Department of: Mathematics and Statistics

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1. Refereed publications and book chapters

Dr. Arasu

Determination of All Possible Orders of Weight 16 Circulant Weighing Matrices, *Finite Fields & Applications, 12, 2006, Pages 498 – 538.*

On Abelian (2^(2m+1)(2^(m-1)+1), 2^m(2^m+1), 2^m) Difference Sets, *Journal of Combinatorial Theory, Series A. V. 113, 2006, pages 1120 – 1137.*

Circulant Weighing Matrices of Weights, 2 2t, *Designs, Codes and Cryptography, V. 41, 2006, Pages 111 – 123.*

Existence Status of Some Previously Open Abelian Difference Sets, *Discrete Math, 306, 2006, pages 1467 – 1473.*

Dr. Chen

On Abelian (2^(2m+1)(2^(m-1)+1), 2^m(2^m+1), 2^m) Difference Sets, *Journal of Combinatorial Theory, Series A. V. 113, 2006, pages 1120 – 1137.*

Dr. Evans

Latin Squares Without Orthogonal Mates, *Designs, Codes and Cryptography,* V. *40, 2006, pages 121 – 130.*

Complete Mapping & Sequencing of Finite Groups, *CRC Handbook of Combinatorial Designs, 2nd edition, pages 345-352.*

Dr. C Huang

Global Smooth Nonconstant Vortex Patches in Bounded Domains, *Far East Journal of Mathematical Sciences, V. 22, 2006, pages 227 – 238.*

Dr. Q. Huang

On the Mean Oscillation of the Hessian of Solutions to the Monge-Ampere Equation, Advances *in Mathematics, V. 207, 2006, pages 599 – 616.*

On a Priori C^ {1,alpha} and W^{2,p} Estimates for a Parabolic Monge-Ampere Equation in the Gauss Curvature Flows, *American Journal of Mathematics, V. 128, 2006, pages 453 – 480.*

Dr. Khamis

Comparison of Male and Female Breast Concer Incidence Trends, Tumor Characteristics, and Survival, *Annals of Epidemiology, V. 15, pages 773 – 780.*

Academic Consulting Profile: Wright State University, *The Statistical Consultant, V. 23, May,* 2006, *pages 11 – 14.*

5-FU Uptake in Peritoneal Metastases After Pretreatment With Radioimmunotherapy or Vasoconstriction: An Autoradiographic Study in the Rat, *Anticancer Research, V. 25, pages 917 – 922.*

Dr. Liu

Weights Modulo a Prime Power in Divisible Codes and a Related Bound, *IEEE Trans Inform Theory, V. 52, 2006, pages 4455 – 4463.*

Dr. Mathews

Where is the Moon Tonight?, *Mathematics Teaching in the Middle School, V. 11, September 2006, Pages. 467 – 475.*

Dr. McKee

S-minimal Unions of Disjoint Cycles & More Odd Eulerian Characterizations, *Congressus Numerantiaum, V. 177 2005/06, pages 129-132.*

Chords and Connectivity, *Bulletin of the Institute for Combinatorics & Its Application V. 47, 2006, pages 48 – 52.*

Chordless Cycles in Line Graphs, *Congressus Numerantium, V. 182, 2006, pages 29-35.*

Dr. Slilaty

Bias Matroids with Unique Graphical Representations, *Discrete Math, V. 306, 2006, Number 12, pages 1253 – 1256.*

Algebraic Characterizations of Graph Imbeddability in Surfaces and Pseudosurfaces, *Journal of Knot Theory Ramifications, V. 15, 2006, Number 6, pages 681 – 693.*

Dr. Sun

Bahadur Representation for sample Quantiles Under Weak Dependence, *Statistics and Probability Letters, 76, 2006, pages 1238 – 1244.*

Bootstrapping the Sample Quantile of a Weakly Dependent Sequence, *Sankhya, V. 68, 2006, Part 1, pages 130 – 166.*

Dr. Tarpey

Estimation in Regression Models with Externally Estimated Parameters, *Biostatistics, V. 7, 2006, pages 115 – 129.*

Allometric Extension for Multivariate Regression Models, *Journal of Data Science, V. 4, pages 479 – 495.*

Dr. Voss

Analysis of Orthogonal Saturated Designs, Chapter 12 in *Screening: Methods for* Experimentation *in Industry, Drug Discovery, and Genetics, pages 268 – 286*, Springer Science and Business Media Inc.

