Kansas State University Libraries

New Prairie Press

Conference on Applied Statistics in Agriculture

2004 - 16th Annual Conference Proceedings

Editor's Preface and Table of Contents

George A. Milliken

Follow this and additional works at: https://newprairiepress.org/agstatconference



Part of the Agriculture Commons, and the Applied Statistics Commons



This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License.

Recommended Citation

Milliken, George A. (2004). "Editor's Preface and Table of Contents," Conference on Applied Statistics in Agriculture. https://doi.org/10.4148/2475-7772.1147

This is brought to you for free and open access by the Conferences at New Prairie Press. It has been accepted for inclusion in Conference on Applied Statistics in Agriculture by an authorized administrator of New Prairie Press. For more information, please contact cads@k-state.edu.

Proceedings



Kansas State University Conference

on



Holiday Inn-Holidome Manhattan, Kansas

April 25-27, 2004



Preface

These proceedings contain papers presented in the sixteenth annual Kansas State University Conference on Applied Statistics in Agriculture, held in Manhattan, Kansas, April 25-27, 2004. The purpose of the conference is to provide a forum for discussion on the application of statistics to problems in agricultural sciences. Papers and posters presented at the conference and included in the proceedings are intended to provide information to both the statistician and agricultural researcher on current issues of agricultural and general statistical interest.

The keynote speaker was George Fernandez, an associate professor of applied economics and statistics, and state specialist with the University of Nevada Cooperative Extension at the University of Nevada, Reno. On April 25, 2004, Professor Fernandez presented a workshop titled Statistical Data Mining Using SAS[®] Macro Applications.

Each contributed paper was refereed before being accepted for publication in these proceedings. The papers were accepted for publication based on their interest, relevance, innovation and application to the agricultural sciences and statistics.

Thanks goes out to the following referees: Debbie Boykin, Jiziang Wu, Ramon Littell, Edward Gbur, Mary Christman, Edzard van Santen, Dale Van Vleck, James Higgins, Kathleen Kiernan, Rual Macchiavelli, and Barry Moser; to Jane Cox and Shannon Reves for their help in assembling the proceedings; and finally to our conference sponsors: American Statistical Association, Eli Lily & Company, Pfizer Inc, Pioneer Hi-Bred International Inc, Quintiles, Inc and the USDA-ARS for their continued support.

George A. Milliken, Ph. D. Proceedings Editor

Table of Contents

Page #
Applications of Statistical Data Mining Methods
G. Fernandez, University of Nevada-Reno1
Random Models with Direct and Competition Genetic Effects
L.D. Van Vleck, USDA-ARS
J.P. Cassady, North Carolina State University
A Comparison of Spatial Prediction Methods Using Intense Spatially-Acquired Water
Quality Data
E.B. Moser, Louisiana State University
V.H. Rivera-Monroy, Louisiana State University
A.R. Alcantara-Eguren, Universidad Iberoamericana-Puebla31
The standard Trade of the standard of the stan
Information Technologies and the Design and Analysis of Site-Specific Experiments within Commercial Cotton Fields
J.N. Jenkins, USDA-ARS
J.L. Willers, USDA-ARS
C. G. O'Hara, Mississippi State
G.A. Milliken, Kansas State University41
Prediction of Yellow Starthistle Survival and Movement over Time and Space
F. Tian, University of Idaho
B. Shafii, University of Idaho
C.J. Williams, University of Idaho
T.S. Prather, University of Idaho
W.J. Price, University of Idaho
L.W. Lass, University of Idaho74
L. W. Lass, University of Idaho74
Genetic Mapping of Gene Expression Levels: Expression Level Polymorphism Analysis for
Dissecting Regulatory Networks of Plant Disease Resistance
K. Kim, Purdue University
R.W. Doerge, Purdue University
M.A.L. West, University of California
D.A. St. Clair, University of California
R.W. Michelmore, University of California
The Onset, Cessation, and Rate of Growth of Loblolly Pines in the FACE Experiment
S. Aref, Virginia Tech
D. Moore, University of Illinois at Urbana-Champaign
E. DeLucia, University of Illinois at Urbana-Champaign
Automatic Model Selection in the Mixed Models Framework
M. Kramer, BCS/ARS/USDA127
Statistical Analysis Software for Multiplicative Interaction Models
E-J. Lee, Advanced Micro Devices Inc.
D.E. Johnson, Kansas State University

