Virginia Tech

1949

Department of Statistics Newsletter

Dr. Samantha Bates Prins
Editor

Fall 2005 Vol. 4

GREETINGS FROM OUR DEPARTMENT HEAD, DR. GEOFFREY VINING

Life in the department has begun to take a turn for the better. Virginia Tech suffered extremely severe budgets cuts three years ago, and the department was hit much harder than most. The worst is now clearly behind us.

We were able to hire two new tenured faculty: Dongchu Sun and Chong He. Both Dongchu and Chong received their Ph.D.s from Purdue University. We were able to recruit them away from the University of Missouri. Dongchu is a Fellow of the ASA and of the IMS as well as an elected member of the ISI. It also looks likely that we will be able to make another senior hire this year.

Marion Reynolds and one of his former Ph.D. students, Zachary Stoumbos, won the Brumbaugh Award from the American Society for Quality for the paper that made the biggest contribution to quality control among those published in an ASQ journal for 2004. This is Marion's second Brumbaugh Award, which is a rare event.

The department's team of graduate students, Landon Sego and Willis Jensen, won this year's Statbowl at the Joint Statistical Meetings. The Statbowl is a Jeapordy-like competition for teams of graduate students. We are all very proud of Landon and Willis! In addition, we sent a record number of students to the JSM, fifteen.

We graduated seven Ph.D. students during the 2004-05 academic year. Even better, we project graduating nine this academic year. It is truly nice to see the numbers of Ph.D. graduates rebound!

Continued on page 3

PEOPLE

WELCOME

Dongchu Sun joined the department in July 2005 as a full professor. Dr. Sun received his Ph.D. in statistics from Purdue University in 1991. He joined the faculty of the Department of Statistics at the University of Missouri at Columbia in 1992. He continues his pre-tenure work on theoretical properties of Bayesian methodology, while doing a great deal of interdisciplinary research in applying modern statistics to wildlife expenditure in wildlife management, response times in psychology, vector autoregressive models in micro-economics, cancer mortality and incidence rates in epidemiology studies and time to pregnancy in reproductive studies.

Also joining us in July was Associate Professor **Chong He**. Dr. He's research focuses on Bayesian analysis, small area estimation, survival analysis, sampling survey and spatio-temporal models. She is especially interested in developing and applying statistical methods in the epidemiology, agriculture, ecology, conservation and environmental research. Dr. He earned her Ph.D. from the department of statistics at Purdue University. Prior to arriving at VT, Dr. He was an Associate Professor in the Statistics Department at University of Missouri at Columbia.

Penelope Pooler has accepted a non-tenure track visiting assistant professorship this year in the department. Penelope is finishing her Ph.D. with advisor **Eric Smith** on Bayesian hierarchical methods and use of ecological thresholds and change-points for habitat selection models. Her primary responsibilities will be teaching the statistics in

WELCOME CONTINUED…

research and statistics for social sciences research courses.

Leigh Harrell and **Mike McGill** continue this fall as instructors. Leigh has also taken over from Michele Marini as the new undergraduate administrator.

FAREWELL

Associate Professor **Keying Ye** accepted a position in the Management Science and Statistics Department at the University of Texas at San Antonio. Dr. Ye joined our department in 1990. He is on leave for the 2005-06 academic year. We wish Key and his family all the best at UTSA.

Tom Boucher joined the department in August 2003 as a post-doctoral associate. Dr. Boucher

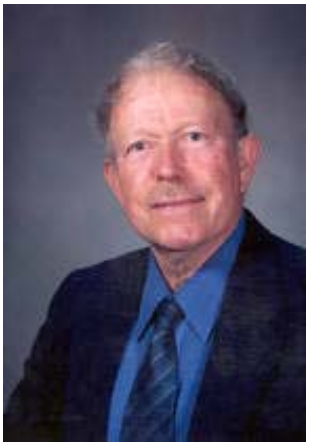
received his Ph.D. in statistics at Texas A&M University in 2003. He is now a tenure-track assistant professor in the Mathematics Department at Plymouth State University in Plymouth, New Hampshire.

Mike Rebich (Windows Systems Administrator, Webmaster) left in spring 2005 to take up full time employment at Nanocom in Blacksburg, VA. Good luck Mike! Our new administrator and webmaster is **Jeff Nichols**.

