

Statistics Communique

Winter 2014–15

Celebrating 50 Years

By Paul Speckman

The Department of Statistics commemorated its 50th anniversary Sept. 19–21, 2013, with *Frontiers in Methodological and Applied Statistics: A Celebration of 50 Years*, a conference that brought together alumni and luminaries in the field. Approximately 100 alumni guests and speakers returned from the five decades of the department's existence.

Organized around five plenary talks and invited speaker sessions, the conference highlighted areas of research over the department's history, with each of the invited sessions featuring alumni.

The conference began with a keynote address by Jim Berger, of Duke University. This led to a session focusing on applications in ecology and biostatistics, reflecting two important themes of research in the department over the last two decades. The session featured Jacob Oleson, MA '99, PhD '02 (University of Iowa); Xiaoyin Wang, PhD '02 (Towson University); Jing Cao, MA '03, PhD '05 (Southern Methodist University); Seung Won Hyun, PhD '10 (North Dakota State University); and Jing Zhang, MA and PhD '08 (Miami University).

The second session was devoted to biostatistics and dedicated to John

Klein (read his obituary in the fall 2013 newsletter). Led off with a keynote address by John Kalbfleisch, of the University of Michigan, the invited speakers were Purushottam (Prakash) Laud, MA '73, PhD '77 (Medical College of Wisconsin); Liang Zhu, PhD '08 (St. Jude Hospital); Luyan Dai, MA '05, PhD '08 (Boehringer Ingelheim Pharmaceuticals); and Kyu Ha Lee, PhD '11 (Harvard School of Public Health).

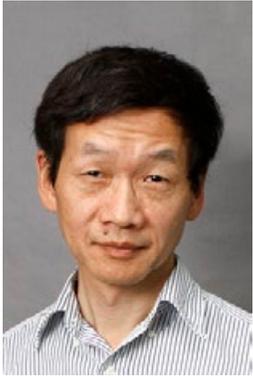
Day two began with a session on space and time, featuring spatial analysis of ecological and environmental data, image analysis of fMRI data, and spatio-temporal models. Following

Continues on Page 3



Attendees of the conference marking the 50th anniversary of the Department of Statistics.

From the Chair



Dear Alumni and Friends:

The last year of my first term as department chair was very good.

We began the fall 2013 semester with a new tenure-track assistant professor, Xianyang Zhang. He earned his PhD from the

University of Illinois at Urbana–Champaign in 2013. I am sorry to report that Professor Michael Robbins resigned and joined the RAND Corporation in Philadelphia. However, we are delighted that Hongyuan Cao has joined us as a tenure-track assistant professor starting this fall. Hongyuan received her PhD from the University of Illinois at Urbana–Champaign and spent four years at the University of Chicago. We are also pleased to announce that Justin Shows and Isabella Zaniletti joined our teaching faculty this fall.

This past year, the department celebrated its 50th anniversary. A conference, The Frontiers of Applied Statistics, with 120 participants, was held September 19–21, 2013. Two and a half days of sessions highlighted research and accomplishments. Each of the five sessions was led by a distinguished plenary speaker and followed by five alumni. The five principle speakers were James O. Berger and Mike West, Duke University; Noel Cressie, University of Wollongong, Australia; Jack Kalbfleisch, University of Michigan; and MU's own Tim Wright. We held a memorial session on biostatistics in honor of John Klein, PhD '80, who passed away on July 20, 2013 (see last year's newsletter for his obituary). The remaining sessions were on ecology and biostatistics, space and time, biostatistics and sequencing, and general methods. In addition, we had a reception featuring a poster session by current students. The banquet was highlighted by Paul

Speckman's summary and memorable photos of the faculty and students during the 50 years. A plaque was given to each of the four former chairs: Asit Basu, John Hewett, Tim Wright, and Nancy Flournoy to honor their contributions to the department.

The department just finished an internal five-year review for MU's Office of the Provost. Here is the executive review summary.

