

NEWSLETTER

Letter from the Chair



Four years has passed since we published our last newsletter. Much has occurred within WMU's Statistics Department since then, and I hope that this edition will update you on key changes.

In the Spring of 2012, Cheryl Peters, our office coordinator and undergraduate

advisor accepted a position in the College of Arts and Science advising office. Cheryl worked in the Statistics Department since its creation in 2001, and even though she is no longer with us, she remains a good friend of the department and promotes our programs in her new job.

Our office coordinator position was filled shortly after Cheryl's departure by Michelle Hastings. She is now our "good spirit" who helps faculty, students, and me with all kinds of problems: from registering for a class that is already full to balancing the budget. With her MA degree in Public Administration, Michelle is very organized and thorough in her work. She is also very capable and efficient in smoothly running a complex department, such as ours, with so many programs.

A new faculty member, Dr. Hyunkeun (Ryan) Cho joined the Statistics department in Fall 2013. He is already working with three PhD students. Fall 2015, Dr. Georgiana Onicescu, recent graduate from the Medical University of South Carolina, joined the department, as a junior faculty member.

Additionally, we have two temporary faculty specialists in the department, Nichole Andrews and Bradford Dykes. They are both students in our PhD program having received awards as outstanding TAs, and who are now responsible not only for teaching but for coordinating multiple sections of two of our largest courses: STAT 2160 and STAT 3660.

The Health Data Research Analysis and Mapping Center, was created in 2013 by both the College of Health and Human

Services and the College of Arts and Sciences and under which Dr. Rajib Paul serves as associate director. The center is working on multiple grants and contracts which pertain to spatial public health data. What we like most is that the center creates opportunity for our doctoral students to get involved in interesting research problems which occasionally lead to dissertation topics.

The Statistics department organized a conference, the International Conference on Robust Rank-Based and Nonparametric Methods, which was held in April 2015. The conference, organized to celebrate the 70th birthday of Dr. Joseph McKean, attracted many statisticians from the US and also Europe and Australia. It was a great feast of statistical science on campus, an event that we will all remember for years to come.

Last but not least, we are excited to share news of a new undergraduate program in Data Science, motivated by the need in the workforce for graduates with expertise in collecting and effectively analyzing big data. The program began Fall 2015, as an interdisciplinary program housed within the Statistics Department, but runs jointly with the Department of Computer Science in the College of Engineering. We already have our first students registered and are excited to see their progress through this new program.

I hope that you will enjoy reading the Fall 2015 edition of our departmental newsletter. We are pleased to share with you the exciting changes taking place within the Statistics Department. We hope to regularly provide newsletters on a yearly basis. Please keep the Statistics Department informed if you have news to share either professionally or personally which we might post in the newsletter. We encourage you to visit, give a talk, and/or to let us know if you have or are aware of internship opportunities for our current students.



In Remembrance of Gerald L. Sievers, Ph.D.

Dr. Gerald L. Sievers joined the faculty of Western Michigan University in 1967 and stayed with the Department of Mathematics, then Mathematics and Statistics, and finally Statistics for 46 years until his retirement in April 2014. He passed away on September 25, 2014 at the age of 74. Dr. Sievers was born on July 15, 1940 in Winona, Minnesota. He received his BS degree in mathematics from St. Mary's College in Winona, Minnesota, an MS (1964) and PhD (1967), both in statistics, from the University of Iowa.

Dr. Sievers research interests were in the areas of quality and productivity improvement, robust correlation methods and linear models.

Together with Dr. Stoline, Dr. Sievers was a co-founder of WMU's statistics program. He helped to develop many of the University's statistics courses. In particular, STAT 3660 - the Introduction to Statistics - flourished under his leadership. It began with an enrollment of 40 students and now has more than 400 students enrolled in multiple sections during each semester.

Dr. Sievers is remembered as a dedicated teacher and statistician. His students often remarked on his friendly and supportive mentoring. In addition, he was referred to as "The Legend" by friends joining him for noontime basketball, which he played until age 71.

Dr. Sievers is survived by his wife, Elaine, three children and nine grandchildren.

