



WESTERN MICHIGAN UNIVERSITY
College of Arts and Sciences
Department of Statistics

Newsletter

SUMMER 2011

A Newsletter for Friends of the
Western Michigan University Department of Statistics

Letter from the Chair



Another year has gone by and it was again full of very productive and exciting events.

The major event organized by the Department this past year was the Great Lakes Symposium "Advancements and Challenges in the Statistical Sciences" on April 8. Three invited speakers: Dr. Noel Cressie from The Ohio State University, Dr. George Milliken, Professor Emeritus from Kansas State University and our own Dr. Michael Stoline presented talks that attracted over 70 statisticians from area universities and industry. The Department of Statistics also celebrated its 10th anniversary with a dinner at Marie and Michael Stoline's residence the night before.

In the coming year, there will be only eight faculty members. Dr. Michael Stoline retired on May 1, 2011 after serving WMU for 44 years. We will miss him in the classroom, but he has promised to stay in touch, attend our colloquium and simply be around for us. At the same time we are happy for Mike and his wife Marie, that they will have more time for the traveling, which they both enjoy so much.

We worked very hard last year to further improve the curricula of our programs: Mr. Loren Heun developed a new course in introductory statistics for sociology majors. He also created an on-line version of the Stat 2160 – a business statistics course. This is our second on-line course in statistics.

Drs. Paul and Terpstra designed four new graduate electives: courses in applied Bayesian analysis, spatial analysis, large sample theory, and research tools in statistical research. Already approved these new courses have modernized our graduate programs.

We are very happy to offer our newest program, an Interdisciplinary Graduate Certificate in Applied Statistics. This certificate has been designed for non-statistics majors mainly to help students with quantitative research for their doctoral dissertations and masters theses. Students who complete these requirements will have 'Certificate in Statistics' printed on their diplomas and transcripts. This certificate program is also available to students who are not in a current program but desire a certificate in statistics for advancement in their employment.

And last but not least, we created an Accelerated M.S. Program in statistics approved this past year and available in the Fall 2011 semester. It allows talented students to obtain their Masters degree in five years from entering college. Details are available on our website www.stat.wmich.edu.

Attracting talented students and supporting them during the program could not be done without our donors. We are grateful for the generous donations from alumni, friends and companies. The money is well spent on summer support, students' travel, conference participation, and awards. Thank you for helping us make our programs successful.

I hope you will enjoy reading the news about the department, students, faculty and alumni. Please email us any updates you would like to have included in our next issue. Your classmates and former professors would enjoy reading them.

*Department Chair,
Magdalena Niewiadomska-Bugaj*

Great Lakes Symposium and 10-Year Celebration

April 8, 2011, was the date of the Great Lakes Symposium and the 10-Year celebration of the Department of Statistics. This was an all-day event with a welcome by Alexander Enyedi, Dean of Arts and Sciences, opening remarks by Magdalena Niewiadomska-Bugaj, chair of the Statistics Department, talks by invited speakers George Milliken, Emeriti Kansas State University, Noel Cressie from The Ohio State University and Michael Stoline, Western Michigan University.

The department also sponsored a poster session which highlighted student and former student work.



2 Notable faculty and student accomplishments

Dr. Rajib Paul, Assistant Professor in the Department of Statistics at WMU was married in India and a reception in Kalamazoo was held at the Holiday Inn West on June 25th. We wish Rajib and his wife Subhanwita a happy long life together.

Dr. Paul is involved in a collaborative project, titled Bayesian Hierarchical Models for Biogeochemical Cycles, with the scientists from Commonwealth of Scientific and Industrial Research Organisation (CSIRO). CSIRO is Australia's national science agency and one of the largest and most diverse research agencies in the world.