On Adaptive Testing in Orthogonal Saturated Designs, *Statistica Sinica, V. 16, pages 227 – 234.*

Dr. Wang

Smallest Confidence Intervals for One Binomial Proportion, *Journal of Statistics Planning and Inference, V. 136, pages, 4293 – 4306.*

Analysis of Orthogonal Saturated Designs, Chapter 12 in *Screening: Methods for* Experimentation *in Industry, Drug Discovery, and Genetics, pages 268 – 286*, Springer Science and Business Media Inc.

On Adaptive Testing in Orthogonal Saturated Designs, *Statistica Sinica, V. 16, pages 227 – 234.*

2. Presentations and invited talks

Dr. Arasu

Invited Talks:

Selfdual Codes, OSU Denison Conference, Columbus OH
Perfect Sequences, University of Scranton
Perfect Sequences, University of Hawaii

Presentations:

Perfect Sequence Construction, WSU

Dr. Chen

Invited Talks:

Relative Difference Set Fixed by Inversion, University of South Florida

Presentations:

Relative Difference Set Fixed by Inversion, East Tennessee State University, TN
Twisted Kronecker Product of Cocyclic Generalized Hadamard Matrices, Florida Atlantic University, FL.

Dr. Dombrowski

Invited Talks:

Jacobi Matrices: Absolute Continuity, Eigenvalues and Spectral Gaps, Ohio State University, Columbus, OH
Jacobi Matrices: Absolute Continuity, Eigenvalues and Spectral Gaps, Lund University, Sweden

Dr. Evans

Invited Talks:

Latin Squares, Orthogonal Mates & Groups, Carlton University, Canada
Latin Squares, Orthogonal Mates & Groups, OSU, Columbus OH

Presentations:

Latin Squares, Orthogonal Mates & Groups, WSU

Dr. Huang

Invited Talks:

Alexandrov Type Inequalities & Regularity of Weak Solutions of the Reflector Problem, University of Iowa, Iowa City.
Geometric Properties of Cross Sections & Regularity of the Monge-Ampere Equation, Beijing Normal University, China.
Regularity of Solutions to the Monge-Ampere Equation, Univ. of Wisconsin, Madison

Presentations:

Alexandrov Type Estimates for the Reflector Antenna Problem & Application to the Regularity of Weak Solutions, Special Session of the AMS meeting, Cincinnati, OH.

Dr. Khamis

Invited Talks:

Is My Data Valid? Statistical Pitfalls, Operator Training Committee of Ohio, Columbus, OH
Buffon's Needle Problem – Variations & Applications, Duquesne University, Pittsburgh, PA

Dr. Kinateder

Invited Talks:

Busy Period of the M/M/1 Queue with Constrained Workload, AFIT, WPAFB, OH
An Ito Formula for Domain-Valued Processes Driven by Stochastic Flows, Univ. of Cincinnati, Cincinnati, OH

Dr. Liu

Invited Talks:

Weights Modulo: A Prime Power in Divisible Codes & a Related Bound, Wichita State University, Kansas

Dr. Mathews

Invited Talks:

Using Fathom to Study Real-World Problems, Ohio Technology Summit, Columbus, OH

Presentations:

An Experiment to Change University Teaching, Association of Mathematics Teacher Educators, Tampa, FL

Dr. McKee

Invited Talks:

Thinking Outside of the Graph, CombinaTexas' 06 Conference of Graph Theoretical Chemistry & Bioinformatics, Texas Southern University, Houston, TX

Presentations:

Chordless Cycles in Line Graphs, 37th Southeastern International Conference on Combinatorics, Graph Theory & Computing, Florida Atlantic University, Boca Raton, FL

Chord-Set Subgraphs, 42nd MIdwest GrapH TheorY (MIGHTY) Meeting, Ohio State University-Marion, Marion, OH

Minimal Weak Separators of Chordal Graphs, 19th Cumberland Conference on Combinatorics, Graph Theory & Computing, East Tennessee State University, Johnson City, TN

Chordal Multipartite Graphs & Chordal Colorings, 13th SIAM Discrete Mathematics Conference, University of Victoria, Canada

Minimal Weak Separators of Chordal Graphs, 43rd MIdwest GrapH TheorY (MIGHTY) Meeting, Indiana-Purdue University, Fort Wayne, IN.

