**NCCC170: Research Advances in Agricultural Statistics**

Annual meeting

Hosted at Oklahoma State University, Stillwater, OK

Meeting held both in-person and by Zoom

June 16-17, 2022

**Members present for business meeting and technical program:** Nora Bello (OH), Bruce Craig (IN, Admin.), Xin Dai (UT), \*Sara Duke (USDA-ARS), Susan Durham (UT), Carla Goad (OK), Clark Kogan (WA), \*Nick Keuler (WI), Raul Macchiavelli (PR), Larry Madden (OH), Jarad Niemi (IA), Bill Price (ID), Julia Sharp (CO), John Stevens (UT), Kathy Yeater (USDA-ARS) (\* not currently on the NIMSS participant list)

**Members present for technical program but not business meeting:** Alex Lipka (IL), Xuelin Luo (GA), Gayla Olbricht (MO), \*Hans-Peter Piepho (Germany), Aaron Rendahl (MN), Rob Tempelman (MI) (\* not currently on the NIMSS participant list)

**Others present for technical program:** Phil Alderman (OSU), Kitty Cardwell (OSU), Mindi McCann (OSU), Bryan Vinyard (USDA-ARS), Huizi Wang (OSU), Nishantha (Sam) Samarakoon (OSU),

**2022 Officers:** Nora Bello, Chair; Susan Durham, Secretary; Clark Kogan, Program Chair; Carla Goad, local arrangements

**Minutes:**

**Technical program:** The meeting began at 9:00 a.m. CT on Thursday, June 16, 2022, with a welcome and opening remarks by Randy Raper, Assistant Vice President-Facilities, Division of Agriculture and Natural Resources, and Assistant Director-Oklahoma Agricultural Experiment Station, OSU; and by Mindi McCann, Department Head and Professor, Department of Statistics, OSU.

The technical program consisted of the following presentations and discussions:

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| Laurence V. Madden  *Ohio State University* | Consideration for the use of linear quantile mixed models for describing highly variable data in agriculture |
| Alex Lipka  *University of Illinois at Urbana-Champaign* | Using simulations to assess the performance of genotype-to-phenotype models accounting for pleiotropy, variance-controlling loci, and interspecific breeding material |
| Julia Piaskowski  *University of Idaho* | Mixed models in R: Mind the gap |
| Phil Alderman  *Oklahoma State University* | Conceptual frameworks for embedding ordinary differential equation models within Bayesian hierarchical modeling |
| Huizi Wang  *Oklahoma State University* | Classification methods for high-dimensional MiFi® data |
| Group discussion led by Aaron Rendahl  *University of Minnesota* | Moving to a world beyond “p < 0.05”: How far have we come, and how far we have yet to go? |
| Jarad Niemi  *Iowa State University* | Computer model emulation in agriculture |
|  |  |
| Bruce Craig  *Purdue University* | Estimating disease prevalence in the absence of a gold standard via Bayesian model averaging |
| Clark Kogan  *StatsCraft LLC* | Optimizing blueberry pollination to ensure future yields |
| Group discussion | Open forum for current challenges in research design and statistical analysis |

**Business meeting:** The business meeting began at about 9:30 a.m. Nora Bello presided. The following items were discussed:

1. Nora thanked Carla for local arrangements and Clark for organizing the technical program.
2. Nora noted that the annual report is due within 60 d. The format for the report is new, with more emphasis on impact. She would like everyone’s input within the next two weeks and will distribute a link to a Google document for facilitate input.
3. Old business
   1. Nora led a review of the current project objectives; our output focus for the annual report should center on project objectives.
   2. Nora encouraged everyone—including new participants—to confirm their registrations in NIMSS.
   3. The project has a new website URL, which currently links to the old and out-of-date URL. Jarad volunteered to work at bringing it up to date. There was discussion on whether the website should move from the University of Arkansas to Google or Github. In addition to not being tied to any one institution, an alternative platform would allow project participants to more readily share information and documents.
4. New business
   1. Planning for future meetings
      1. 2023: Tentatively, University of Wisconsin with Nick Keuler and Guilherme Rosa as local hosts, June 15-16; Utah State University is the backup location. Program chair: Aaron Rendahl. MN
      2. 2024: Mayagüez, Puerto Rico with Raúl Macchiavelli as local host. Dates to be determined. Program chair to be determined.
   2. Now that the AgStat Conference has been re-launched with massive efforts by NCCC170 participants, the NCCC170 group considered whether to step back to allow AgStat and NCCC170 to have distinct identities. There was general consensus that separation would be desirable, while still acknowledging overlap in the AgStat planning committee for the time being.
   3. There was some discussion of a potential need for a central repository, both for AgStat conference proceedings and for NCCC170 documents.
   4. Jarad Niemi, IA, volunteered to relaunch an updated website for the NCCC-170 group. The old website (https://nccc170.uark.edu/) used to be hosted by University of Arkansas and has not been updated since May 2020 due to lack of staff support.
5. Photos were made of the group in the meeting room and in front of the OSU Library. We looked fabulous.
6. Nora moved and Susan seconded adjournment at 11:00 am.

Some participants toured the OSU Teaching Greenhouses, led by Dr. Bruce Dunn, Horticulture. OSU.