Postdoctoral fellow **Dr. Guimin Gao** left in August 2005 to take a faculty position in the Statistical Genetics division of the biostatistics department of the University of Alabama at Birmingham. Dr. Gao's supervisor was **Ina Hoeschele.**

PROFESSOR DON JENSEN RETIRES

Professor Donald R. Jensen has retired after 40 years of dedicated and productive service in the Department of Statistics. Don received his PhD from Iowa State University in 1962, and following a three year stint at Oregon State, joined VPI&SU in 1965. He became Associate Professor of Statistics in 1967, attaining the rank of Professor in 1973.



Don's impressive, and still growing, list of publications is now approaching 140 journal articles! He has worked extensively in distribution theory, linear inference, robustness, outlier detection and influence diagnostics, regression design, and quality control. Among his 14 invited papers are articles in the oft-cited reference works *Encyclopedia of Statistical Sciences* and *Encyclopedia of Biostatistics*. Look for his papers appearing this year in *Journal of Multivariate Analysis* and *Linear Algebra and its Applications*.

Professional service has been another hallmark of Don's career. He served as associate editor of *The American Statistician* for a decade, and has been a reviewer for *Mathematical Reviews* for the last 30 years. Don took early interest in the Virginia Academy Sciences, where he has been a tireless supporter of the Statistics section and other Academy functions throughout his years at Virginia Tech.

Don has taught a full range of courses for the Department of Statistics, from service courses for undergraduates to our own Stat 6114: Advanced Topics in Statistical Inference, with which he concluded his teaching career this spring. Seven of our students earned their PhD under his direction.

The depth of knowledge, and breadth of experience, gained through 50 years of Don's "statistical sweat," cannot be replaced. His probing comments at colloquia will be missed by us all, as will his willingness to chat on all topics statistical. Don will have his office, 412 Hutcheson, for another year, so please stop by to offer retirement wishes to a trusted colleague and a true friend.

J.P. Morgan

GREETINGS FROM OUR DEPARTMENT HEAD, DR. GEOFFREY VINING

Continued from page 1

This week is our fifth Corporate Partners Conference. We added two new Corporate Partners this year: Pratt & Whitney and SAS. This year, we have representatives from Du Pont, Eli Lilly and Company, General Electric, Pratt & Whitney, and SAS. Kraft is unable to come this year, and Minitab is coming down in November to recruit.

Not all was rosy for the department over the past year. Christine Anderson-Cook officially left the department for Los Alamos National Laboratory. Keying Ye has taken an unpaid leave of absence to go as a Full Professor at the University of Texas at San Antonio. Don Jensen retired on June 1, 2005 after 40 years of service. We wish all three the best!

It is hard to believe that I have started my seventh year as Department Head. Over this period, the department has seen some wonderful highs, such as the VIGRE site visit in the 2002-03 academic year, and some awful lows, such as the budget cuts. I am thankful to be able to say that the department has weathered the recent storm and seems poised to recover nicely.

PEOPLE CONTINUED…

RECENT GRADUATES

The department or affiliate programs have graduated 7 Ph.D. students, 17 M.S. students and 12 undergraduates since the last edition of the newsletter.

Graduate Degrees

The 2004-2005 Master of Science graduates were: **William Cecere, Dan Cheng, Hui Cheng, Cheranjet Chetia** (Advisor: Ina Hoeschele), **Varun Dinesh, Shannon Fraker, Justin Gorman, Lei Liu, Kimberly Love, Dipayan Maiti, Shabnam Mousavi, Dennis Perez, Guillermo Tricado, Huanmin Xu, Henry Yuen, Qin Zhao, Hongzhang Zheng**. Shannon, Kimberley, Shabnam and Hongzhang are continuing in the Ph.D. program in the department. Guillermo is pursuing a Ph.D. degree in Forestry at VT.

Bo Jin, Liang Li, Mahmoud Mahmoud, Ayca Ozol-Godfrey, Peter Parker, Valentin Parvu, and **James Williams** were granted Ph.D.s. Details of their Ph.D. theses are below.