Some Results on the Design of Experiments for Comparing Unreplicated Treatments	
R.J. Martin, United Kingdom	
J.A. Eccleston, University of Queensland (Australia)	
N. Chauhan, Prosthetics Molecular Design Ltd (United Kingdom)	
B.S.P. Chaun, ABN-Amro Bank, (China)	157
Introduction to Doverion Opentitative Trait I caus Analysis for Delantoids	
Introduction to Bayesian Quantitative Trait Locus Analysis for Polyploids D. Cao, Purdue University	
B.A. Craig, Purdue University	
R.W. Doerge, Purdue University	172
·	
Statistical Analysis of 70-mer Oligonucleotide Microarray Data from Polyploid Experim	nents
Using Repeated Dye-swaps	
H. Jiang, Purdue University	
J. Wang, Texas A&M University	
L. Tian, Texas A&M University	
Z.J. Chen, Texas A&M University	107
R.W. Doerge, Purdue University	187
Estimating Rheological Properties of Yogurt Using Different Versions of the Freundlich	1
Model and Design Matrices	ı
M. Zhou, University of Nebraska at Lincoln	
A.M. Parkhurst, University of Nebraska at Lincoln	
H.K. Voss, University of Nebraska at Lincoln	
C. L. Weller, University of Nebraska at Lincoln	199
C. D. Weller, Oliversity of Neoraska at Elifeoni	177
Comparing Analyses of Unbalanced Split-plot Experiments	
C. Smith, Kansas State University	
D.E. Johnson, Kansas State University	212
Analyzing Binomial Data in a Split-Plot Design: Classical Approaches or Modern	
Techniques?	
L. Fang, Kansas State University T. Loughin, Kansas State University	225
1. Loughin, Ransas State University	223
Hotelling's T ² Approximation for Bivariate Mixed (Dichotomous and Continuous) Data	
I. Khamis, Southeast Missouri State University	
P. Singh, Southeast Missouri State University	
J. Higgins, Kansas State University	241
•	
Nonlinear Models with Repeated Measures for Analyzing Disease Progress in Plant	
Epidemiology	
R. Macchiavelli, University of Puerto Rico	
W. Robles, University of Puerto Rico	
E. Abreu, University of Puerto Rico	
A. Pantoja, University of Puerto Rico	255

An Example of Developing Covariates for Problems in Precision Agriculture	
D. Meek, USDA-ARS-MWA NSTL	
J.W. Singer, USDA-ARS-MWA-NSTL	270
Conditioning Plots and Designed Experiments	
J.S. Pontius, Kansas State University	
J.W. Slocombe, Kansas State University	
J.E. Boyer, Jr., Kansas State University	279
Identification of Errors in Cotton Fiber Data Sets Using Bayesian Networks	
G.F. Sassenrath, USDA-ARS APTRU	
J.E. Boggess, Mississippi State University	
X. Bi, Mississippi State University	
H.C. Pringle, Delta Research and Extension Center	287
Distribution of Boll Number and Lint Yield by Time and Position in Upland Cotton	
Cultivators	
J. Wu, Mississippi State University	
J.N. Jenkins, USDA-ARS	
J.C. McCarty, Jr., USDA-ARS	296
A Comparison of Geostatistical and Spatial Autoregressive Approaches for Dealing with	
Spatially Correlated Residuals in Regression Analysis for Precision Agriculture	
Applications.	
I. Colonna, University of Illinois at Urbana	
M. Ruffo, University of Illinois at Urbana	
G. Bollero, University of Illinois at Urbana	
D. Bullock, University of Illinois at Urbana	310

List of Attendees

Aref, Susanne, Virginia Tech

Bauer, Karin, Midwest Research Institute **Bi**, Lieqi, Kansas State University

Blankenship, Erin, University of Nebraska-Lincoln

Boberg, Wendy, Kansas State University **Boyer**, John, Kansas State University

Boykin, Debbie, USDA-Ag Research Service

Bryson, Lawrence, Pfizer

Bsharat, Rebhi, Kansas State University

Burch, Brent, Northern Arizona University

Camp, Mary, USDA/ARS

Cao, Dachuang, Purdue University

Chapman, Phillip, Colorado State University **Christman**, Mary, University of Maryland

Cochrane, Chun-Yen, Kansas State University

Coldwell, Ryan, University of Nebraska-Lincoln

Colonna, Ignacio, Univ of Illinois @ Urbana-Champaign

Cornelius, Paul, University of Kentucky **Cui**, Zhanglin, Eli Lilly & Company

DeCook, Rhonda, Iowa State University

Doerge, Rebecca, Purdue University

Douglass, Larry, University of Maryland

Dubnicka, Suzanne, Kansas State University

Duke, Sara, USDA-ARS

Durham, Susan, Utah State University

Dwyer, Andy, University of Nebraska-Lincoln

Eskridge, Kent, University of Nebraska-Lincoln **Evenson**, Paul, South Dakota State University

