

Fall 2008

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from the **CHAIR**



Another successful year has gone by and it is time to once again report to you on the many exciting developments over the past year.

Qihe Tang was promoted to Associate Professor with tenure. Joe Cavanaugh was promoted to full professor. Jerome Pansera was hired as an Assistant Professor.

This year we graduated seven Ph.D. students: Kwang Woo Ahn, Xiangming Fang, Dai Feng, Xiaoli Gao, Bangwon Ko, Yeok Ok Lee, and Jung-Eun Song. Bangwon, Jung-Eun, Kwang Woo, Xiangming and Xiaoli have all taken academic positions, Yeok Ok has taken a position in medical research, and Dai has taken a position in industry. We also awarded 12 M.S degrees and 4 B.S degrees in statistics last year. Our actuarial science program awarded 19 M.S. degrees and 7 B.S degrees. Our students' pass rates on the SOA exams continue to be exceptional. In addition, 19 alumni became Fellows and 21 became Associates of the Society of Actuaries.

We are very grateful for the generous donations from alumni, friends, and companies who allow us to attract and support the best students. During the 2007-2008 academic year we spent more than \$101,000 on our students, the vast majority in the form of scholarships, actuarial exam fee reimbursements, and prizes. This is a big investment, but having the best students makes it worthwhile. Thank you for helping to make our programs successful!

As you have probably heard, the University suffered serious flood damage this June. While the department itself remained unscathed, a number of our students and faculty, like many in Iowa City, were directly or indirectly affected. We have included a section on the flood in this newsletter.

A very important way to support the department's efforts in hiring and retaining the best faculty is the establishment of endowed chairs in the department. We recently instituted the Robert V. Hogg Professorship at the Foundation to fund a chair in the department in Bob's honor.

I hope you will enjoy reading the news about the department, students, faculty, and alumni on the following pages. We would be happy to include any news you would like to share with former classmates in next year's newsletter. Please send us an email with alumni news.

Best wishes,



Luke Tierney
Chair, Statistics and Actuarial Science
Ralph E. Wareham Professor of Mathematical Sciences
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luke-tierney@uiowa.edu

The Flood of 2008



A snow-laden Iowa winter combined with a wet and soggy spring created "Iowa's Katrina" and the Flood of 2008. In early June most

of the rivers in eastern Iowa began to swell and rise and many filled the Coralville Lake and Reservoir. By June 14th the water began to flow over its emergency spillway and was headed down the Iowa River to Iowa City. Fortunately the University had time to prepare and was successful in moving its valuable art and library collections as well as clearing out the lower levels of many University buildings. The campus was shut down for a week and only the essential employees were asked to come to work. Thousands of employees took this time to fill millions of sandbags to better protect the campus building. The river crested about two feet lower than predicted due to many breaches and levees failing all along the river's length. But by the week's end nearly 20 University of Iowa buildings were under siege with the river flowing into their lower levels. President George W. Bush toured the flood damage on June 20th with University of Iowa President Sally Mason noting how the Arts Campus was particularly affected. Hancher Auditorium took floodwater over the stage level and into the middle of the main floor seats. The Voxman Music Building and the Art Museum were filled up to the first floor level. The Iowa Memorial Union, the Adler Journalism Building, the Becker Communications Building, and the Mayflower residence Hall all had significant water damage. Even the power plant and miles of utility tunnels crossing under the Iowa River were severely damaged. Months and millions of dollars later many of the campus buildings are now open or are in the planning stages for futures openings.

The University has a great website on the UI Flood Recovery: <http://www.uiowa.edu/floodrecovery/index.html#relief>.



A Message from UI President Sally Mason

If you spent the summer in the Iowa City area, you saw record floods threaten The University of Iowa. If you are new or returning to campus this fall, you're joining a university community that has emerged from this historic event tested yet inspired.

Parts of our campus continue to recover. Progress has been faster than anyone predicted, but we ask your help and your patience as we build a revitalized University of Iowa that's stronger than ever.

For the most part, UI life continues as normal this fall, but from time to time, each of us may notice unexpected changes or challenges. Even if you don't regularly use any of the facilities directly affected by the flood, you may discover the occasional inconvenience getting around campus, notice temporary equipment in place, or even experience minor disruptions in utilities or communications.

Our community met the flood head on, stacking sandbags, rescuing equipment and materials, and helping friends weather the storm. By staying informed, adjusting to challenges, and looking forward, you become part of this unprecedented effort.

Thank you for your ongoing support as we write what's sure to be a remarkable chapter in University of Iowa history.