- **Bo Jin**. Statistics. Dec., 2004. Title: *Optimal designs with limited resources*. Present position: Biometrician at Merck Research Labs. Advisor: J.P. Morgan.
- **Liang Li.** Statistics. Mar., 2005. Title: *Graphical Tools, Incorporating Cost and Optimizing Central Composite Designs for Split-Plot Response Surface Methodology Experiments*. Advisors: Christine Anderson-Cook and Tim Robinson (U. of Wyoming).
- **Mahmoud A. Mahmoud**. Statistics. Dec., 2004. Title: *The Monitoring of Linear Profiles and the Inertial Properties of Control Charts*. Present position: University of Cairo. Advisor: Bill Woodall.
- **Ayca Ozol-Godfrey**. Dec., 2004. Title: *Understanding Scaled Prediction Variance Using Graphical Methods for Model Robustness, Measurement Error and Generalized Linear Models for Response Surface Designs*. Advisor: Christine Anderson-Cook.
- **Peter Parker**. Mar., 2005. Title: *Response Surface Design and Analysis in the Presence of Restricted Randomization*. Advisors: Geoff Vining and Steven Kowalski (Minitab).
- **Valentin Parvu**. Statistics. Dec., 2004. Title: *Optimal blocking for three treatments and BIBD robustness - Two Problems in Design Optimality*. Present position: Becton, Dickinson and Company. Advisor: J.P. Morgan.
- **James D. Williams**. Statistics. Dec., 2004.Title: *Contributions to Profile Monitoring and Multivariate Statistical Process Control*. Present position: Statistical Leader, General Electric Global Research. Advisors: Jeffrey B. Birch and Bill Woodall.

We enter fall semester 2005 with 25 Ph.D. students and 26 M.S. students. This includes 15 new M.S and 1 new Ph.D. student. Welcome!

RECENT GRADUATES CONTINUED…

Graduate Award Winners

- Boyd Harshbarger Award -

Awarded for outstanding academic achievement of a first year graduate student

Sunan Zhao

- Jesse C. Arnold Award -

Awarded for outstanding teaching by a graduate teaching assistant

Willis Jensen and Mike Joner

- Klaus Hinklemann Award-

Awarded for outstanding service by a graduate student to the department or university

Yuyuan 'Raina' Duan

Undergraduate Degrees

The twelve undergraduate degree recipients included **Caitlin Andrews**, **Jennifer Booth**, **Amanda Bowling**, **Dawn Cloney**, **Brendon Salatino**, and **Joseph Taliuaga**. **Taylor Lewis** is working for the Office of Personnel Management in the Washington DC area. **Christopher Franck** (Cum Laude) will attend graduate school at North Carolina State University. **Jeffrey Graham**, **Stephen Kaputa**, **Franklin Sell** (Magna Cum Laude), and **Jacob Zielinski** (Magna Cum Laude), will continue in our department towards graduate degrees.

Undergraduate Award Winners

- Best in Class –

2006	Justin Lofling
2007	Arwin Thomasson
2008	Brian Miller and Andy Rivenbark

- The Whitfield Cobb Award -

Awarded to the graduating senior with the highest academic performance overall

Frank Sell

- The Clyde Y. Kramer Award -

Awarded to a graduating senior who has shown outstanding service to the University and the broader community

Taylor Lewis

DEPARTMENT ACTIVITIES

SPECIAL TOPICS COURSES

Special Topics in Statistics is a one-hour graduate course that emphasizes recent developments in statistical theory and subject matter not found elsewhere in the curriculum. Primary aims are to stimulate student interest in research and to inspire further studies for the Ph. D. Fall semester, 2004, a team of Eli Lilly and Company statisticians, Drs. Matt Rotelli, Kristi Griffith, and Ilya Lipkovich, all Ph.D. graduates from our department, taught Drug Development in the Pharmaceutical Industry. "An Overview of Sample Survey" was taught by Emeritus Professor Dr. **Jesse Arnold**, spring semester, 2005.

STUDENT INTERNSHIPS

Several of our graduate students participated in internships this past year. Internships may be in located in government, industry or with another university department and are taken for course credit. Each participant must present an oral presentation to the department and a written report to their department and on-location advisors summarizing their experience. A summary of the interns for the past year follows.