- Strengthen research capacity through selective invitations to long-term visitors
- Develop online MA program
- Expand undergraduate research

As you probably know, the recent Master of Statistics Applied Track program has been a great success! This program gives students the opportunity to earn their master's degrees by completing 30 hours of graduate work and a comprehensive master's exam

Degree Programs					
Degree (e.g., BS, MA, PhD)	Degree Program	Enrollment		Number of Degrees Awarded	
		Most-recent Fall Semester (2013)	Five-year Fall Semester Average	Most-recent Academic Year (2013)	Five-year Average
BA/BS	Statistics	49	34	18	11.6
MA	Statistics	103	51	17	15
PhD	Statistics	39	39.4	12	6.2

Changes Since Last Review in 2007

- Significant growth (135 percent) of undergraduate enrollment, despite reduction of tenure-stream faculty
- 13 percent increase in number of credit hours produced
- Creation of new applied-track MS in statistics, resulting in a one-year increase of 57 percent in number of MA students (F12 = 54; F13 = 85)
- Major redesign of largest service course, Statistics 1200, to allow for increased capacity, increased efficiency, and without any negative effect on student learning outcomes
- Significant increase in federal sponsored expenditures, from \$597,000 in FY2008 to \$1,058,000 in FY2012

Strategies or Plans for Improving Program

- Enhance research strengths in Bayesian statistics, spatio-temporal research, and biostatistics and bioinformatics

but no thesis. After 31 new graduate students joined the program in fall 2012, 45 and 13 more graduate students joined in fall 2013 and spring 2014, respectively. The current graduate student enrollment is 127! The total number of statistics graduate students has been more than doubled in two years! We have one of the largest statistics graduate programs in the country.

Our faculty were quite active this past year, as you will see in Faculty Kudos on Page 4. Sakis Micheas returned from research leave during 2012–13 and Scott Holan returned after a 12-week family leave in spring 2013. During 2014–15, Chong He and I are on research leave. We will spend most of our time visiting several universities in China. I will share with you more news next year!

Sincerely,
Dongchu Sun

Recent Statistics Graduates

May 2013

Xiaoxuan Peng
Samuel Joseph Reed

December 2013

Dana Caroline Lardner
Zachary Milton Levinson
Chenggang Tu
Yueyue Yu

May 2014

Amy Karen Armstrong
Scott David Bredvold
Kevin Daniel Bumberry
Andrew Myron Cochran
Spencer Logan Cook
Kaina Guo
Tyler Morgan Halterman
Michael Joseph Maasen
Abinash Mohanty
Elliott Lawrence Pollac
Seth Caleb Scarborough
Melanie Marie Steel
Samantha Tarson
Carlos Ignacio Martinez Villar

Katti Endowment Fund Travel Awards for Graduate Students

2013–14

Chris Hassett
Tri Minh Le
Sifan Liu
Yeqian Liu
Ling Ma
John Snyder
Nai-En Tang
Zhenyu Wang
Guohui Wu
Min Yi
Qingning Zhou

Winemiller Undergraduate Scholarships 2014–15

Ellyn Atkinson
Marielle Carlos
Ann Marie Coultrap
Tyler Easton
Sarah Kang
Anthony Marcozzi
Mary Margaret Ryan

Celebrating 50 Years

Continued from Page 1

the keynote address by Noel Cressie, of Ohio State University, were talks by alumni Mevin Hooten, PhD '06 (USGS Colorado Cooperative Fish and Wildlife Research Unit); Ali Arab PhD '07 (Georgetown University); Mark Kaiser, BS '79, MS '82 fisheries and wildlife, MA '84, PhD '90 statistics (Iowa State University); and Yu (Ryan) Yue, PhD '08 (Baruch College, CUNY). We also included one speaker who is not an alumnus—former colleague Joe Cavanaugh (University of Iowa).

After lunch, we returned to a biostatistics theme, featuring Mike West, of Duke University, and talks by Zhigang Zhang, PhD '04 (Memorial Sloan-Kettering Cancer Center); Lianming

Wang, PhD '06 (University of South Carolina); Xin He, PhD '07 (University of Maryland); Wade Davis, PhD '03 (University of Missouri); and Junlong Li, PhD '12 (Harvard School of Public Health).

The banquet Friday night was held at the newly remodeled Tiger Hotel in downtown Columbia. The evening was devoted to good food; renewed friendships; reminiscing by alums John Spruill, Matt Mayo, and Jun Lu; a few old photos; and some after-dinner remarks by emcee Paul Speckman on the past and future of the department.

The conference closed with a final session Saturday morning. Our own Tim Wright, BA '63, MA '64 math, PhD '68 statistics, gave a retrospective

of the department's contributions to the development of isotonic regression, a field prominent in the early history of the department. The invited speakers on general methodology and education were Song Zhang, MA and PhD '05 (University of Texas Southwestern Medical Center); Matthew Mayo, BA '86, MA '90 (University of Kansas School of Medicine); Roger Woodard, PhD '99 (North Carolina State University); Hyun-Joo Kim, MA '98, PhD '00 (Truman State University); and Adam Lane, PhD '13 (Cincinnati Children's Hospital Medical Center).