Fang, Liang, Kansas State University

Fernandez, George, University of Nevada Reno

Fernando, Indra, Quintiles Inc

Ferry, Nancy, DuPont Crop Protection

Foriegn Part, Applied Stats, Kansas State

University

Freese, Larry, USDA/GIPSA

Gabelhouse, Zachary, University of Nebraska-Lincoln

Gadbury, Gary, University of Missouri-Rolla

Gbur, Edward, University of Arkansas

Gibson, Fleming

Hanford, Kathy, USDA/ARS/MARC

Heilmann, Cory, Iowa State University

Herink, Catherine, University of Nebraska-Lincoln

Higgins, James, Kansas State University

Hinds, Mark, Pioneer Hi-Bred International **Hong**, Nan

Huang, Zhenyu, Pioneer Hi-Bred

Jaeger, Sarah, University of Nebraska-Lincoln **Jayaprakash**, Anil, University of Nebraska-Lincoln

Jayawardhana, Ananda, Pittsburg State University

Jiang, Hongmei, Purdue University Johnson, Dallas, Kansas State University

Jung, Yoonsung, Kansas State University **Kachman**, Stephen, University of Nebraska-Lincoln

Kang, Qing, Kansas State University

Kelly, Rowena, USDA-ARS Corn Host Plant

Resistance

Khamis, Imad, Southeast Missouri State University

Kiernan, Kathleen, SAS Institute

Kim, Kyunga, Purdue University

Kramer, Matt, USDA/ARS

Krishnan, Gopal, Pioneer Hi-Bred International

Laytimi, Fouzia, Kansas State University

Lee, Seunghee, Kansas State University

Lee, Eun-Joo, Kansas State University

Li, Wenzhi, DuPont

Littell, Ramon, University of Florida

Liu, Weiwei

Loughin, Tom, Kansas State University

Maas, Tisha, University of Nebraska-Lincoln

Macchiavelli, Raul, University of Puerto Rico

Mackey, Bruce, USDA/ARS

MacKinnon, April, Milliken Associates Inc

Martin, Richard, North Carolina State University

Max, Timothy, USDA/Forest Service

Meek, David, USDA-ARS

Miller, Talaya, University of Nebraska-Lincoln

Milliken, George, Kansas State University

Moser, Barry, Louisana State University

Mowrey, Daniel, Eli Lilly & Company

Munasinghe, Wijith, Kansas State University

Nettleton, Daniel, Iowa State University

O'Hara, Chuck, Mississippi State University

Palmquist, Deb, USDA/Ag Research Service

Parkhurst, Anne, University of Nebraska-

Perera, Subashan, University of Kansas Medical Center

Perez, Tim, Kansas State University
Perrett, Jamie, Kansas State University
Pintar, Adam, Pittsburg State University
Pontius, Jeffrey, Kansas State University
Popham, Tom, USDA/ARS
Price, William, University of Idaho
Ren, Cuirong, South Dakota State University
Ridpath, Lance, Kansas State University
Roths, Scott, Kansas State University
Ruffo, Matias, Univ of Illinois @ Urbana-Champaign

Sassenrath, Gretchen, USAD/ARS

Shafii, Bahman, University of Idaho

Simon, Stephen, The Childrens Mercy Hospital

Singh, Pradeep, Southeast Missouri State University

Smith, Christina, Kansas State University

Stanley, Bruce, DuPont Crop Protection

Stevens, John, Purdue University

Stroup, Walt, University of Nebraska-Lincoln

Sy, Oumar, Kansas State University

Taylor, Veronica, Milliken Associates

Tebbs, Joshua, Kansas State University

Tolos, Siti, Kansas State University

Travnicek, Daryl, University of Nebraska-Lincoln

Vahl, Christopher, Kansas State University

van Santen, Edzard, Auburn University

Van Vleck, Dale, USDA/ARS

Vezzu, Sailesh, Kansas State University

Villarreal, Milton

Vinyard, Bryan, USDA/ARS

von Borries, George, Kansas State University

Wang, Dong, Iowa State University

Wang, Chenguang, University of Nebraska-Lincoln

Waris, Sadaf, Kansas State University

West, Mark, USDA/ARS/NPA

Whitehand, Linda, USDA/ARS/PWA/WRRC

Wickremasinghe, W. N., Kansas State

University

Willers, Jeffrey, USDA-ARS

Wilson, Samuel, Kansas State University

Wroughton, Jacqueline, University of

Nebraska-Lincoln

Wu, Jixiang, Mississippi State University