

DEPARTMENT of
FOOD SCIENCE *and* TECHNOLOGY
Autumn 2022 Seminar Series

**“Systems-level modeling:
Step-by-step example in livestock production”**



Nora Bello, PhD, DVM

Professor

Department of Animal Sciences

The Ohio State University

WEDNESDAY

November

16

4:00-5:00 pm

Parker 118

Trained as a veterinarian, animal scientist and statistician, Dr. Bello's research and teaching interests comprise modern statistical modeling and analytics motivated by relevant problems in agriculture and veterinary medicine. Specifically, her focus areas involve hierarchical modeling –including both Bayesian implementations and their frequentist counterparts, mixed models– and encompass both methodological developments and innovative applications. Most recently, her efforts have centered around modeling approaches to animal agriculture from a comprehensive systems perspective. Systems-level thinking calls for synergistic integration across scientific domains with extensive analytic capacity. In this talk, we will discuss a step-by-step approach to systems modeling applied to an example in swine production. Working at the interphase of graphical models, networks and structural equations, we illustrate the thought process and modeling exercise for systems, followed by an assessment of model stability and statistical power. The modeling approach is relevant to other biological systems with analogous data features, including the food sciences.

This seminar will take place virtually and in person.

To Join via Zoom: [Seminar ZOOM Option](#)

Passcode: 844666