Hongyuan Cao has two major statistical methodological research interests. The first is statistical and computational methods for large and complex data sets, and the second is survival and longitudinal data analysis.

Sounak Chakraborty has received funding from the NSF and NIH. He is also a member of a recently concluded NSF-funded working group to solve problems in model selection and phylogeny in mixed multi-factor meta-analysis at the National Evolutionary Synthesis Center in Durham, N.C. He organized an invited session on Bayesian bioinformatics at the Statistical Learning and Data Mining conference in Durham, N.C., in June, and a topic-contributed session at the Joint Statistical Meeting, in Boston, in August. As the past president of the American Statistical Association Mid-Missouri Chapter, he organized an ASA-sponsored one-day short course on data mining at MU in October 2013.

Marco Ferreira is supported by a University of Missouri Research Board grant as principal investigator for his research on statistical models for functional magnetic resonance imaging analysis. He has published articles in the *Journal of the Royal Statistical Society–Series B*, *Journal of the American Statistical Association*, *Biometrika*, *NeuroImage*, *Bayesian Analysis*, *Sankhya–Series B*, *Journal of Time Series Analysis*, *Environmetrics*, *Canadian Journal of Statistics*, *Journal of Computational and Graphical Statistics*, and *Journal of Multivariate Analysis*.

Nancy Flournoy published “A Vignette of Discovery” in a volume titled *Past, Present and Future of Statistical Science* that was published by Taylor and Francis in celebration of the 50th anniversary of the Committee of Presidents of Statistical Societies. She also published “Information in a Two-stage Adaptive Optimal Design” in the *Journal of Statistical Planning and Inference* with her former students Adam Lane and Ping Yao, and “A New

Faculty Kudos

Bounded Log-linear Regression Model” in *Metrika* with her former student HaiYing Wang.



Subha Guha has published in *Journal of the Royal Statistical Society–Series B*, *Journal of the American Statistical Association*, *Canadian Journal of Statistics*, and *Journal of Computational and Graphical Statistics*. He continues to teach, mentor students, and work with collaborators in statistics, biomedical, and epidemiological sciences, with whom he has several papers in progress or under submission. He has received funding from NSF and NIH.

Zhuoqiong (Chong) He is supported by both NIH R01 and MDC grants for her research. She publishes papers in various statistics journals. She and Sounak Chakraborty developed and taught a new course, Introduction of Statistical Customized Pricing, in 2012 and 2013. She has served as the director of the graduate admissions committee since 2012, and she will be on research leave from August 2014 to July 2015.

Leonard Hearne is working on some new methodologies addressing causality and partitions of support spaces. He continues to consult in the life sciences area and has been traveling and speaking in Europe.



Scott Holan is supported (with Chris Wikle) on one of eight prestigious NSF–Census Research Network (NCRN) grants (2011–2016), with the aim of developing spatial and spatio-temporal (multiscale) models for improving the interpretability and usability of the American Community Survey. This multi million-dollar grant

(\$3,253,766) supports three senior personnel and four postdocs, along with several graduate and undergraduate research assistants. In addition, he also received research support from the U.S. Geological Survey to develop population and survival estimates for pallid sturgeon in the lower Missouri River and from the U.S. Department of Agriculture–Agricultural Research Service (USDA–ARS) for development of statistical methodology for agricultural research. During 2014, he was elected a fellow of the ASA and a member of the International Statistical Institute. He had publications in *Spatial Statistics*; *Journal of the Indian Society of Agricultural Statistics*; *Statistica Sinica*; *Environmetrics*; *Annals of Statistics*; *Journal of Agriculture, Biological and Environmental Statistics (JABES)*; *Handbook of Discrete-valued Time Series*; *The Survey Statistician*; and *Statistics Views* (Wiley). During 2013, as guest editor for JABES, he published a special issue on big data in ecology with Mevin Hooten and Chris Wikle. Holan serves as a steering committee member (2012–2016) for the NCRN coordination office and as a scientific committee member for the NBER/NSF Time Series Conference (2014). He is an affiliate member for the Program in Spatial Statistics and Environmental Statistics (The Ohio State University) (2011–present). Holan graduated two doctoral students (one co-advised with Chris Wikle) and one master’s student (co-advised with Shawn Ni) and continues to advise several doctoral students and mentor several postdocs. He serves on three editorial boards (*JABES*, *Journal of Nonparametric Statistics*, and *Journal of Time Series Analysis*). Finally, he gave 12 invited talks (four international) and is co-editing a handbook on discrete-valued time series, to be published by Chapman and Hall.