Dr. Siever's family asked that in lieu of flowers, memorials be given to the Gerald Sievers Memorial Fund for the Department of Statistics. The donations that the Statistics Department received and \$20,000 in additional departmental funds were used to start an endowment "Dr. Gerald Sievers Memorial Fund". It will provide scholarship money to top students in the graduate programs offered by the WMU Statistics Department. If you would like to help build the fund in memory of Dr. Sievers and help the department to attract the strongest applicants – please send the check to the Department of Statistics at Western Michigan University, 3304 Everett Tower, Kalamazoo, MI 49008-5278.



Left To Right – Dr. John Dunn, WMU President, Dr. Dugaj and Dr. Sievers at Dr. Sievers retirement reception in April 2014

International Conference on Robust Rank-Based and Nonparametric Methods

On April 9th and 10th, 2015, the Statistics Department hosted the International Conference on Robust Rank-Based and Nonparametric Methods which was held at the Bernhard Center at WMU. Co-Sponsors of the conference included:

The American Statistical Association.

Nonparametric Section of the American Statistical Association.

Department of Statistics, Western Michigan University

The College of Arts & Sciences, Western Michigan University

Zoetis Corporation, Kalamazoo, MI

Innovative Analytics, Kalamazoo, MI

Stryker Corporation, Kalamazoo, MI

Kellogg's Company, Battle Creek, MI



The organizing committee consisted of Joe McKean, Rajib Paul, Magdalena Niewiadomska-Bugaj, and Tom Vidmar. Michelle Hastings was in charge of local arrangements.

Dean Keith Hearit of the College of Arts and Sciences officially opened the conference on Thursday morning, April 9th. Over Thursday and Friday there were five keynote addresses and five sessions. Rank-Based Nonparametric Procedures served as the topic of three of the sessions, while Biostatistics and Big Data were the topics of the other two.

The keynote addresses were given by: Thomas P. Hettmansperger, Penn State University; Regina Liu, Rutgers University; Hannu Oja, University of Turku (Finland); Simon J. Sheather, Texas A&M University; and Douglas Wolfe, Ohio State University. Besides the keynote speakers, there were 13 invited speakers: Ash Abebe, University of Auburn; Moulinath Banerjee, University of Michigan; Arne Bathke, University of Salzburg; Kim Crimin, Novartis Pharmaceuticals; Casey Jelsma, NIH; Kjell Johnson, Arbor Analytics; John Kapenga, Western Michigan University; John Kloke, University of Wisconsin; Sunil Mathur, Medical College of Georgia; Rajib Paul, Western Michigan University; Omer Ozturk, Ohio State University; Mushfiqur Rashid, FDA; and Jeffrey Terpstra, Western Michigan University. There was also a poster session where graduate students in statistics at WMU and several other universities presented posters on their research in statistics. Information on the conference including the complete program and abstracts of the talks can be found at the url: <http://www.stat.wmich.edu/mckean/RBconf/>. Currently, a book containing many of the papers given at the conference is being edited by Regina Liu and Joe McKean. The book is to be published by Springer.

The conference was very well attended. The theme of the Thursday evening banquet was the celebration of Joe McKean's 70th birthday. There were 89 attendees at the banquet. As a final note, the conference was a celebration of the Statistics Department. Five of the invited speakers are former students of the department. Many of the department's graduate students attended the conference.



Our Dream: HDReAM

The **H**ealth **D**ata **R**esearch **A**nalysis and **M**apping Center (**HDReAM**) at Western Michigan University is a multidisciplinary cross college center that brings together expertise in the area of Epidemiology and Public Health from the College of Health and Human Services along with expertise in the area of Geographic Information Systems (GIS), Bayesian Statistics, and Spatial Statistics from the College of Arts and Sciences. This center also represents a unique local public health Health & Community partnership between WMU and (Kalamazoo and Calhoun County Services Departments). By combining the expertise of these organizations as well as those on a local health alliance advisory board, HDReAM conducts analyses, develops cutting-edge novel methodologies for analyzing large spatio-temporal datasets, maps and disseminates findings, trains new researchers, and provides consultation services to improve the health of our community and others, without burdening the population with new, costly data collection. HDReAM officially began July 18, 2013, however, the inaugural ceremony was held on April 18, 2014 and it was our great pleasure to have Dr. Sander Greenland, a renowned epidemiologist and statistician, as a key-note speaker for the event.