In summer of 2009, Dr. Paul was in Perth, Australia for three months to work on this project. In this project space-time advection-diffusion models are being developed for

organisms (e.g. zooplankton, phytoplankton) drifting in the water column of oceans, seas, nad bodies of fresh water. These models have some highly nonlinear features, and Gaussian error structures are at best unrealistic. Transformation offers a way forward in this latter case, but given the fundamental nonlinearity of the models, methods based on the Kalman

filter, for example, are unreasonable. The main challenge in this project is to develop methodologies to deal with complex space-time models, nonstationary in space as well as nonstationary in time. There is a possibility the Dr. Paul will again visit CSIRO for a few months in Summer 2012 to continue working on this project.



Publications

- **Ahmed N. Albatineh and Magdalena Niewiadomska-Bugaj.** (2011). MCS: A Method for Finding the Number of Clusters, Journal of Classification.
- **Ahmed N. Albatineh and Magdalena Niewiadomska-Bugaj.** (2011). Correcting Jaccard and other similarity indices for chance agreement in cluster analysis, Advances in Data Analysis and Classification.
- **Annie (Tordilla) Darilay and Joshua Naranjo.** (2010). A Pretest for Using Logrank or Wilcoxon in the Two-sample Problem, Computational Statistics and Data Analysis, 5, 2400-2409.
- **Thomas Hettmansperger and Joseph McKean.** (2011). Robust an Nonparametric Statistical Methods 2nd Ed., New York; Chapman-Hall.
- **John Kloke and Joseph McKean.** (2011). Rank-based estimation for Arnold-transformed data, 183-203, Nonparametric Statistics and Mixtue Models: A Festschrift in Honor of Thomas P. Hettmansperger, Hunter, D., Richards, D., and Rosenberger, J. ed., New Jersey: World Scientific.
- **Ruvie Lou Martinez and Joshua Naranjo.** (2011). Diagnostics for Choosing Between Logrank and Wilcoxon Tests, METRON – International Journal of Statistics, 111-125.
- **Marwan (Daoud) Zidan, Jung-Chao Wang and Magdalena Niewiadomska-Bugaj.** (2011). Comparison of k independent, zero-heavy lognormal distributions, Canadian Journal of Statistics, 39, 1-13.

Donors List:

- Mr. John Thomas Reese
- Mrs. Erin and Mr. Bruce Buscher
- Mr. Steven P. Engel
- Mr. Loren Heun
- Dr. Sudhakar Rao
- Dr. Thomas J. Vidmar
- Dr. Magdalena Bugaj
- Mrs. Demetra V. Collia & Mr. Steven M. Koning

Alumni News

- **Ahmed Albatineh** was invited to present a talk on his work in the area of similarity/dissimilarity based classification methods at the meeting of International Federation of Classification Societies in Frankfurt, Germany, in August 2011.
- **Annie (Tordilla) Darilay** (Ph.D. 2009) accepted a new position as a senior biostatistician at Johns Hopkins School of Public Health in Baltimore.
- **Karen Rosales** (Ph.D. 2010) recently accepted a position at Experis.
- **Kuanwang Watcheratone** (Ph.D. 2010) accepted a position as a senior statistician at Michigan Institute for Clinical and Health Research at the University of Michigan in Ann Arbor.

Dr. Michael Stoline Retires

On July 23, 2010 the WMU Board of Trustees approved the resignation of Michael Stoline. Dr. Stoline retired officially on May 3, 2011 after 44 years of service.

Dr. Stoline's career was celebrated with a dinner at his home for faculty and guests on April 7th, as well as a public reception at the Oaklands for the campus community, family and friends on April 29th. Among the speakers at the open house was Robert McNutt, a Ph.D. student in the department, who gave an interesting speech about admiration and imitation being the highest form of flattery.

During his commentary he mentioned the creation of "Air Stolines" high top boots which Mike generally wears

with a Nike swoosh added, and the need to wear brightly colored shirts, ties and a sports jacket.

During Dr. Stoline's parting words, he removed his tie and said he was no longer in need of them, and his wife Marie, brought several of Mike's ties that were given to our students as mementos and reminder of the professor they all admired and will miss. Many of the students requested that Dr. Stoline autograph the ties, and on July 1st the Stolines invited the students to a "tie signing" party at their home.



Dr. Michael Stoline celebrates 44 years of service



Mike Stoline (center) with some of his students present and past.

