

GREETINGS FROM OUR DEPARTMENT HEAD, DR. GEOFFREY VINING

Life in Blacksburg has been "interesting" for the beginning to Dickens' *A Tale of Two* worst of times."

On the positive side, Bill Woodall this year's Youden Award for the best Bill also presented the Youden address at Smith was the principal investigator on a Keying Ye are involved in major grants as grant. We have 59 graduate students (up from 34 just a few years ago), and we have 38 undergraduate students (up from 14 just a few years ago). We recently held our fourth Corporate Partners Conference, attended by Du Pont, Eli Lilly and Company, and General Electric. It was wonderful to see the quality of the presentations made by our graduate students. Several of our graduate students have won major awards. We have much about which we should be proud.



the past several months. I am reminded of *Cities*, "It was the best of times, it was the

spearheaded the research group that won expository paper to appear in *Technometrics*. this year's Fall Technical Conference. Eric major EPA STAR grant. Bill Woodall and well. J.P. Morgan just finished a major NSF

On the negative side, we have lost several faculty members over the past few years. Due to budget constraints, we have not been able to replace them. During the 2001-02 academic year, just before the budget cuts, we had eighteen tenured or tenure-track faculty members. As of July 1, 2005, we have twelve. The new College of Science, of which the department belongs, has articulated a policy that all new faculty hires must be "cluster hires" focused on large, center-level grants. Unfortunately, our department does not fit neatly into this program. On the bright side, the Dean told our corporate partners that we should have twenty five tenured and tenure-track faculty by 2010. It is not clear at this time how we will grow to that size. Certainly, the short term outlook is not promising.

Just as the French Revolution was a critical time in French history, so too is today for our department. It is clear that Virginia Tech wishes to transform itself into a primarily large-scale research university. It is also clear that the department will change as the result.

PEOPLE

FAREWELL

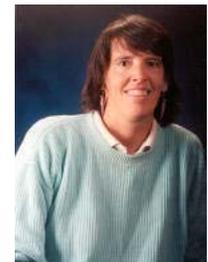
Associate professor **Christine Anderson-Cook** accepted a position at Los Alamos National Laboratory in Los Alamos, NM. Dr. Anderson-Cook joined the department in 1996. She is on leave for the 2004 academic year. We wish Christine and Stan all the best in Los Alamos.



Michele joined the Department in 1992 and was the assistant director of the Statistical Consulting Center and a department instructor. Michele was also the undergraduate coordinator for the Department. We wish Michele and her family all our best in State College!

Michele Marini left the Department this summer and relocated with her family to State College, PA.

Anya M. McGuirk has accepted a position at SAS in North Carolina. Dr. McGuirk joined the department in 1988 and was a professor in the agricultural economics and statistics department. All the best Anya!



NEW FACULTY



Susanne Aref joined the Department in August 2003 as a non-tenure track research scientist. Susanne was formerly at the University of Illinois Urbana-Champaign and received her Ph.D. in Statistics from Cornell University in 1982. Her research interests include long-term data sets, experimental design, spatial statistics and applied statistics. In August 2004, Susanne took over from **Eric P. Smith** as Director of the Statistical Consulting Center.

Tom Boucher joined the Department in August 2003 as a post-doctoral associate. Dr. Boucher received his Ph.D from the Department of Statistics at Texas A&M University in 2003. His dissertation involved researching conditions for stability of some nonlinear time series models. He has since been exploring some implications of this for large sample results for certain nonlinear time series and has been working on tests for diagnosing various types of nonlinearity in time series data. Tom received his B.S. and M.S. degrees in math from the University of Massachusetts at Lowell.



Leigh Harrell and **Mike McGill** joined us this Fall as instructors. Leigh has also taken over from Michele Marini as the new Undergraduate Administrator. Leigh and Mike both graduated from the University of Georgia with an M.S. in Statistics, Leigh in 2004 and Mike one year earlier. Leigh has previously taught at the UGA Statistics department and at Stuart Hall School in Staunton, VA. Her research interest is regression. Mike also taught courses at the UGA statistics department and his research interest is in number theory. Leigh's B.S. degree was in psychology and business from Virginia Wesleyan, and Mike has B.S. degrees in psychology and mathematics from Kennesaw State University.