- **Ashley Edwards.** Summer 2005. Company: U.S. Census Bureau. Ashley is looking at the use of generalized variance functions as they relate to the Survey of Income and Program Participation
- **Shannon Fraker**. May–Dec., 2004. Company: GlaxoSmithKline (GSK), PA. Shannon worked with the statistical analysis component of the Integrated Biology Initiative (IBI) for which she mainly implemented multivariate and clustering methods in the hopes of creating a manageable list of biomarkers to work with in the identification phase of the study and in future analyses.
- **Feng Gao**. Summer, 2005. Company: Capital One, Richmond, VA. As a research consultant Feng is working on Bayesian treed models and finite mixture model approaches to make lift on segmentations/scorecarding. She is now applying the Bayesian treed model approach to real datasets to see if there is an improvement on prediction of chargeoff rate.
- **Michael Joner.** May-Aug., 2005. Company: The Procter and Gamble Company, Cincinnati, Ohio. Michael wrote web-based statistical analytics, a training course in split plot designs, and generated experimental designs for various projects.

STUDENT INTERNSHIPS CONTINUED…

- **Aditya Lele**. Summer, 2005. Company: ABBOTT laboratories, Abbott Park, IL. Aditya's projects involved developing familiarity with protocol and carrying out clinical trial data analysis using SAS.
- **Landon Sego**. Nov. 2003-present. Company: Bank of America, Chicago, IL. Landon developed non-parametric smoothing methods to detect bad data and unusual data points in financial time series, along with software development to implement the procedure on a large scale.
- **Li Wang**. Jul.-Dec., 2005. Company: Du Pont. Li provided Six Sigma project support and wrote SAS macros for multidimensional scaling problems.
- **Ying Zhang**. May- Dec., 2004. Company: Eli Lilly and Company. Ying worked on a research project with a Lilly statistician and also did some clinical data analysis.

RESEARCH HOMES

A Research Home is composed of a group of students and a faculty member who meet to discuss, in broad terms, research topics in statistics. These presentations are attended by all first year students and other interested students and faculty.

Research Home presentations were given by **Marion Reynolds**, discussing his work in control charts for process monitoring - beyond standard methods; **Samantha Bates Prins** presented her work in Bayesian analysis, simulation methods, and deterministic models in environmental applications; and **Ina Hoeschele** discussed her work in statistical genetics and genomics.

RESEARCH TEAMS

Research Teams are comprised of faculty and graduate students working on common research problems or centered on research grants. Teams typically meet weekly or bi-weekly to keep members appraised of recent developments, to provide accountability for timely progress, and to share common expertise.

Currently active Research Teams include the *Statistical Genetics and Genomics Team* led by **Ina Hoeschele**, the *Environmental Team*, includes **Eric P. Smith**, **Keying Ye**, and **Samantha Bates Prins**; the *Heath Care Monitoring Team* led by **Bill Woodall**; and the *Pharmaceutical Research Team* with **Geoff Vining**, **Jeff Birch** and **Key Ye**. A brief review of team activities is given below.

Environmental Research Team

This team consists of **Eric P. Smith, Keying Ye** and **Samantha Bates Prins** along with students **Zhengrong Li**, **David Farrar**, **Raina Duan**, **Feng Gao** and **Huizi Zhang** The team meets to discuss

UNDERGRADUATE GRADUATION CEREMONY 2005

Left to Right: Jennifer Booth, Caitlin Andrews, Dawn Cloney, Jeff Graham, Chris Franck, Frank Sell, Stephen Kaputa, Jake Zielinski, Taylor Lewis, Joe Taliuaga, Amanda Bowling and Brendon Salatino.

Environmental Team Continued…

various research topics related to environmental statistics, such as clustering of stressor-response relationships, standards assessment, power priors, hierarchical modeling and the environmental monitoring and assessment program (EMAP). Several presentations have been made by team members including those at the 2005 meetings of the Interface Society, International Statistical Institute and the Joint Statistical Meetings. Four related papers have been submitted:

- Bates Prins, S.C., and Smith, E.P. "Scaling by Reference Conditions for Ecological Assessment". Submitted to the *Journal of the National Benthological Society*.
- Duan, Yuyan, Ye, Keying and Smith, Eric P. "Evaluating water quality: using power priors to incorporate historical information". *Environmetrics*, to appear.
- Duan, Yuyan, Smith Eric P. and Ye, Keying, "Power prior approach to the binomial test in water quality assessment". Submitted to *Journal of Ag., Biol. and Envir. Stat.*
- Farrar, D., Bates Prins, S.C., and Smith, E.P. "A finite mixture approach for identification of geographic regions with distinctive ecological stressor-response relationships". Submitted to *Biometrics*.