A brief history of Mike Stoline

Michael R. Stoline was born in Jefferson, Iowa. He earned bachelors and masters degrees in Mathematics from the University of Iowa. In 1967 he completed a Ph.D. in Statistics at the University of Iowa. On graduation, he accepted two half-time positions at Western Michigan University in the Academic Computing Center and Department of Mathematics. In 1979 he moved full time into the Department of Mathematics. Dr. Stoline has spent his entire professional career here at WMU.

Dr. Stoline's areas of expertise include regression analysis, analysis of variance, design of experiments, sample surveys, time series analysis, biostatistics, survival data analysis, environmental statistics and spacial statistics. He has focused on problems in preliminary testing, multiple comparisons, repeated measurements, lognormal inferences and intervention time series. He is well published on applied



Robert McNutt, a Ph.D. student in the department, gave an interesting speech about admiration and imitation at the retirement reception.



Mike Stoline with three department chairs; John Petro, Magdalena Niewiadomska-Bugaj, and Jay Wood.



Gerald Sievers (right) presents Mike Stoline with a retirement gift.

and theoretical topics in these areas as well as numerous technical reports. To share his work he has given over 60 talks, presentations and short courses at professional conferences, at universities and for various government and business organizations.

Mike took a lead role, along with statisticians at the Upjohn Company, in developing our Biostatistics Master's program. This was a unique program in that it required an extensive internship component with a pharmaceutical company. He was the program director from 1976-89.

At Western, Mike developed connections and friendships with faculty members in other departments by helping them with data aspects of their research. This work resulted in numerous publications and generated ideas for further research. For example, in partnering with faculty in the Department of Geosciences, he became interested in environmental statistics and the issues in groundwater monitoring. He became an adviser for Michigan Environmental Regulations and wrote six reports analyzing groundwater data in counties in west Michigan. In the 1980s he was appointed to a national panel formed by

the EPA to study and make recommendations on the Love Canal Environmental Monitoring Study. He wrote numerous reports and gave over a dozen talks on various aspects of the Love Canal issues and data.

Mike was a statistical consultant for Michigan State University/Kalamazoo Center for Medical Studies in the years 1991-2000. Since the 1990s he helped organize and direct six Great Lakes Symposia. Five doctoral students completed their dissertation in statistics under his direction.

In retirement, Mike will stay active in statistics. He plans to finish his book on the design of experiments, based on many years of teaching this material to students at Western. Along with his wife Marie, he will make many visits to the East coast to visit grandchildren. They have always traveled around the world and now they will have time to plan more of this. On a daily basis they will care for their horses and llamas and keep up with all the work on their home in the country.

—Prepared by Dr. Gerald Sievers

Preliminary Examination Results

Methods Prelim Project:

The Department has two preliminary examinations and a third methods project which must be passed by all Ph.D. students. The Methods Prelim was given late June and students were given two weeks to complete two projects utilizing methods learned in two elective

courses taken this past academic year. Two students scored perfect 100% on a portion of their exams; Casey Jelsema on the Survival portion of his exam and Robert McNutt on the Categorical portion of his exam. Others passing the Methods Prelim this year are: Yusuf Bilgic, Jaime Burgos Mariot and Haolai Jiang

Linear Models Prelim:

The following students passed their Preliminary examination in Linear Models given May 27, 2011: Jaime Burgos Mariot, Yusuf Bilgic, Benedict Dormitorio, Casey Jelsema, Haolai Jiang, Diane Lovett, Robert McNutt and YuanYuan Shao.

CONGRATULATIONS!

Casey Long Presidential Scholar

Casey A. Long was selected as one of 45 students recognized as WMU's top seniors for 2011 during the 31st annual Presidential Scholars Convocation on Thursday, March 24th.

Each year, faculty members from across the University select the most outstanding senior in their various academic schools, departments and programs to represent their units. This designation is the highest honor that WMU can bestow on its undergraduates.

Casey was awarded the Presidential Scholar Award for both the Departments of Statistics and Economics.

