

Cyberbiosecurity and the SmartFarm Innovation Network

AGENDA

January 31, 2020, 1:00-4:00 pm

Newman Library Room 101 or Zoom <https://virginiatech.zoom.us/my/kgantt>

1:00 Introduction and Overview – Sue Duncan, Associate Director, Virginia Agricultural Experiment Station/CALS

1:15 Building the Baseline through Internal Funding Sources (5x5 presentations)

1:15 Song Li and team:

- Identifying select agents using a nanopore sequencing and secure cyberphysical system (Funding source: CyberBiosecurity in Agriculture and Life Sciences seed funding through VAES)
- Developing SmartSense: A robotic platform for high throughput phenotyping and genome wide association analysis (Funding source: Big Agriculture Data – Finding, Visualizing, and Translating the Outputs – joint funding from VAES and ICAT SEAD grant)

1:20 Bingyu Zhao and team:

- Dancing Plants: integrating plant imaging and acoustics to improve plant growth (Funding source: Big Agriculture Data – Finding, Visualizing, and Translating the Outputs – joint funding from VAES and ICAT SEAD grant)

1:25 Robin White, Vitor Mercadante and team:

- Establishment of SmartFarm Innovation Network nodes at Middleburg and Shenandoah Valley ARECs (Funding source: VAES SmartFarm Innovation Network Animal Infrastructure Seed funding)

1:30 Susan Duncan, Tiffany Drape and team - Presentation by undergraduate students Zoie McMillian and Noah Magerkorth

- Designing cyberbiosecurity case studies for the food and agricultural system for integrating education, workforce development, and bioeconomy (Funding Source: ICAT Mini SEAD grant).

1:35 Bo Zhang and team:

- Input from the edamame research project to the cyberbiosecurity case study project. (Funding source: USDA SCRI project - Developing edamame varieties for mechanized production and improved consumer acceptance to increase sustainability of the vegetable industry.)

1:40 Neal Vines, CALS IT Director

- Wireless and internet systems for ARECs and farm locations – CALS actions and discoveries

1:45 Q&A with speakers

2:00 Positioning our Leadership Momentum in Cyberbiosecurity and SmartFarm Innovation Network

2:00 CALS Leadership Perspective

- Dean Alan Grant, CALS
- Dr. Saied Mostaghimi, Associate Dean for Research and Director of the Agricultural Experiment Station

2:20 Creating visibility – Sue Duncan, Ford Ramsey, Randy Murch

2:20 Cyberbiosecurity as a rising VT initiative - Commonwealth CyberInitiative and the Southwest Virginia Node, Innovation Campus, Rural Virginia Initiative

2:25 Overview: Frontiers in Bioengineering and Biotechnology special issue: Mapping the Cyberbiosecurity Enterprise – overview

2:30 Wade Thomason presenting an overview of one manuscript – Cyberbiosecurity: A new perspective on protecting U.S. food and agricultural system

2:35 National Workshop: Securing Agriculture, Food, and its Economy (SAFE) with Cyberbiosecurity

- Sue Duncan and team: Funded through USDA grant, FACT: Regional multisector cyberbiosecurity workshop to safeguard the agriculture and food bioeconomy: Community building, training, strategy
- Invitation for CALS/VT participation – partial travel support for 15 faculty; request for promotion and advertising of workshop to stakeholders

2:45-3:00 Networking Break (Refreshments provided)

3-4pm General discussion (Moderated by Kira Gantt)

- Current and upcoming RFAs
- What outcomes from last meeting (3/11/2019) led to success?
- What gaps exist in the current group or efforts?
- What vision do we have for creating VT preeminence in cyberbiosecurity and agriculture and food systems? How do we get there?
- Wrap up- Summary and Actions