*Sally Mason, President
The University of Iowa*

Professor Jim Broffitt reports....The floods of 2008 brought our community together in an extraordinary way. It was great to see hundreds of people volunteering their time to fill sand bags and build dikes in an attempt to hold back the waters. Our son Dan and his family live close to the Iowa

River -- near lower City Park. Their home flooded, so in June they moved in with us. We enjoyed having them and especially getting to see our granddaughter every morning. She was one year old on Thanksgiving Day. I call her little Miss Sunshine because she is always smiling and brightens my day. They were with us for about four months, but have now moved back home. Dan, together with family and friends, did most of the restoration work. At one point they counted more than fifty people who had volunteered to work on their home!

In Memoriam

Class of 1932

Evelyn B. Kittlesby (BA in Mathematical Sciences, with an interest in Statistics and Actuarial science) died in January 2007.



John Joseph Birch of Eastham, MA, died on November 9, 2008 of bile duct cancer. He was born on June 10, 1923 and raised in Brockton MA where he graduated from Brockton High School in June 1941. He served in the Navy during World War II where he was awarded the European-African-Middle Eastern Medal with 2 stars, the Victory Medal, the American Medal, and the Good Conduct Medal. He survived the D-day mission, landing

Class of 1934

Catharine Mueller Wegner (BA in Mathematical Sciences, with an interest in Statistics and Actuarial science) died in December 2006.

Charles F. Pestal (BA in Mathematical Sciences, with an interest in Statistics and Actuarial science) died in July 2007.

first on Omaha Beach and then on Utah Beach.

After receiving a B.S. in Physics from Brown University in June 1950, he worked as an engineer in Electronics Research at Melpar Inc, and Operations Research at A.D. Little Inc. He left industry in 1954 to attend the University of California, Berkeley, where he received a Ph.D. in Mathematical Statistics in 1960.

He joined the faculty of Mathematical Statistics first at the University of Nebraska (1960-1964) and then the University of Iowa, from which he retired in 1988.

He married Eleanor Mansfield on February 3, 1951. In addition to his widow, he is survived by two daughters Dr. Joanna M. Birch, D.V.M., a

Class of 1938

Martha Stoessel Wahl (BA in Mathematical Sciences, with an interest in Statistics and Actuarial Science) died in November 2007.

Class of 1945

Winifred A. Asprey (PhD in Mathematical Sciences, with an interest in Statistics and Actuarial Science) died in October 2007.

veterinarian in Snellville GA., and Dr. Laura E. Birch, an associate professor of biology at Clarke College, Dubuque, IA., and two grandchildren, Siobhanna L. Brown and Jonathan P. Brown of Snellville, GA. He is also survived by his sister-in-law Irene Berzinis of Chatham, MA.; nephew Stephen M. Berzinis (Mary) and children Kyra and Kevin of Brewster MA.; nephew Barry Berzinis (Mary) of West Townsend, MA.; and niece Sheila T. Congdon (Richard) of Providence, R.I., and great nieces Sarah C. Barr and Dawn C. Lovelace.

Mr. and Mrs. Birch retired to Eastham in 1992, where they were members of the board of Nauset Newcomers in 1994-5, and members of the Orleans

Class of 1958

Alexander Mehaffey Jr. (MS in Mathematical Sciences, with an interest in Statistics and Actuarial Science) died in October 2007.

Gerald S. Rogers (PhD in Mathematical Sciences, with an interest in Statistics and Actuarial Science) died in June 2008.

Yacht Club since 1994. Mr. Birch's woodworking hobby led to his participation in Hollyberry Bazaars during the past eighteen years.

At his specific request, no public service is planned. As a final gift to his alma mater, he donated his body to be used in the research and teaching programs of the Warren Alpert Medical School of Brown University.

In lieu of flowers, donations may be sent to: VNA of Cape Cod Hospice (434 Rt. 134, Suite G1, South Dennis, MA 02660), or the American Cancer Society (New England Division, 30 Speen St., Framingham, MA 01701).



Katherine Furgol, MS Statistics 2008. Katherine won the University of Iowa L.B. Sims Outstanding Master's Thesis Award. The title of her thesis was "Trend Estimation Under UCLB: A Novel Method for Estimating Trends from Censored Assessment Data." Her advisor was **Dale Zimmerman** and Andrew Ho.

Daniel S. Nettleton, PhD Statistics 1996. Dan is a professor of statistics at Iowa State University and has been named an American Statistical Association Fellow for 2008.

Joshua M. Tebbs, BS Statistics 1995 and MS Statistics 1999. Josh was promoted to Associate Professor of Statistics at the University of South Carolina.