In 2014, **Tieming Ji** published papers in *PLoS ONE* and *Journal of Agricultural, Biological, and Environmental Statistics*. Her first master’s student graduated in May and accepted a statistician job at Monsanto. Ji also gave birth to her first baby girl, Ariana, in September. She took a leave of absence in the fall and will be back in spring 2015.

Suhwon Lee was promoted to associate teaching professor in August 2013 and has been elected president of the American Statistical Association Mid-Missouri Chapter for 2014. She continues to teach, advise students, and work with collaborators with whom she has several papers in progress. She works as a referee for *Journal of Statistics Education*.



Athanasios Micheas, in the academic year 2014, was published in the *Journal of the American Statistical Association*, the *Journal of*

Statistical Planning and Inference, and the *Journal of Applied Statistics*. He became an associate editor for the *Journal of Statistical Computation and Simulation* and serves as the director of graduate studies for the department. A student completed her doctorate under his guidance in December 2013. He is writing a book titled *Theory and Modeling of Stochastic Objects—Point Processes to Random Sets*.

Jing Qiu published four papers in the 2013–14 academic year, including two papers in *Science*, one in *Statistical Applications in Genetics and Molecular Biology*, and one in *Plant Genetic Resources*. Two master's students and one doctoral student successfully graduated under her supervision. In addition, Qiu gave birth to her lovely daughter, Esther Zhou, at the end of December 2013. Qiu is on leave for a year.

Lawrence D. Ries continues to serve as associate chair and lower-division coordinator for the department and he continues to teach Statistics 1200, the department's largest enrollment course, which he has taught since 1997. The Stat 1200 redesign project, which was completed in fall 2012, will be expanded in fall 2014 with Statistics 1200 being offered in three formats: traditional (on campus), online self-paced,

and online semester-based. During the upcoming academic year, Ries will serve on the newly formed Mizzou Online Advisory Council.



Justin Shows led the members of the statistics faculty at Mississippi State University in the spring 2014 semester in an effort to improve the

master's program there. He joined the faculty at MU this fall as an assistant teaching professor.

Paul Speckman has been supported by an NSF grant with Dongchu Sun and Jeff Rouder (of the psychology department) in developing methodology for Bayes factors. He was a co-author of



Professor Emeritus Tim Wright visiting at the anniversary conference with alumni Mohammad Zahorul Islam, PhD '87, and Zhigong Zhang, PhD '04.

the paper, "Default Bayes Factors for ANOVA Designs," that received the R. Duncan Luce Outstanding Paper Award for the years 2010–2012 from the Society for Mathematical Psychology. He gave talks at the 2013 Joint Statistics Meeting in Montreal, the 2013 Bayesian Model Selection Conference in Shanghai, and a plenary talk at the 2013 International Conference on Statistical Distributions and Applications at Central Michigan University. In addition, he worked with Erik Loehr (of the civil engineering department) on improved estimates of foundation strength sponsored by a grant from the Missouri Department of Transportation.

Dongchu Sun has two active NSF grants: one from DMS studying priors in spatial and temporal models and the other, with Paul Speckman and Jeff Rouder, of psychological sciences, is from SES for investigating the properties of Bayes factors for linear and nonlinear models. He has published articles in *Journal of the American Statistical Association*, *Canadian Journal of Statistics*, *Journal of Statistical Planning and Inference*, *Annals of the Institute of Statistical Mathematics*, *Statistics & Probability Letters*, and *Journal of Multivariate Analysis*.

Jianguo (Tony) Sun is continuously supported by both NIH Ro1 and NSF grants for his research on biostatistics and advising the trainees supported by an NIH biostatistics training grant. He is the principal investigator for all three grants. He advised one postdoctoral fellow, and he has one doctoral student who graduated in 2013 and three others who graduated in 2014. In addition to publishing papers in various top statistics journals, he published jointly with Xingqiu Zhao his third book, *The Statistical Analysis of Panel Count Data*, with Springer. Also he has given a few invited talks on his research at some research institutes and international conferences, and he serves as an associate editor for the *Journal of American Statistical Association*, *Lifetime Data Analysis*, *International Journal of Biostatistics*, and *Journal of Nonparametric Statistics*.