The Fundamlental Theorem of Superficial Trivia, Purdue-Indiana Math Club, Indiana-Purdue University, Fort Wayne, IN

Dr. Mercer

Presentations:

Mathematica Technology Update, Annual International Conference on Technology in Collegiate Mathematics, Orlando, FL

Dr. Miller

Presentations:

On Characterizing Stopping Time Functionals on Diffusions as Solutions to Boundary Value Problems for Use in Domain Optimization, Miami University, Oxford, OH

Dr. Ratnaparkhi

Invited Talks:

Certain Open Mathematical & Statistical Research Problems in Indian Classical Musicology, Ahmednagar College, India

The Role of the Statistican in Scientific Research, Ahmednagar College, India

Statistics in Biological Sciences, Ahmednagar College, India

Modeling Length-Biased Data Using Weighted Distributions, Miami University, Oxford, OH

Dr. Slilaty

Presentations:

Representability of Signed Graphs Over Vector Spaces, WSU

Regular Signed-Graphic Matroids, XXVIII OSU Denison Conference, Ohio State University

Signed-Graphic Matroids, University of Mississippi

Dr. Sun

Presentations:

Bahadur Representation for Sample Quantiles Under Weak Dependence, Joint Statistical Meeting, Seattle, WA

Dr. Tarpey

Presentations:

Latent Regression Analysis, Joint Statistical Meeting, Seattle, WA

Dr. Tian

Presentations:

Nonlinear Study of Electric Field Induced Pattern Formation in Thin Liquid Films, Polymer Surfaces and Interfaces, Orville, OH

Dr. Turyn

Presentations:

CNN on Triangular Lattice: Preliminary Results, University of Texas-Pan American, Edinburg, TX

Dr. Voss

Invited Talks:

Iterative Stepdown Tests: Analysis of Orthogonal Saturated Factorial Designs, Joint Statistical Meetings, Seattle, WA

Dr. Wang

Invited Talks:

Foundation of Statistical Tests with Partioned Alternative Hypotheses, Beijing Normal University, China.

New Results for Stepwise Tests in Orthogonal Saturated Designs, International Conference on Design of Experiments and its Applications, Tianjin, China

3. Invitations to participate or chair symposia

None

4. Editorial board memberships

Dr. Arasu

International Journal Designs, Codes & Cryptography

Dr. Khamis

Journal of Diagnostic Medical Sonography
Computer Methods & Programs in Biomedicine
International Journal of Statistical Sciences
Journal of Modern & Applied Statistical Methods

5. Granting Agency Study Section Memberships

None

6. Offices held in National professional organizations

Dr. Sun

American Statistics Association, Dayton Chapter, Secretary/Treasure

Dr. Tarpey

American Statistics Association, Dayton Chapter, President

7. Special events, symposia or colloquia

Dr. Arasu

Latin Squares, Orthogonal Mates and Groups, Anthony Evans, WSU

Structure & Linear-time Recognition of 4-Leaf-Powers, R. Sritharan, University of Dayton

Dr. Chen

Bayesian Variable Selection in Clustering High Dimensional Data, Naijun Sha, University of Texas at El Paso

Representability of Signed Graphs Over Vector Spaces, Daniel Slilaty, WSU

Coulter-Mathews Bent Functions and Their Duals, Xiang-dong Hou, University of South Florida

Dr. Huang

Stable-Stationary Harmonic Maps to Spheres, Changyou Wang, University of Kentucky

Pricing & Hedging in Multidimensional Incomplete Markets Under Stochastic Interest Rates, Srdjan D. Stojanovic, University of Cincinnati

Large Deviations for Stochastic Navier-Stokes Equations: A PDE Approach, Andrzel Swiech, Georgia Institute of Technology

Dr. Khamis

An Overview of the OSU Statistical Consulting Service, Thomas Bishop, Ohio State University

An Examination of the Efficiency of the Sequential Parallel Design in Psychiatric Clinical Trials, Roy N. Tamlura, Eli Lilly & Company

Multilevel Analysis Methods: Hierarchical Linear Models, Bev Grunden, WSU

Statistical Consulting Center and Adrienne Stolfi, WSU, Department of Pediatrics, Boonshoft School of Medicine

Dr. Kinateder

Some Limits Theorems a Cumulative Degradation, Jeffrey P. Kharoufeh, Editor, Operations Research Letters and for IEEE Transactions on Reliability

Dr. McKee

Hamiltonian Paths and Cycles in Touraments, Art Busch, University of Dayton

Dr. Miller

Elementary Proof of a Classical Sufficient Condition, Dean A. Carlson, American Mathematical Society Mathematical Reviews

Dr. Reed

Improving Mathematics Instruction: Is There a Road Map? Barbara Moses, Bowling Green State University

Dr. Seoh

Computational Approaches to Understanding Organic Evolution, Sudhindra R. Gadagkar, University of Dayton

Dr. Slilaty

Induction on Highly Connected Graphs and Matroids, Xiangqian Zhou, Syracuse University

Graph Structures and Excluded Minors, John Maharry, Ohio State University

Distinguishability of Locally Finite Trees, Xiangqian Zhou, Syracuse University

Dr. Sun

Occupation Laws for Some Nonhomogeneus Markov Chains, Sunder Sethuraman, Iowa State University

Dr. Tarpey

Large Sample Interval Mapping Method for Genetic Trait Loci in Finite Regression Mixture Models, Hanfeng Chen, Bowling Green State University

Foundation of Statistical Tests with Partitioned Alternative Hypotheses (1), Weizhen Wang, WSU

Hierarchical Bayesian Analysis of Genetic Diversity in Geographically Structured Populations, Seongho Song, University of Cincinnati

Dr. Voss

An Exact Percolation Threshold Point in a 4-Dimensional Hyper-Cube, Sasuke Miyazima, Chubu University, Nagoya Japan (visiting Ohio Univ.)