Invited SPEAKERS

Spring 2007

Huiliang Xie
Ph.D. Candidate
Department of
Statistics and Actuarial
Science
University of Iowa
“Extending SCAD-
Penalized Regression
to Accelerated Failure
Time Models”

Jiafeng Sun
Department of
Actuarial Science, Risk
Management, and
Insurance
University of
Wisconsin-Madison
“Heavy-Tailed Longitu-
dinal Data Modeling
Using Copulas”

Arka Ghosh
Department of
Statistics
Iowa State University
“Optimal Buffer Size
for a Stochastic
Processing Network
with a Drift”

Kate Cowles
Department of
Statistics and Actuarial
Science
University of Iowa
“Parallelizing MCMC
for Bayesian Spatiotem-
poral Geostatistical
Models”

Rong Chen
NSF Program Director
for Statistics
Professor of Informa-
tion and Decision
Sciences
University of Illinois-
Chicago

“Sequential Monte
Carlo Methods and
Their Applications: An
Overview and Recent
Developments”

Lan Wang
School of Statistics
University of Minne-
sota
“Consistent Model
Selection and Data-
Driven Smooth Tests
for Clustered Data”

William Meeker
Department of
Statistics
Iowa State University
“Using Accelerated
Tests to Predict
Warranty Returns”

Wei Chen
Principal Financial
Econometrician
SAS Institute, Inc.
“Tail Tales -- Topics
on Portfolio Risk
Management”

David Bates
Department of Finance
University of Iowa
“On Estimating and
Filtering Time-
Changed Levy
Processes”

Xuming He
Department of
Statistics
University of Illinois at
Urbana-Champaign
“Inference for Quantile
Regression Models”

John Manistre
AEGON USA, Inc.
Cedar Rapids, Iowa
“Tail Correlation - A
Practitioner’s Perspec-
tive”

Xian Zhou
Department of Applied
Mathematics
The Hong Kong
Polytechnic University
“Survival Analysis with
Long-term Survivors”

Rick Chappell
Departments of
Biostatistics and
Medical Informatics
& Statistics
University of
Wisconsin-Madison
“Delta What? Choice
of Outcome Scale in
Non-Inferiority Trials”

Fall 2007

A. Ronald Gallant
Fuqua School of
Business
Duke University
“A Statistical Inquiry
into the Plausibility of
Recursive Utility”

Robert V. Hogg
CLAS Alumni Fellow
Department of
Statistics and
Actuarial Science
University of Iowa
“Small Steps and
Giant Leaps”

Jia-An Yan
Academy of
Mathematics and
Systems Science
Chinese Academy
of Sciences
“Some New Risk
Measures and Their
Representations in
Terms of Choquet
Integrals w.r.t.
Distorted Probabilities”

Philip Dixon
Department of
Statistics
Iowa State University
“Combining Multiple
Sources of Information
to Better Estimate the
Probability of a Rare
Event”

Heike Hofmann
Department of
Statistics
Iowa State University
“Scagnostics for
Projection Pursuit”

Li-Shan Huang
Department of
Biostatistics
University of Rochester
“Incorporating
Neighborhood
Estimates in Non-
parametric and
Semiparametric
Models”

Nancy Reid
Department of
Statistics
University of Toronto
“Weighting the
Likelihood Function”

Nancy Reid
Department of
Statistics
University of Toronto
“Putting Asymptotics
to Work”

Max Morris
Department of
Statistics
Iowa State University
“Composite Response
Surface Designs for
Factors with Jointly
Symmetric Effects”

Kwang Woo Ahn
PhD Candidate in
Statistics
University of Iowa
“Bayesian Inference
with Incomplete
Multinomial Data -
Assessing the Spatio-
Temporal Variation
in Pathogen-
Variant Diversity”

Rodney Strachan
School of Economics
University of
Queensland
“Divergent Priors
and Well-Behaved
Bayes Factors”

Gary Russell
Department of
Marketing
University of Iowa
“Predicting Product
Purchase from Inferred
Customer Similarity:
An Autologistic
Model Approach”

John Geweke
Department of
Statistics and
Actuarial Science
Department of
Economics
University of Iowa
“Hierarchical Markov
Normal Mixture
Models with Applica-
tions to Financial
Asset Returns”

Gideon Zamba
Department of
Biostatistics
University of Iowa
“A Bayesian Analytical
Tool for ILL control
and Detection of
Intentional Release”

Faculty and Staff News



Our department welcomed a new Assistant Professor, **Jerome Pansera**, in August 2008. Jerome earned his PhD in Applied Mathematical and Computational Sciences under the direction of Elias Shiu at the University of Iowa. He also spent the past three years working in the financial industry. We are very happy to have him join our actuarial faculty!

Matt Bognar went to France in July to present at the International Workshop on Applied Probability (IWAP 2008). The talk was called “Bayesian Inference for Discretely Sampled Diffusion Processes: A New MCMC Approach.” The paper was published with **Osnat Stramer**.



Osnat Stramer had a busy year traveling and participating in many conferences, including the 30th Midwest Probability Colloquium at Northwestern University in October; the Workshop on Likelihood Methods in Finance at Princeton University also in October; the NBER-NSF Time Series Conference at the University of Aarhus, Denmark, in September; the Graybill Conference at Colorado State University in June; the 2008 Seminar on Bayesian Inference in Econometrics and Statistics (SBIES) at the University of Chicago Graduate School of Business in May; and the Workshop in Inference for Partially Observed Diffusion Processes at the University of Warwick in January.