More information on the team's work can be found at http://www.stat.vt.edu/~strclstr/.

Health Care Monitoring Team

Professors **Bill Woodall**, **Dan Spitzner** and **Marion Reynolds** are working with graduate students **Brooke Marshall**, **Mike Joner** and **Landon Sego** in the general areas of mortality rate monitoring and prospective public health surveillance. The following papers have been written:

- Woodall, W. H. (2006), "Use of Control Charts in Health Care Monitoring and Public Health Surveillance" (with discussion), To appear in *Journal of Quality Technology*.
- Joner, M. D., Woodall, W. H., and Reynolds, M. R., Jr. (2005), "The Use of Multivariate Control Charts to Detect Changes in the Spatial Patterns of Disease", Submitted to *Statistics in Medicine*.
- Marshall, J. B., Woodall, W. H., and Spitzner, D. J. (2005). "Methods for the Prospective Monitoring of Disease Occurrences in Space and Time to Detect Epidemics". Presented at the 2005 Joint Statistical Meetings in Minneapolis, MN.
- Sego, L., Woodall, W. H., and Reynolds, M. R., Jr. (2005). "A Comparison of Methods for the Surveillance of Congenital Malformations". Presented at the 2005 Joint Statistical Meetings in Minneapolis, Minnesota.

Pharmaceutical Research Team

Team members include faculty **Geoff Vining**, **Jeff Birch**, and **Keying Ye** and students **Stephanie Pickle**, **Wen Wan**, **Ying Zhang**, and **Younan Chen**. The team is investigating applications of experimental discovery process.

HONORS

Bill Woodall and his co-authors received the 2003 Youden Prize for the best expository paper in Technometrics for the following paper:

> Woodall, W.H., Koudelik, R., Tsui, K.-L., Kim, S.B., Stoumbos, Z.G., and Carvounis, C.P. (2003), "A Review and Analysis of the Mahalanobis-Taguchi System," *Technometrics*, 45, 1-30. (With discussion by R. Jugulum, G. Taguchi, S. Taguchi, and J. O. Wilkins; D. M. Hawkins; and B. Abraham and A. M. Variyath.).

Mike Joner was awarded $500 by the Statistics in Epidemiology Section of ASA to attend the Joint Statistical Meetings (JSM) in Minneapolis, MN for his paper "The use of multivariate control charts to detect changes in the spatial patterns of disease".

Landon Sego received the Mary Natrella Scholarship from the Quality and Productivity Section of ASA to present his work at the 2005 Quality and Productivity Research Conference held in Minneapolis, MN in May. VT students have won this award three years in a row with past winners being Ayca Ozol-Godfrey (2004), J.D. Williams (2003) and Willis Jensen (2001).

Willis Jensen won the Ellis R. Ott Scholarship for Applied Statistics and Quality Management from the Statistics Division of the American Society of Quality. This award, worth $5000, is given to well-rounded students who demonstrate great potential for leadership. J.D. Williams received this award in 2004.

Marion Reynolds received the 2004 Brumbaugh Award presented by the American Society for Quality for the paper, "Should Observations Be Grouped for Effective Process Monitoring?", published in the *Journal of Quality Technology*. The Brumbaugh Award is presented to the authors whose paper "has made the largest single

HONORS CONTINUED…

contribution to the development of industrial application of quality control"[1].