Casey is from Saline, Michigan and a graduate of Saline High School. He is majoring in economics and statistics and expects to graduate in April 2011. Following graduation, Casey plans to return to WMU and earn a master's degree in statistics in preparation for a career in the actuarial field. He has excelled in his actuarial studies, achieving a score of 9 on his first qualifying exam of the Society of Actuaries. He also has taken an independent study course at WMU to prepare for the next qualifying actuarial exam. Casey is involved with the WMU Campus Activities Board as a general assembly member, and he works for the Academic Resource Center as a tutor for basic economics courses. Casey is a member of Phi Kappa Phi honor society and was nominated by the Department of Economics in 2009 to be a member of the University's Academic Integrity Committee.



Casey A. Long (second from right) receives congratulations from (left) WMU President John M. Dunn, Department of Statistics Chair Magdalena Niewiadomska-Bugaj, and Department of Economics Chair, William Kern.

Sudhaker Rao receives 2010 College of Arts and Sciences Alumni Achievement Award for Statistics



Dr. Sudhakar Rao (center) at the College of Arts and Sciences Distinguished Alumni celebration flanked by Gerald Sievers (left) and Magdalena Niewiadomska-Bugaj.

Dr. Sudhakar Rao (Ph.D. 1989) was nominated by the Department of Statistics as a Distinguished Alumni. All nominees were recognized during an awards dinner October 1, 2010. Dr. Rao is currently the senior director of biostatistics with Johnson & Johnson Pharmaceutical Research and Development in Raritan, NJ.

Rao's key responsibility is to provide statistical leadership in the development and life cycle management of drugs for treatment of cancer in various stages, ranging from First in Human (FIH) trials to near patent expiration. Dr. Rao is a key member of several oncology therapeutic strategic development teams including clinical, regulatory, commercial and marketing functions to attain team and company goals.

Dr. Rao joined Johnson & Johnson in 2002 after spending 12 years at Schering Plough Corporation, also in New Jersey—now part of Merck & Co. He received his Master's in Statistics from Michigan State University in 1985 and his Ph.D. in Statistics from Western Michigan University in 1989. In 1980, Prior to coming to the United States, he attended college in India and earned a Master's in Statistics from the University of Mysore.

Rao's experience covers 21 years in the pharmaceutical industry and extensive expertise in oncologic drug development. Other areas of expertise include clinical pharmacology, pharmacokinetics, and pre-clinical and non-clinical areas. Dr. Rao is the lead statistician for several new drug applications and biologic license applications with the U.S. Food and Drug Administration, European Medicines Agency, Health Canada, Australia and other countries, and part of at least a dozen submissions for new indications in various types of cancer. Dr. Rao is the point person for statistical support to the FDA Oncologic Drugs Advisory Committee, and a Cardio-Renal Drugs Advisory Committee. Dr. Rao is the recipient of eight Johnson & Johnson Standards of Leadership Awards between 2002-2010.

6 Student News

WMU 5th Annual Poster Day

April 15, 2011, was the 5th Annual Poster Day event at WMU. Among our students presenting their posters was Casey Jelsema who presented a poster on Paleoclimatic Reconstruction of Rainfall and Drought in Midwest co-authored with Dr. Rajib Paul; this was a FRACCA supported poster presentation.

Student presenters from the department included Tamer Elbayoumi with a poster on An Empirical study of a Rank-Based Estimate for Cell Lineage Data, and Mona Alduailij who displayed her poster titled Lognormal Block Kriging for Multivariate Spatial Processes.



Casey Jelsema presented a poster on Paleoclimatic Reconstruction of Rainfall and Drought in Midwest.

Awards



Students receiving certificates from the Department of Statistics during the spring student awards luncheon.

April 15, 2011 was the date for the Department Student Awards luncheon. On this day we had talks prepared by several of our undergraduate students on topics that included the statistical analysis of authors such as J.K. Rowling and Rick Riordan. This provides our undergraduate students the opportunity to learn how to prepare and make presentations; this is the capstone experience of our course STAT 4810—Communicating Statistics.