Russ Lenth wrapped up many months of activity as chair of the program committee for the Joint Statistical Meetings in Denver. This was the second largest JSM ever, with about 5,600 attendees. The meeting went quite smoothly and Denver was a nice venue. Of the 450 technical sessions on the program, some particularly successful ones included a panel discussion on steroids in baseball that included two statisticians and two outside “sabermetricians”; another panel on the recent book *The Black Swan* that included the author, Nassim Taleb; and a great session on missing and coarse data chaired by our own **Dale Zimmerman**. Especially timely and important were several sessions related to elections and polling; these have already fostered some volunteer efforts of ASA members to help design and improve post-election audits of the voting system.

Aside from JSM, Russ has been developing a *StatWeave* program, which integrates code and output for all kinds of statistical software with word processors. Russ was also elected the 2010 chair of the ASA section on Statistics in the Physical and Engineering Sciences (SPES).

Dale Zimmerman was awarded a research grant of \$64,358 from the National Institutes of Health. His grant proposal was titled “Enhancing the Utility of Geocoding Accuracy Assessments via Regression Modeling of Accuracy on Geographic Characteristics and Feature Size.” This grant helps support one graduate student in our department.

Jian Huang was awarded the prestigious NIH ROI award from the National Cancer Institute. The grant is titled “Regularized Classification & Survival Analysis for Expression Profiling of Cancer” and it is for four years. He also was awarded a National

Science Foundation grant for “Efficient Bi-Level Variable Selection in High-Dimensional Models.”

Last summer, **Elias Shiu** and **Qihe Tang** presented papers at the Twelfth International Congress on Insurance: Mathematics and Economics in Dalian, China, and attended the subsequent symposium at Tsinghua University, Beijing, held in honor of Professor Hans Gerber’s 65th birthday. A highlight of the 12th I:M&E Congress was a plenary address by Shirley Shao, who obtained her M.S. degree in actuarial science from Iowa in 1979 and is now Chief Actuary of China Life, the largest life insurer in China.

Qihe also presented a paper at the Second International Workshop on Gerber-Shiu Functions, Johannes Kepler University, Austria, and taught a three-day short course on “Subexponential Tails in the World of Dependence” which is part of the Fifth Conference in Actuarial Science and Finance, University of Aegean, Greece.

Congratulations to **Qihe Tang**, who was promoted to Associate Professor, and to **Joe Cavanaugh**, who was promoted to Full Professor!



Effective January 2008 **Tammy Siegel** became our Department Administrator taking over from Jessie Trepanier, who held the position for two and a half years, and Dorothy Kelley, who took care of us for 19 years before that. We’re glad Tammy remains in our department, and this new role presents welcome challenges that she has embraced with the same enthusiasm and efficiency that has always been her way.

Margie Ebert joined our staff in March 2008. Margie has revitalized our office and wears many hats, including Actuarial Science Coordinator, Department Webmaster, and Project Assistant. Margie and her husband, Jim, have four children. Welcome Margie!

Faculty Books

Dale Zimmerman co-authored his first book. It is called “Geocoding Health Data: The Use of Geographic Codes in Cancer Prevention and Control, Research and Practice,” and was published by CRC Press in late 2007. The co-authors are G. Rushton, M.P. Armstrong, J. Gittler, B. Greene, C. Pavlik, and M. West, all of whom are colleagues from various other departments at the University of Iowa.

Jonathan D. Cryer and **Kung-Sik Chan**, second edition of *Time Series Time Series Analysis with Applications in R Series* was published by Springer Verlag.

The third edition of *Applied Statistics for Engineers and Physical Scientists* by **Johannes Ledolter** and **Robert V. Hogg** will be out in January 2009.

The eighth edition of “*Probability and Statistical Inference*,” by **Robert V. Hogg** and Elliot A. Tanis will be out in January 2009.