[1]Taken from the award description at the American Society for Quality website http://www.asq.org/about-asq/awards/brumbaugh.html

GRANT NEWS

The work of **Bill Woodall** and several Ph.D. students has been partially supported by NSF grant DMI-0354859. This is in collaboration with Doug Montgomery of Arizona State University. The following work resulted from this support:

- Ryan, T. P., and Woodall, W. H. (2005), "The Most-Cited Statistical Papers," *Journal of Applied Statistics* 32, 461-474.
- Williams, J.D., Woodall, W. H., and Birch, J.B. (2005), "Phase I Analysis of Nonlinear Product and Process Profiles", To be resubmitted to *Technometrics*.
- Woodall, W. H., and Mahmoud, M. A. (2005), "The Inertial Properties of Quality Control Charts", To appear in *Technometrics*. (To be presented at the *Technometrics* Session of the 49th Fall Technical Conference.)
- Gupta, S., Montgomery, D. C., and Woodall, W. H. (2005), "Phase II Monitoring of Linear Calibration Profiles", To appear in *International Journal of Production Research*.
- Mahmoud, M. A., Parker, P. A., Woodall, W. H., and Hawkins, D. M. (2005), "A Change Point Method for Linear Profile Data", To appear in *Quality & Reliability Engineering International*.
- Williams, J. D., Woodall, W. H., Birch. J. B., and Sullivan, J. H. (2005), "On the Distribution of Hotelling's T^2 Statistic Based on the Successive Differences Covariance Matrix Estimator", To appear in the *Journal of Quality Technology*.
- Jensen, W. A., Jones-Farmer, L. A., Champ, C. W., and Woodall, W. H. (2005), "Effects of Parameter Estimation of Control Chart Performance: A Literature Review", To appear in the *Journal of Quality Technology*.
- Runger, G. C., Barton, R. R., Del Castillo, E., and Woodall, W. H. (2005), "Optimal Monitoring of Multivariate Data for Fault Detection", To be resubmitted to the *Journal of Quality Technology*.
- Woodall, W. H. (2005), Review of *Introduction to Statistical Quality Control*, 5th Edition, by Douglas C. Montgomery, *Journal of Quality Technology*, 37, 251-252.
- Woodall, W. H. (2005), Review of *Statistical Engineering* by Stefan H. Steiner and R. Jock Mackay, *Journal of Quality Technology*, 37, 317-318.

J.P. Morgan's continuing NSF grant "Block Designs: Advancing Theory and Use" that supported **Bo Jin** and **Valentin Parvu** ends in September 2005. This provided partial support for the work contained at http://www.designtheory.org. This project was also supported by UK EPSRC. The grant is focused on determining, enumerating, and cataloging block designs and their properties. Computational power and theoretical investigations bridge the gulf separating the classical combinatorial and optimality approaches to obtaining statistically useful block designs.

Keying Ye and **Eric Smith** along with S. Prisley and L. W. Carstensen, Jr. were awarded a 3-year National Geospatial Intelligence Agency grant to work on "Application of spatial uncertainty models to automate and enhance data fusion".

VT STUDENTS WIN STAT BOWL AT JSM 2005

Virginia Tech won the College Stat Bowl at the Joint Statistical Meetings (JSM) in Minneapolis, MN. Team members **Landon Sego** and **Willis Jensen** each received $500 towards travel to JSM for participating and $100 each for the team win. The Stat Bowl is held at the JSM each year. Participants answer statistics and probability puzzles, questions about famous statisticians as well as history and facts of the American Statistical Association.

Left to right: Golde Holtzman (Coach), Willis Jensen, Landon Sego and Mark Payton

STATISTICS PICNIC AT NELLIE'S CAVE PARK, AUGUST 26 2005

RECENT TALKS AND PUBLICATIONS

Selected talks and publications from the 2004-2005 academic year follow. Additional publications and talks are mentioned elsewhere in the newsletter. A comprehensive list will be in the 2004-2005 annual report.

Papers

- Bing, N., Hoeschele, I., Ye, Keying, and Eilertsen, K.J. (2005) Finite mixture model analysis of microarray expression data on samples of uncertain biological type with application to reproductive efficiency, *Veterinary Immunology and Immunopathology*, 105**,** 187-196.
- Birch, J. B. and J. P. Morgan, (2005). TA Training at Virginia Tech: A Stepwise Progression. *The American Statistician*. 59, 1, 14-18. (Invited paper).
- Boone, Edward L., Ye, Keying and Smith, Eric P. Evaluating the relationship between ecological and habitat conditions using hierarchical models, *Journal of Ag., Biol. and Envir. Stat.*, to appear.
- Boone, Edward L., Ye, Keying and Smith, Eric P. (2005), Assessment of two approximation methods for computing posterior model probabilities, *Computational Statistics and Data*

Papers Continued…

Analysis, 48, 221-234.