The following students all passed their Departmental Graduate Exams (DGE) given May 12th & 13th and were awarded one-year memberships to the American Statistical Association (ASA) from the Department in recognition; Ida Alcantara, Prince Allotey, Anup Bhandari, Barbie Ann Bugna, Janice Hiner, Paul Kondon, Libertie Mantilla, Jordan McQueen, Jason Olsen, YuanYuan Shao Yu Su, and Wan Xin Go.

Several other students received awards

- Teaching Assistant of the Year award—Casey Jelsema
- Citizenship Award—Casey Jelsema, Bradford Dykes and Peter Lazaro
- Departmental Colloquia and Service Awards—Ida Alcantara, Yusuf Bilgic, Casey Jelsema, Peter Lazaro, and Katie Nelson
- Outstanding Student Employee—Anthony Wilburn

Department Graduates

- Fall 2010: Ph.D. Scott Kosten and Karen Rosales; M.S. Benedict Dormitorio, Di Gao, and Xiangqun Lu; B.S. Michelle Peak.
- Spring 2011: B.S. Alison Bagley, Judson Fonger and Casey Long.
- Summer 2011: Ph.D. Gabriel Okyere; M.S. Joe Marvin Alquerto, Bradford Dykes, Wan X Go, Peter Lazaro, Katie Nelson, and Carl Westine

Alumni Information Update

We want to hear from you!

Our strong suit is our alumni. In each issue, we will focus on YOU, So PLEASE consider yourself selected for upcoming issues. We enjoy receiving your announcements: marriages, job changes, presentations, promotions, advanced degrees, etc. All you need to do is fill out any portion of the form below (with a picture, if possible to cheryl.peters@wmich.edu, or mail to Newsletter Editor, Department of Statistics, 1903 West Michigan Ave., Kalamazoo, MI 49008-5278.

Name _____

Home address _____

City _____ State _____ Zip _____

Home phone _____ Email _____

Employer _____ Job title _____

Work address _____

City _____ State _____ Zip _____

If alumni, degree and year: _____

Tell us more about yourself, and/or what you would like to see in future newsletters:

Western Michigan University
Department of Statistics
1903 West Michigan Ave.
3304 Everett Tower
Kalamazoo, MI 49008-5278
Office phone: (269) 387-1421

Check us out on the web at: www.wmich.edu/statistics

Western Michigan University
Department of Statistics
1903 West Michigan Ave.
3304 Everett Tower
Kalamazoo, MI 49008-5278

Give online at www.wmich.edu/foundation/gift
(Indicate Department of Statistics in the College of Arts and Sciences)

Yes, I want to support the WMU Department of Statistics!

In a time when state funding is increasingly restricted, the support we receive from friends and alumni is vitally important. Such funds are used to take advantage of new or unbudgeted opportunities in order to enhance the teaching or the research of the department, or to assist students in achieving their educational and professional goals.

Thank you for considering a gift to the WMU Department of Statistics.

The WMU Foundation processes all gifts that come to the University and forwards 100 percent to the department. Michigan residents: Remember that 50 percent of your gift to a Michigan University is returned to you as a tax credit on your state income tax (up to \$200 for a single filer; \$400 for joint filers).

I support the WMU Department of Statistics with the following gift:

__\$1,000 __\$500 __\$250 __\$100 __\$50 __\$25 \$_____Other

_____I would like to become a special donor to the
WMU Department of Statistics with a gift of \$_____

My gift is to be paid via:

_____ Check (payable to WMU Foundation: Statistics)

_____ Credit card (check one)

_____Mastercard _____Visa (will be shredded)

Account #: _____

Expiration Date: _____

Signature (required): _____
stnl

_____Electronic Funds Transfer (instructions will follow)

_____Please contact me about my giving plans.

Name: _____

Phone Number: (_____) _____



WESTERN MICHIGAN UNIVERSITY
College of Arts and Sciences
Department of Statistics

Please mail this completed form, along with your gift to:

Western Michigan University
WMU Foundation Office
1903 W. Michigan Ave.
Kalamazoo, MI 49008-5403