Faculty and Staff News continued

More Recent Publications

- Christ, A., Ver Hoef, J., and **Zimmerman, D.L.** (2008). An animal movement model incorporating home range and habitat selection. *Journal of Environmental and Ecological Statistics*, 15, 27-38.
- Dhaene, J., Vanduffel, S., Goovaerts, M.J., Kaas, R, **Tang, Q.** and Vyncke, D. (2006). Risk measures and comonotonicity: A review. *Stochastic Models*, 22, 4, 573-606.
- Feng, D. and **Tierney, L.**, (2008). "Computing and Displaying Isosurfaces in R," *Journal of Statistical Software*, 28, (1), 1-24.
- Huang, J.**, Ma, S. G., Xie, H. L. and Zhang, C.-H. (2008). A Group Bridge Approach for Variable Selection. *Biometrika*.
- Huang, J.**, Horowitz, J. L., and Ma, S. G. (2007). Asymptotic properties of bridge estimators in sparse high-dimensional regression models. Accepted for publication by the *Annals of Statistics*.
- Huang, J.**, Ma, S. G., and Zhang, C.-H. (2007). Adaptive Lasso for Sparse High-Dimensional Regression Models. Accepted for Publication by *Statistica Sinica*.
- Lu, M. G., Zhang, Y., and **Huang, J.** (2007). Estimation of the Mean Function with Panel Count Data Using Polynomial Splines. Accepted for Publication by *Biometrika*.
- Ma, S.G., Kosorok, M.R., **Huang, J.**, Xie, H.H., Manzella, L. and Soares, M.B. (2006). Robust semiparametric microarray normalization and significance analysis. *Biometrics*, 62: 555-561.
- Mazumdar, S., Rushton, G., Smith, B.J., **Zimmerman, D.L.**, and Donham, K.J. (2008). Geocoding accuracy and the recovery of relationships between environmental exposures and health. *International Journal of Health Geographics*, 7, 13.
- Rossini, A. J., **Tierney, L.**, and Li, N. (2007). *Simple parallel statistical computing in R*. *Journal of Computational and Graphical Statistics*, 16 (1), 399-420.
- Russo, R.P.** and **Shyamalkumar, N.D.** (2007). Reading policies for joins: An asymptotic analysis. *Annals of Applied Probability*, 17, 230-264.
- Shyamalkumar, N.D.** and Varadarajan, K. (2007). Efficient subspace approximation algorithms. *ACM-SIAM Symposium on Discrete Algorithms*, 532-40.
- Stramer, O.** and J. Yan (2007). Asymptotics of an efficient Monte Carlo estimation for the transition density of diffusion processes, *Methodology & Computing in Applied Probability*, Volume 9, Issue 4, 483-496.
- Stramer, O.** and J. Yan (2007). Parametric inference for partially observed diffusion processes: a comparison study, *Journal of Computational and Graphical Statistics*, Volume 16, Issue 3, 672-691.
- Stramer, O.** and J. Yan (2007). On Bayesian analysis of non-linear continuous-time autoregression models". *The Journal of Time Series Analysis*, volume 28, Issue 5, 744-762.
- Stramer, O.** and **Bognar, M.** (2008). "Bayesian Inference for Discretely Sampled Diffusion Processes: A New MCMC-Based Approach to Inference," refereed procedure volume for the 2008 international workshop on Applied Probability.
- Stramer, O.** (2008). "Asymptotics of Efficient Monte Carlo Estimations for the Transition Density of Multivariate Diffusion Processes," refereed procedure volume for the 2008 international workshop on Applied Probability and for *Methodology & Computing in Applied Probability*, Volume 9, Issue 4, 483-496.
- Stucky, T.D., Heimer, K. and **Lang, J.B.** (2007). A bigger piece of the pie?: An analysis of state corrections spending over time. *Journal of Research on Crime and Delinquency*, 44, 91-123.
- Tierney, L.** (2007). R: An overview and some current directions. *Journal of the Korean Statistical Society*, 36 (1), 31-58.
- Tierney, L.** (2008). "Implicit and explicit parallel computing in R," COMPSTAT 2008: Proceedings in Computational Statistics, Paula Brito (ed.), *Physica Verlag*, 43-51.
- Xie, H. L. and **Huang, J.** (2008). SCAD-penalized Regression in High-dimensional Partially Linear Models. Accepted for publication by the *Annals of Statistics*.
- Zhang, C.-H. and **Huang, J.** (2008). Model-Selection Consistency of the LASSO in High-Dimensional Linear Regression. Accepted for Publication by the *Annals of Statistics*, 36, 1567-1594.
- Zhang, H. and **Zimmerman, D.L.** (2007). Hybrid estimation of semivariogram parameters *Mathematical Geology*, 39, 247-260.
- Zimmerman, D.L.** (2006). Optimal network design for spatial prediction, covariance parameter estimation, and empirical prediction. *Environmetrics*, 17, 635-652.
- Zimmerman, D.L.**, Fang, X., Mazumdar, S. and Rushton, G. (2007). Modeling the probability distribution of positional errors incurred by residential address geocoding. *International Journal of Health Geographics*, 6:1.
- Zimmerman, D.L.**, Fang, X., Mazumdar, S. and Rushton, G. (2007). Modeling the probability distribution of positional errors incurred by residential address geocoding. *International Journal of Health Geographics*, 6:1.
- Zimmerman, D.L.** (2008). Estimating the intensity of a spatial point process from locations coarsened by incomplete geocoding. *Biometrics*, 64, 262-270.
- Zimmerman, D.L.** (2008). Spatial clustering of the failure to geocode and its implications for the detection of disease clustering. *Statistics in Medicine*, 27, 4254-4266.
- Zimmerman, D.L.** and Pavlik, C. (2008). Quantifying the effects of mask metadata disclosure and multiple releases on the confidentiality of geographically masked health data. *Geographical Analysis*, 40, 52-76.