- Wang, Yanping, Myers, Raymond H., Smith, Eric P. and Ye, Keying. D-optimal designs for Poisson regression models in toxicological and medical studies, *Journal of Statistical Planning and Inference*, to appear.
- Wang, Yanping, Smith, Eric P. and Ye, Keying. Sequential designs for a Poisson regression model in toxicological and medical studies, *Journal of Statistical Planning and Inference*, to appear.
- Williams, J. D., Woodall, W. H., Birch, J. B., and Sullivan, Joe H., Distributional Properties of the Multivariate T2 Statistic Based on the Successive Differences Covariance Matrix Estimator. *Journal of Quality Technology* (in press).

Books

- **Hinkelmann, K.** and O. Kempthorne, (2005) "*Design and Analysis of Experiments, Vol.2: Advanced Experimental Design",* xii + 780pp, Wiley-Interscience, New York.

Presentations

- **Landon Sego**. As part of receiving the Natrella Scholarship, presented "Continuously Monitoring a Small Incidence Rate" at the Quality and Productivity Research Conference in Minneapolis, May 2005.
- **Landon Sego** presented "A Comparison of Methods for the Surveillance of Congenital Malformations" at JSM, Minneapolis, 2005.
- **Bill Woodall** presented the W. J. Youden Memorial Address, "The View from an Ivory Tower", at the 48th Annual Technical Conference of ASA and ASQ held in Roanoke, VA in October 2004.
- At JSM 2004 in Toronto, Canada, **Younan Chen** presented "A Bayesian hierarchical approach to dual response surface modeling". This paper was co-authored with **Keying Ye**.
- **Raina Duan** presented "Bayesian power prior approach in environmental and ecological studies" at JSM 2005. This is coauthored with Keying Ye and Eric Smith.
- **J.D. Williams** presented "Phase I Analysis of Product and Process Nonlinear Quality Profiles." This is co-authored with Jeff Birch and William H. Woodall, at the Joint Statistical Meetings in Toronto, Canada. August, 2004.
- **J.D. Williams** presented "On the Distribution of the Multivariate T2 Statistic Based on the Successive Differences Covariance Matrix Estimator". His co-authors were Jeff Birch, William H. Woodall, and Joe Sullivan. 48th Annual Fall Technical Conference. Roanoke, VA. October, 2004.
- **Stephanie M. Pickle** presented "Nonparametric Approaches to Response Surface Methodology". Her co-authors were Jeff Birch and Timothy J. Robinson. Presented at the Virginia Academy of Sciences Annual Meeting, Harrisonburg, VA. May, 2005.
- **Mingjin Yan** presented "Determining the number of clusters using the weighted gap statistics" at JSM 2005. Her **coauthor is Keying Ye.**
- **Jeff Birch** gave an invited presentation at the STATFEST Conference titled "Continuing Your Education: The Study of Statistics in Graduate School". STATFEST was held at the University of Hawaii, West Oahu.
- **Dr Birch** also gave the invited talk titled "TA Training at Virginia Tech: A Stepwise Progression" at the United States Conference on Teaching Statistics in May, 2005**.**

Short Courses

Keying Ye gave a short course on "Bayesian methods with applications in marketing" for the Department of Marketing at City University of Hong Kong from June 14 to 17 2005.

ALUMNI

Visit the alumni website to view current and past newsletters, information on fellow alumni and of course, to update your information.

Alumni URL: http://www.stat.vt.edu/alumni/

LATE BREAKING NEWS!

Dr Don Jensen is now an Emeritus Professor.

PARTY FOR KEYING YE

Eric Smith and Leslie Hager-Smith hosted a going-away party for Keying Ye and his family on July 30th 2005. Some candid shots from the party are below.

Left-Right: Sharon and Ray Myers, and Klaus Hinkelmann

Left-right: Bob Foutz, Peggy and Jesse Arnold and Theresa Knox

Top: Bing Liu, Younan Chen, Catherine Fu, Ying Zhang, Cindy Li, and Kimberly Love
Middle: Wen Wan, Raina Duan, Zhengrong Li, Mingjin Yan, Huizi Zhang, Xiaowei Wang, and Feng Gao
Bottom: Eric Smith and Keying and Emily Ye