Dr. Amy Curtis (Professor, Interdisciplinary Health Sciences PhD Program) is the director of HDReAM and she provides expertise in chronic and infectious disease epidemiology, social determinants of health, public health surveillance, and healthcare-associated infections. Dr. Kathleen Baker (Associate Professor, Geography) is one of the two associate directors of HDReAM, and she provides expertise in GIS and spatial analysis. Another associate director, Dr. Rajib Paul (Associate Professor, Statistics) provides expertise in Bayesian Statistics, Spatial Statistics, and Spatio-Temporal models.

Combining GIS, epidemiology, and statistics enhances the value of public health data and can impact both policy and funding. Policy-relevant applications of GIS, statistics, and public health data have included ecological risk assessment, identification of disease patterns across space and time, and charting the distribution of disease relative to resource allocation. HDReAM research work includes poor birth hotspots and racial disparity analysis, nationwide spatial cluster analysis of diabetes self-management education program locations, medical services for foster care youth, Michigan Medicaid service utilization, sexually transmitted infection patterns, and several other interesting topics.

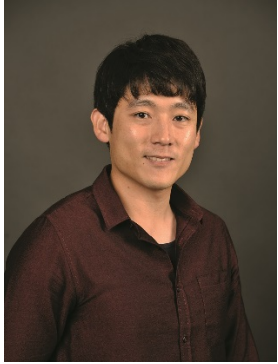
In November 2014, HDReAM published its interactive mapping website for the general community to access health relevant local data displayed as map layers; it can be accessed at: <http://www.wmich.edu/hdream/gis-server/index.html>.

Graduate students from the Departments of Interdisciplinary Health Sciences PhD Program, Geography, and Statistics are actively engaged in HDReAM funded research.

The investigators from HDReAM have received several extramural research grants and contracts from, for example, Blue Cross Blue Shield (BCBS) of Michigan Foundation, Michigan Department of Community Health (MDCH, now DHHS, Calhoun County, and WMU/W. K. Kellogg Foundation. The researchers from HDReAM also actively participate in national and international conferences and collaborate with researchers from the Michigan State University, Wayne State University, and the Medical University of South Carolina.

Meet Our New Faculty

Ryan Cho (2013)



My name is Ryan Cho. I was born in Chungju, a small but beautiful city in the middle of South Korea, on one cold wintry morning. I received two Bachelor degrees in two different areas: Business Administration from Ajou University, South Korea, and Applied Mathematics & Statistics from State University of New York at Stony Brook. I was very fortunate to be able to enhance my educational experience by immersing myself in diverse fields. After I received a Master of Science in Statistics at Stony Brook in 2008, I joined the Department of Statistics at University of Illinois at Urbana-Champaign and completed my Ph.D. in Statistics in 2013. Currently, I am an Assistant Professor in the Department of Statistics at Western Michigan University.

My primary research interests lie broadly in statistical methodology for correlated data such as longitudinal data, clustered data and panel data. The research I have undertaken in recent years, together with plans for future work, is described below in terms of six different categories:

(1) Develop a model selection procedure for correlated data with a diverging number of parameters; (2) Propose an efficient estimation approach by combining large-dimensional moments conditions; (3) Consider the multivariate marginal model to analyze longitudinal data with multiple responses; (4) Model varying and semivarying coefficients to explore the dynamic change of response over time; (5) Provide quantile regression for longitudinal data with dropouts; (6) Develop the personalized treatment strategy to provide the proper treatment individually. This research has wide applications in public health, engineering, economics and business.

In addition to my methodological research, I also have a strong interest and background in collaborative research within an interdisciplinary environment. I have done statistical consulting on more than 30 projects at the Illinois Statistical Office. This experience has enabled me to apply statistical tools in novel applications and has enhanced my experience and ability for solving real world problems. Furthermore, it has allowed me to collaborate with fellow researchers and scientists. Collaboration with colleagues has further expanded my work at WMU. I have been working with fellow researchers in many areas which has led to several statistical methodology papers and collaborative papers published or under review.