Congratulations to Iowa alumni who became associates or fellows in the Society of Actuaries!

SOCIETY OF ACTUARIES Fellows(FSA)

September 2007

Haobo Li (MS 2002)
Paul Nawrot (BS 1997)
Guan Ting Janelle Ong (MS 2004)
Glen Reineke (BS 2002)
Oleg Sydyak (MS 2001)
Yang You (MS 2001)

November 2007

Aaron Ekstrom (BS 1996)
Jennifer Jakubowski (BS 1999)
Shuo Liu (MS 2004)
Bryce Rosel (BS 2003)
Bin Sun (MS 1999)
Lu Tiffany Wang (MS 2005)
Shufang Wang (MS 2003)
Lilin Zhang (MS 2002)

February 2008

Sara Carstensen (BS 2001)
Yin He (MS 2005)
Laura Heyn (BS 2003)
Tony Langasek (BS 2003)
Dan Li (MS 2003)
Matthew Plothow (MS 2002)
Greg VandeKrol (BS 2000)
Yue Xu (MS 2004)
Hai You (MS 2000)
Wei Zhou (MS 2004)

March 2008

Megan Heine (MS 2002)

July 2008

Rong Yang (MS 2003)
Shaowei Yang (MS 2006)

September 2008

Kevin Geurtsen (BS 1993)
Haibo Liu (MS 2005)
Jennifer Lynn McGinnis (MS 2006)
Cheuk Yin Andrew Ng (PhD 2007)
Chris Alan Plucar (MS 2004)
Lina Xu (MS 1990, PhD Applied Math 1996)

SOCIETY OF ACTUARIES Associates(ASA)

October 2007

Kally Marks (BS 2005)
Blake Tiernan (BS 2004)
Qian Wan (MS 2002)

November 2007

Diep H. Do (MS 2005)
Nienh Ho (BS 2006)
Christopher Johnson (MS 2004)
Jingyan Wang (MS 2006)

December 2007

Kyle P. Hays (MS 2006)
Krishna Kothoor (MS 2006)
Valerie Noonan (MS 2004)

January 2008

Chun-Wei Chen (MS 1999)
Douglas Krupa (BS 2005)
Min Luo (MS 2004)
Emmie Munthali (MS 2004)
Dion Salandy (MS 1999)
Barry Wagoner (MS 2002)

March 2008

Marissa Doudna (BS 2004)
Khang-Yee Lim (MS 1997)

May 2008

Haotong Wu (MS 2004)

June 2008

Siying Chen (MS 2006)
Jun Jiang (MS 2008)
Yang Hyun Kim (MS 2007)
Brian Lanning (BS 2001)
Yan Li (MS 2006)
Reilly Peterson (BS 2006)
Gang Wang (MA Economics 2001)
Yan Wu (MS 2004)

July 2008

Yu Chen (MS 2005)
R. Travis James (BS- Mathematics 2005)
Yuenteng Ng (MS 2006)

August 2008

Dongwei Yang (MS 2002)

September 2008

Christian Fay Rulli (BS 2000)

SOCIETY OF ACTUARIES Chartered Enterprise Risk Analysts (CERA)

April 2008

Carl Fagenbaum (BS 1996)

May 2008

Jennifer McGinnis (MS 2006)

July 2008

Haibo Liu (MS 2005)

student NEWS

Student Awards and Scholarships

Our annual student awards were presented on May 1, 2008. The Allen T. Craig Award for outstanding teaching assistant was shared by **Marcel Carcea, Dimple Doshi** and **Yiwen Huang**. **Tianyang Zhang** took home this year's Henry L. Rietz Award for best performance on the Ph.D. Comprehensive Examination. For outstanding performance in the Actuarial Science program, **Jun Jiang, Kent Schrad** and **Hing Wu** won the Lloyd A. Knowler Award.

We also presented several Robert H. Taylor Awards for academic achievement in Actuarial Science. This year's recipients were **Xuemiao Hao, Colleen McGlaughlin, Kent Schrad, Chao Tan, Yi Wang, Yu Xu** and **Jun Yang**.