A Candidate Set Free Algorithm for Generating Optimal Split Plot Designs, Bradley Jones, Systems Developer, SAS Institute

8. Faculty who were awarded professional development leave

Makarand Ratnaparkhi, Pune India, Challenges underlying the assessment of tonal quality of a violin using the statistical analysis of vibration modes of violin plates.

9. Faculty, staff or students who were given awards locally, nationally or internationally

None

10. Outreach programs

Ms. Brackenridge

Volunteer Assistant Coach High School Girls Golf Team

Ms. Diesslin

Local food coordinator for Interfaith Hospitality Network (IHN)
Prepared and served dinner for WSU Methodist Student Organization

Ms. Douglas

Volunteer for Dayton Arts events, Victoria, Schuster & Loft

Dr. Evans

Horizons School, Science Fair judge, Cincinnati

Dr. Kinateder

Pre-school Sunday School Teacher

Dr. Mathews

Acting Co-Director of the WSU EXCEL Center
Appointed representative, National Council of Teachers of Mathematics

Dr. Mercer

Institutional Representative for the Goldwater Scholarship Competition (recruits, and selects nominees)
Beavercreek Scholastic Chess Club, Grades K-8, Beavercreek

Mr. Otto

Worked as Higher-Ed Facilitator for the WOMAT data analysis institute

Ms. Snellings

Attended National Association for Curriculum Supervisors
Advisor, Youth Spiritual Affirmation
Nominated High School Teacher of the Year, Dayton Public School System

Dr. Vance

Volunteer math tutor for 8th grade student
Webmaster for Grace United Methodist Church, Dayton
Volunteer Master of Ceremonies for 1st Annual Dayton Asian Cultural Festival

Dr. Voss

Board of Directors member, Honors Seminar of Metropolitan Dayton, Inc. Orientation Committee Chair
COSM Exploring Science Programs; three one-hour presentations/shows on "Mathematics & Puzzles".

Ms. Zizzo

Completed online professional development course in Breakthrough Mathematics
Attended Ohio Council of Teachers of Mathematics Conference
Presented, Michigan Council of Teachers of Mathematics, Detroit MI
Volunteer, March of Dines, Cancer Association
Volunteer, Hospice of Dayton

11. Student clubs and activities

None

12. Undergraduate honors students

Julie Seger

13. Off campus or special interest courses

Dr. Farrell

Charity Adams Earley Academy, Faculty Retreat, Dayton

Oscar Mayer Public School, Research Lesson, Chicago

Ohio Science & Mathematics Education Policy Advisory Council

Ohio Council of Teachers of Mathematics, one hour session on math courses in Algebra, introductory Statistics, & Geometry, Toledo, OH

Dr. Khamis

Invited search committee member for university in Uppsala Sweden (north of Stockholm), to recruit statistics faculty

Gamma Delta Chapter of Phi Beta Delta, Honor Society of International Scholars

Medeiras Elementary School, Predicted the adult height of 19 students in Mrs. A. Freeman's 3rd grade class, Turlock, CA

Dr. Mathews

Charity Adams Early Academy, Professional Development for Elementary Teachers

External evaluator for mid-point of mathematics and science education research at University of Kentucky

Dr. Pedersen

Worked on two chemistry projects with a private company

Dr. Reed

Proctored Ohio Council of Teachers of Mathematics contest, 100 high school students

Treasurer, Central Ohio Writers of Literature for Children

14. Graduate students

Adkins, Nathan – Mathematics. Instructor of mathematics at Edison Community College

Atem, Folefac - Statatistics

Chatterjee, Arunava – Statistics. Working at Millward Brown, Inc. Alpharetta, GA

Dubrois, Jeffrey – Statistics. Working at Wright Patterson Air Force Base, WPAFB, OH

Ewald, Kenneth - Applied Mathematics

Hu, Wanting - Statistics

Lee, Miryoung – Statistics. Working at Life Span Health Research Center, WSU, SOM

Li, Minewi - Statistics

Powder, David - Mathematics

Stroman, Eiko - Statistics