I hope to be told that as a member of Western Michigan University, I am warm-hearted, approachable, eager to help students, enthusiastic and creative, and that my lively sense of humor helps to keep students interested and engaged. I am passionate about research and teaching in Statistics, and I look forward to exploring research interests with the hope for accomplishment and great joy in my future academic career. I believe that my balanced academic background will be a great fit with the Department of Statistics at WMU.

Georgiana Onicescu (2015)



My name is Georgiana Onicescu and I joined the Western Michigan University Department of Statistics in August 2015 as an Assistant Professor. My methodological research interests are in Bayesian spatial statistics, with an emphasis on spatial survival and spatio-temporal modeling. My research is also highly collaborative, and I am interested in working with investigators across a variety of disciplines. I am originally from Romania, where I earned a bachelor's degree in Applied Mathematics and also completed postgraduate specialization studies in Computer Science at the University of Bucharest, Romania. I

continued my education and work experiences in the United States, where I earned an MS degree in biostatistics from the Johns Hopkins Bloomberg School of Public Health and a PhD degree in biostatistics from the Medical University of South Carolina.

Alumni Achievement Award Winners



2012 -Ash Abebe obtained his Ph.D. from the Department of Statistics, Western Michigan University, in 2002. He is currently professor in the Department of Mathematics and Statistics at Auburn University. His main research focus is on rank-based

nonparametric analysis procedures for complex data. Ash has authored or co-authored more than 35 refereed publications in mathematics and statistics as well as application areas including agriculture, finance, and kinesiology. He has supervised seven Ph.D. dissertations and several masters theses as well as served on the graduate committees of over a hundred students. Ash has received NSF grant support totaling over \$6 million as PI or co-PI for research and outreach projects. He co-directs the Masamu Program that has the goal of enhancing mathematical sciences research and education in Sub-Saharan Africa. He is also involved in numerous projects that aim to improve the academic success of US students from groups that are traditionally underrepresented in STEM disciplines.

Ash has received Auburn University's Graduate Faculty Mentorship Award in 2008 and Outstanding Outreach Award in 2012. He is also one of the recipients of the WMU College of Arts and Sciences Alumni Achievement Award in 2012. Ash is a fan of Auburn football and resides in Auburn, AL with his wife and two sons.



2013 - Dr. Kimberly Crimin graduated from Western Michigan University with a Ph.D. in statistics in 2002. Her dissertation was in the area of robust visualization procedures for multivariate predictors with discrete or continuous responses. This research allowed her to combine her talents in statistical

software development and robust statistical procedures. Her development on these procedures led to her co-authoring several articles in peer-reviewed statistical journals.

While at WMU Kimberly co-directed the Statistical Consulting Center and served as an intern at Pharmacia on micro-array analysis. Upon graduation, she accepted a position as a biostatistician at Pharmacia and, subsequently, Pfizer. She then took a position at Wyeth Research and eventually held the title of senior principal biostatistician II. She is currently director statistical scientist at Novartis. Kimberly has over 12 years of experience in the pharmaceutical industry, consulting with scientists in supporting drug discovery, including ADME, SAR and toxicology and consulting with clinicians in supporting drug development through all phases of clinical development. Besides her work at Novartis, she still pursues an active role in research in applied statistics, giving technical talks at statistical conferences and publishing in statistical journals.



2014 - Boyd Hanson is a biostatistical and biometrics leader with more than 20 years of pharmaceutical and biotech industry experience. He has directed biometrics preparations for numerous regulatory submissions, including three BLAs (multiple sclerosis, hematology and mucopolysaccharidosis). He has participated in frequent interactions with international regulatory authorities, including the F.D.A., and is a strong advocate of innovative statistical solutions that have accelerate clinical drug development. Hanson has contributed across many aspects of pharmaceutical research and development (clinical trials, discovery, DMPK, immunogenicity assessment, pharmaceutical development and manufacturing) in multiple therapeutic areas, including oncology, rare metabolic diseases, central nervous system, autoimmune diseases, cardiovascular, endocrine, benign hematology and antibiotics.

Alumni Award Winners (Boyd Hanson cont.)