Lori Thombs

continues her collaborative research with members of the MU community. A new collaboration with K. Siegenthaler of Mizzou Online and Jim Spain, vice provost for Undergraduate Studies, compares online versus face-to-face instruction at MU. They use multilevel-modeling techniques that incorporate

Faculty Kudos

Continued from Page 5

the demographic and academic variables from the student-level data, as well as instructor-level attributes. Another notable activity of Thombs' during the year was serving as an expert witness in a class-action lawsuit involving labor law economics. Thombs also continues as director of the Social Science Statistics Center. During the last 10 years, SSSC staff collaborated with 325 faculty and 1058 student researchers, resulting in numerous published manuscripts, dissertations, theses, and grant proposals. The talented 2013 SSSC team included Lada Micheas and Ray Bacon, longtime MU employees, and four advanced quantitative graduate students: Angel Nickolov, Dongjun You, Nick Brown, and Yuelel Sui. During 2013, there were 193 one-on-one consulting clients, 428 persons using the SSSC Outreach walk-in consulting service, and 352 people enrolled in one of the 16 statistical software (SPSS, SAS, and Minitab) courses taught by SSSC staff.

Chris Wike had four active grants over the last year, including two from the NSF, one from the Office of Naval Research, and one from the Mis-



souri Department of Conservation. He also was the principal investigator on the department's successful proposal to develop an online master's program. He published papers in *The Annals of Applied Statistics*; *Spatial Statistics*; *Statistica Sinica*; *Environmetrics*; *Journal of the Royal Statistical Society—Series C*; *Quarterly Journal of the Royal Meteorological Society*; *Oceanography*; *Statistical Science*; *Journal of Agricultural, Biological and Environmental Statistics*; *Statistical Methodology*; *Journal of the Indian Society for Agricultural Statistics*; and the *Handbook of Discrete-valued Time Series*. He gave 12 invited talks, including a keynote lecture at the International Society for Bayesian Analysis world meeting in Cancun, Mexico, and plenary lectures at the International Statistical Ecology Conference in Montpellier, France; the CSIRO Meeting on Agricultural Informatics in Adelaide, Australia; and the Third Workshop on Bayesian Inference and Latent Gaussian Models with Applications in Reykjavik, Iceland. He was nominated by the president of the American Statistical Association and named one of five inaugural editors on the Statistical Board of Reviewing Editors for *Science*.

He also is associate editor of *Statistica Sinica*, *Environmetrics*, *Spatial Statistics*, *STAT*, and *Weather and Forecasting*, and series editor of Chapman and Hall/CRC *Interdisciplinary Statistics Series*. He advised three postdocs, four doctoral students, six master's students, and over 90 undergraduate students in his role as the director of Undergraduate Studies. His 2011 book, *Statistics for Spatio-Temporal Data*, co-written with Noel Cressie, was awarded the 2013 Degroot Prize by the International Society for Bayesian Analysis.



Isabella Zaniletti, MA '06 statistics, PhD '11 E&C psy, rejoins the Department of Statistics after three years of pediatric research with Children's

Hospital Association. Her main area of interest includes neonatal special diagnoses such as severe bronchopulmonary dysplasia, necrotizing enterocolitis, congenital diaphragmatic hernia, gastroschisis, and hypoxic ischemic encephalopathy. She published several manuscripts in *Pediatrics*, *Journal of Perinatology*, and *Journal of Pediatric Surgery*. She worked for the Office of Medical Research at MU's University Hospital for five years, and taught for the statistics department from 2004 to 2011 as a graduate instructor and adjunct faculty member. She is excited to return to MU as an assistant teaching professor and will be focusing on teaching classes at both the undergraduate and graduate levels.

Xianyang Zhang joined the faculty as an assistant professor in fall 2013. He is supported by a University of Missouri Research Board grant as principal investigator for his research on statistical inference for dependent functional data. He has published articles in the *Journal of the American Statistical Association*, the *Annals of Statistics*, *Electronic Journal of Statistics*, *Scandinavian Journal of Statistics*, *Statistica Sinica*, and *Bernoulli*.