Scholarships totaling \$76,292 were awarded to 27 students in the 2007-08 academic year. Included among these were several named scholarships:

AEGON Foundation Scholarship
Kimberly M. Cessna

Aviva Charitable Foundation Scholarships
Fall 2007: **Hing Wu** and **Yu Xu**, Spring 2008:
Kyle Mulholland and **Yu Xu**

CIGNA Foundation Scholarships
Fall 2007: **Hing Wu** and **Colleen McGlaughlin**,
Spring 2008: **Colleen McGlaughlin**

Knowler Scholarship
Kimberly Cessna

Principal Financial Group Foundation
Scholarship
Kent Schrad

Towers Perrin Scholarship
Lindsey Scott

Harold W. Schloss Memorial Scholarship
Lindsey Scott

Charles and Eleanore Wilson Scholarships
Fall 2007: **Bradley Becker, Bryan Benson, Tyler Biggs, Kimberly Cessna, Stephanie Fahy, Katherine Geller, Whitney Gerlich, Christian Harms, Alexander LeFevre, Kyle Mulholland, Sang-Jin Park, Lindsey Scott, Kinsey Sloss, Peter Tigges, Seth Truka, Thaddeus Wasowicz, Nicholas Weber, Devin Westcott, Hing Wu, Li Zhen**

Spring 2008: **Bradley Becker, Bryan Benson, Tyler Biggs, Kimberly Cessna, Rachel Gallagher, Katherine Geller, Whitney Gerlich, Christian Harms, Alexander LeFevre, Kyle Mulholland,**

Kent Schrad, Lindsey Scott, Jenna Shatek, Yoon Joo Sung-Cho, Peter Tigges, Seth Truka, Thaddeus Wasowicz, Nicholas Weber, Devin Westcott, Jing Yin, Li Zhen.

In addition to scholarships, the department refunded a total of \$25,570 to students passing CAS/SOA exams in 2007-08.

We are pleased to have so many outstanding students receiving scholarships and passing exams, just as we are grateful for the generous donations from corporations, alumni and friends that make these scholarships and exam refunds possible.

Student News

Throughout the year many of our graduate students present posters and papers at various national conferences. This is an important way to introduce student research and leadership within the department.

Jinzheng Li, MS candidate in Statistics, presented two papers at the SAE Digital Human Modeling Conference in Pittsburg in June 2008.

Mathai, A., Li, J., Godin, C., Chiang, J., Knake, L., Wisch, J. and Stephens, A. (2008), "A New Multi-Variable Regression Model for Ergonomic Lifting Analysis with Digital Humans".

Rahmatalla, S., Xiang, Y., Smith, R., Li, J., Meusch, J., Bhatt, R., Swan, C., Arora, J. and Abdel-Malek, K.A., "A Validation Protocol for Predictive Human Locomotion."

Jie Li presented a paper "Geocoding Accuracy: Effects of Geographic Features and Spatial Autocorrelation" at the Joint Statistical Meetings in Denver.

Xiongwen Tang attended the Conference on Survival Analysis and its Applications in Columbia, Missouri in October.

Xuemiao Hao attended the 12th International Congress Insurance: Mathematics and Economics, held in Dalian, China in July.

McGlaughlin shines on, off the field

by John Riehl, *The Cedar Rapids Gazette*, April 20



Colleen McGlaughlin loves numbers, just not the ones that calculate her batting average.

As an actuarial science major, McGlaughlin, a junior on the University of Iowa softball team, could figure out her average

instantly after each at-bat if she wanted. You would think that would be the case since she was hitting (Colleen, close your eyes) .333 with six home runs and 26 RBIs.

The Hawkeyes split a twin-bill Sunday with Minnesota at Pearl Field, winning the opener 2-0 and losing the nightcap, 1-0, in 13 innings. McGlaughlin was 0-for-8 in the twin-bill, but it marked a rare bad day for the Iowa utility player.

"I've been pretty good with numbers. But I don't like to look at those," McGlaughlin said. "It's too much pressure. I couldn't tell you (my batting average)."

She does, however, have an idea about her grade-point average. "I'm not sure exactly what it is. It's not quite a 4.3 though," said a modest McGlaughlin, a National Fastpitch Coaches Association Academic All-America Scholar Athlete last year.

McGlaughlin earned a \$400 Robert H. Taylor Award this semester for demonstrating excellence in research and academic performance in the UI's Department of Statistics and Actuarial Science. In addition to her fine offensive numbers, she hasn't committed an error while playing first base, third base and left field. This Morton, Ill., native is the epitome of a student-athlete. Actuarial science isn't an easy area of study, as the UI handed out only 14 undergraduate and 30 master's degrees in 2007. Hitting Big Ten pitching isn't a walk in the park, either, with the likes of sixth-ranked Michigan and No. 13 Northwestern atop the standings with No. 25 Iowa (32-14 overall, 10-4 Big Ten).

"She's an amazing person. On road trips, she probably beats me up," said Iowa Coach Gayle Blevins, who normally wakes up around 6 a.m. "Not even the assistant coaches are up. She's downstairs in the hotel lobby studying with her laptop. When we're traveling on the bus, she always has a book open."

Faced with the choice, McGlaughlin would rather take an actuarial science exam than try to get a base hit off an elite pitcher.