At BioMarin Pharmaceutical, Hanson is responsible for planning and oversight of the BioMetrics Department, which includes biostatistics, statistical programming and applications, and clinical data management. He is also charged with transforming the department into a unit capable of providing biometrics leadership for multiple clinical development programs and preparing biometrics deliverables for worldwide marketing applications and revising BioMetrics processes to increase efficiency and strengthen GCP compliance.

Hanson has held local and regional leadership positions in the Church of Jesus Christ of Latter-day Saints, been a Scoutmaster for Boy Scouts of America and a coach for the AYSO and Little League Baseball. Hanson was also a member and served as president of the School Board of Plainwell Community Schools in Michigan. He and Diana, his wife of 39 years, have five children.

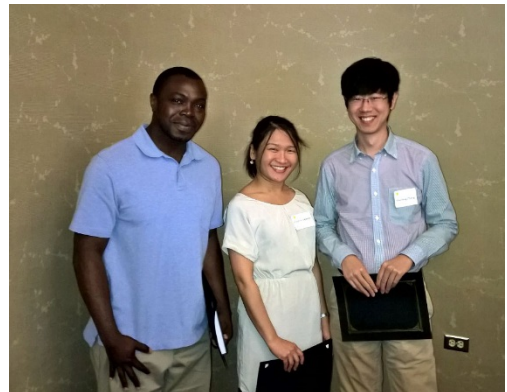
Colloquium Award Winners

2013 – 2014



Left to Right – Dr. Rajib Paul, James Dzikunu, Bradford Dykes, Nichole Andrews and Libertie Manilla

2014-2015



From Left to Right – Leonard Johnson, Jhoanne Gatpatan and Shaofeng Zhang

2014-2015



From Left to Right – Harmony Luce, Leonard Johnson, James Dzikunu, Bang Le and Joyce Lope

Student Awards (cont.)

2013 Highest DGE Result



Xiaomeng Niu

2014 Highest DGE Result



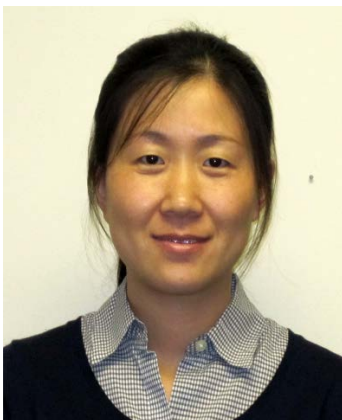
Andrew Klapko

2015 Highest DGE Result



Dan McGuire

*2014 Western Michigan University
Annual Research and Creative
Activities Poster and Performance
Day – Yuan Yuan Shao – 1st place
and James Dzikunu – 2nd Place*



Student Awards (cont.)

2013/2014 Teaching Assistant Excellence Award



Mr. Loren Heun and Mrs. Nichole Andrews

2014/15 Teaching Assistant Excellence Award



Leonard Johnson

2014 Highest Spatial/Categorical Prelim Results



Dr. Rajib Paul, Bradford Dykes (Categorical) and Barbie Bugna (Spatial)

2015 Highest Methods Prelim



Jhoanne Gatpatan

Gifts to Statistics

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Suzanne	Dubnicka
Loren	Heun
Dallas	Johnson
Magdalena	Niewiadomska-Bugaj
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William	Haas
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Joseph	McKean
Margaret	McKean
Magdalena	Niewiadomska-Bugaj
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Elizabeth	White

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Alumni Information Update

We want to hear from you!



Name:

Address:

Phone:

Year Graduated:

Degree Received:

Current Employment:

Other News:

Return To:

Mrs. Michelle Hastings
Department of Statistics
Western Michigan University
1903 W Michigan Ave
Kalamazoo MI 49008-5278 USA

GIVING

Gifts and donations are vitally important from Statistics Friends and Alumni. If you would like to support our department or the Dr. Sievers Memorial Fund, detach this form and mail to:

Mrs. Michelle Hastings
Department of Statistics
Western Michigan University
1903 W Michigan Ave
Kalamazoo MI 49008-5278 USA

Donation amount \$_____

Cash_____ Check_____ (payable to Department of Statistics)

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