11. Biosensors for defense and space application
12. Waveguides for Food Safety as well as Extra-terrestrial and in-space thrusters

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