"Hitting is more of a challenge for me, because of the confidence factor," McGlaughlin said. "When I go into a test, I know if I've studied well and I go in confident and it's no problem. With hitting, you're constantly working to stay confident."

Ph.D. Graduates

Kwang Woo Ahn, received his Ph.D. in Statistics in August 2008 under the direction of Luke Tierney. The title of his thesis was "Topics in Statistical Epidemiology." Dr. Ahn is currently an Assistant Professor with the Division of Biostatistics at the Medical College of Wisconsin in Milwaukee, Wisconsin.

Xiangming Fang, received his Ph.D. in Statistics in August 2008 under the direction of Kung-Sik Chan. The title of his thesis was "Generalized Additive Models with Correlated Data." Dr. Fang is currently an Assistant Professor at the Department of Biostatistics East Carolina University in Greenville, North Carolina.

Dai Feng, received his Ph.D. in Statistics in May 2008 under the direction of Luke Tierney. The title of his thesis was "Bayesian Hidden Markov Normal Mixture Models with Application to MRI Tissue Classification." Dr. Feng is currently a Biometrician with Merck and Company in Rahway, New Jersey.

Xiaoli Gao, received her Ph.D. in Statistics in August 2008 under the direction of Jian Huang. The title of her thesis was "Topics in Statistical Epidemiology." Dr. Gao is currently an Assistant Professor at Oakland University in Rochester, Michigan.

Bangwon Ko, received his Ph.D. in Statistics in May 2008 under the direction of Elias Shiu and Qihe Tang. The title of his thesis was "On Sums of Dependent Heavy-Tailed Random Variables and Valuation of Equity-Linked Insurance Products." Dr. Ko is currently an Assistant Professor in Statistics and Actuarial Science at Soongsil University in Seoul, Korea.

Yeok Ok Lee, received her Ph.D. in Statistics in May 2008 under the direction of John Geweke. The title of her thesis was "Mixture of Semiparametric Models." Dr. Lee is currently a *Postdoctoral Fellow* in the Department of Biostatistics at University of Rochester in Rochester, New York.

Jung-Eun Jasmine Song received her Ph.D. in Statistics in August 2008 under the direction of Luke Tierney. The title of her thesis was "Bayesian Linear Regression Via Partition." Dr. Song is currently employed by Research and Development with Electrical Geodesics, Inc. in Eugene, Oregon.

Actuary of Tomorrow

Stuart A. Robertson Memorial Scholarship

Presented to undergraduate student: **Colleen P. McGlaughlin**

Stuart A. Robertson, FSA, MAAA, a distinguished actuary, passed away on November 4, 2005 at the age of 87. Mr. Robertson co-founded the actuarial and consulting firm Milliman & Robertson (now Milliman, Inc.) over 50 years ago, together with Wendell Milliman. Mr. Robertson served as CEO and Chairman of the firm for many years prior to his retirement in 1983. He was also active in the actuarial profession, serving on the Society of Actuaries Board of Governors and in other capacities. A scholarship fund was established in 2006 in Stuart Robertson's name at the Actuarial Foundation to honor his dedication to excellence and to recognize his tremendously positive influence on the professional lives of many colleagues. Funding is being provided by Milliman, Inc. and by several of Mr. Robertson's colleagues and friends.

The Actuary of Tomorrow Scholarship recognizes and encourages the academic achievements of undergraduate students pursuing a career in actuarial science. Applicants must be a full-time undergraduate student entering as a sophomore, junior or senior, must have a minimum cumulative GPA of 3.0 (on 4.0 scale) and must have successfully completed two actuarial exams.

John Culver Woody Scholar

Presented to undergraduate student: **Kimberly M. Cessna**

The John Culver Woody Scholarship is awarded annually to college seniors who have successfully completed at least one actuarial examination, rank in the top quartile of their class and are nominated by a professor at their school.

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Many of you have been very generous in the past by supporting our students with your charitable donations. We are very appreciative of your support as it allows us to help many gifted and talented students to achieve their academic goals. Your gift to the Department of Statistics and Actuarial Science benefits education and research!

To make a contribution, go the Department's online gift web site at:

<http://www.givetoiowa.org/statistics>

Thank you, your gifts to the Department of Statistics and Actuarial Science are greatly appreciated!

Reminders:

- Gifts to the **UI Foundation**, the channel preferred by The University of Iowa for private support, qualify as charitable contributions to an IRC, Sec.501(c)(3) organization for federal income, estate, and gift tax purposes.
- You can become a member of the College of Liberal Arts and Sciences Dean's Club with gift support of \$1,000 or more during the fiscal year July 1-June 20 to the Department of Statistics and Actuarial Science Development fund or any other area of the College. Gift support totaling \$2,500 or more will qualify you for membership in the **Patrons Circle of Dean's Club**, designated to recognize the College's most generous benefactors.