Keep in Touch

Visit the department website at www.stat.missouri.edu for news and information about the Department of Statistics

or check in on the department Facebook page at <https://www.facebook.com/mizzou.statistics> to catch up with fellow alumni



Where Do We Stand? After a Departmental Five-year Review

By Paul Speckman

The department recently completed a self-study culminating in a five-year review. During the past five years, we have seen dramatic increases in undergraduate majors (+123 percent) and master's students (+243 percent) as well as a substantial increase in doctoral students (+30 percent). Over this same period, the number of credit hours generated by the department (mostly in service courses for other majors) has risen 13 percent. Despite the increased interest in our field and the rising demand for our courses, the number of tenured and tenure-track faculty has declined over the past five years. Our biggest challenge is to continue to attract and retain the best faculty in a difficult economic environment.

The department has approved or implemented several major curricular initiatives. Our largest service course, Statistics 1200: Introductory Statistical Reasoning, was redesigned to allow for increased capacity without a corresponding increase in cost and with no harm to student outcomes. We developed the new applied-track master's program, which has produced a dramatic growth in master's of arts enrollments. We have also begun developing a new master's in statistics with an emphasis in data analytics, to

be offered online, which promises to further increase the enrollments in our courses and the visibility of our department.

The University of Missouri has begun a strategic plan to enhance our standing in the prestigious American Association of Universities (AAU). The MU statistics department ranks in at least the top third among all statistics departments in almost all the metrics tabulated by the AAU. Our mission statement for the five-year review reflects this emphasis. To enhance our productivity, we intend to build on existing strengths, especially those in Bayesian statistics, spatio-temporal research, and biostatistics and bioinformatics. In particular, the addition this fall of Hongyuan Cao, who earned her doctorate at the University of North Carolina and then worked at the University of Chicago, will greatly strengthen our biostatistics program.

Another goal is to develop and strengthen our NSF-census research node, led by Holan and Wikle. One of only eight such programs in the U.S., Holan and Wikle's team is applying spatio-temporal models to federal statistics. Funding beyond the current 2011–2016 grant will be sought.

We intend to focus on recruitment and retention of domestic graduate students by visiting conferences and fairs



Alumni and graduate students represent the department at the anniversary conference. Seated: Yiqun Yang, Yuan Cheng, and Professor Dongchu Sun; standing: Junlong Li, PhD '12; Dan Zheng; Na Hu, PhD '13; Henan Wang; Yang Li, PhD '13; Ling Ma; Xiaojun Tong; Chong Dong; and Ran Duan, PhD '13.

that attract interested undergraduates and by expanding departmental scholarships to guarantee competitive stipends for up to five years to promising students. We will expand undergraduate research opportunities, and we will strengthen our curriculum to better equip both undergraduates and graduates for the changing business environment. Toward that end, two courses have been recently introduced, Statistical Methods for Customized Pricing and a new 8000-level data-analysis course covering data-mining techniques fundamental to analyzing big data.

These few highlights from the self-study report clearly illustrate the rapid growth in our undergraduate and graduate programs along with our standing among departments of statistics nationwide. We are very proud of our accomplishments over the last five years and are excited to see what the next five years have in store for us.



Lianming Wang, PhD '06, Professor Tony Sun, and Ping Yao, MS '06 AF&NR, PhD '09, at the 50th-anniversary conference.

Communiqué is published by the Department of Statistics at the University of Missouri.

Editorial Office

Department of Statistics
146 Middlebush Hall
Columbia, MO 65211
Phone: 573-882-6376
E-mail: dooleyj@missouri.edu
Web site: www.stat.missouri.edu

Editorial Board

Dongchu Sun
Melody Galen

The department appreciates hearing from alumni and friends. Send announcements or milestones to the address listed above.

Attacking Big Data with New Online MA

By Lawrence D. Ries

In our increasingly digital world, the volume of information we collect and archive is growing exponentially. To analyze this “big data” explosion, our society needs more statisticians, particularly those trained at the master’s level. In 2012, the department introduced a new applied-track master’s program, which has admitted over 30 new students during each of its first two years of existence. In order to permit additional growth and to provide a program specifically tailored to meet the demands of big data, the department plans to introduce a new master of arts in statistics degree with an emphasis in data analytics.

The most exciting aspect of the new program is that it will be completely available online. In February 2014, to provide for development and to assist with the launch of the program, the university awarded the department \$229,500 through a competitive proposal process. Our new online master’s is the only program in the College of Arts and Science to receive university funding through this process.

Individual courses that will support the new degree program will be developed over the next two years. It is anticipated that the online portion of the program will begin admitting students in fall 2016.



Zhijie Zhao and Zhinan Lin, graduate students, at the spring picnic in April 2014.