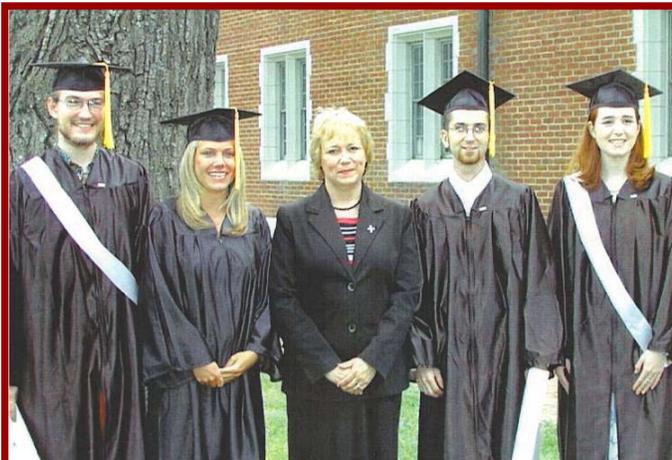
RECENT GRADUATES

The department or affiliate programs have graduated 5 Ph.D. students and 16 M.S. students since the last edition of the newsletter.

The 2003-2004 M.S. graduates (and their employer) were **Bryan Baker** (Highway Safety's Vehicle Research Center), **Peter Boyer**, **Feng Gao** (Ph. D. student), **Sarah Harris** (Minitab), **Wanxin Li** (Ph. D. student), **Zhengrong Li** (Ph. D. student), **Bing Liu** (Ph. D. student), **Yuqiong Liu** (Ph. D. student), **Amy McGregor**, **Ming Xiong Pang**, **Juwei Sheng**, **Joel Smith** (Minitab), **Wen Wan** (Ph. D. student) and **Ying Zhang** (Ph. D. student). **Jason Henning** and **Li Wang** graduated with M.S. degrees in May 2003.

Nan Bing, Edward Boone, Keun Pyo Kim, David Lawrence and Xiao Yang graduated with Ph.D. degrees. Details of their Ph.D. theses are below.

- **Keun Pyo Kim.** Statistics. Dec., 2003. Title: *Process Monitoring with Multivariate Data: Varying Sample Sizes and Linear Profiles*. Present position: PRA International (Charlottesville, VA). Advisors: Marion Reynolds & Bill Woodall.
- **Nan Bing.** Statistics track of Genetics, Bioinformatics and Computational Biology (GBCB). Apr., 2004. Title: *Statistical Analysis of Gene Expression Profile: Transcription Network Inference and Sample Classification*. Present position: Bioinformatician, GlaxoSmithKline (NC). Advisor: Ina Hoeschele.
- **Edward Boone.** Statistics. Jan., 2003. Title: *Bayesian Methodology for Missing Data, Model Selection and Hierarchical Spatial Models with Application to Ecological Data*. Present position: Assistant Professor, Department of mathematics & statistics, UNC Wilmington. Advisor: Keying Ye.
- **David Lawrence.** Statistics. Jul., 2003. Title: *Cluster-Based Bounded Influence Regression*. Present position: Senior Research Scientist, Becton-Dickenson. Advisor: Jeffrey B. Birch.
- **Xiao Yang.** Statistics. Feb., 2003. Title: *Optimal Design of Single Factor cDNA Microarray Experiments and Mixed Models for Gene Expression Data*. Advisors: Ina Hoeschele & Keying Ye.



Statistics B.S. majors who graduated in Spring '04: Jason (Cory) Brunson, Martine Kostanich, Ryan King and Ashley Edwards. Their undergraduate advisor, Michelle Marini, is at center. Ashley was the "Best In 2004 Class" award winner.

DEVELOPMENTS

GRADUATE PROGRAM

Basic Statistics

We started the 2003-2004 academic year with 55 graduate students, 28 in the Ph. D. program and 27 in the M. S. program. This Fall we began with 28 Ph.D. students (26 continuing) and 32 M.S. students (24 continuing).

Recent Changes

Our Undergraduate and Graduate Committees spent the 2001/2002 academic year reviewing our courses, degree options, and entry routes for our programs; offering proposals for departmental discussion; and initiating agreed-upon changes. This was more than an internal exercise: we evaluated our core offerings against those of ten of our historical peers in applied statistics (including North Carolina State University, Iowa State University, Kansas State University, Colorado State University, Cornell, Southern Methodist University, Oklahoma State University, University of Minnesota, Oregon State University and Texas A & M). The graduate core courses are applied statistics, probability and distribution, design of experiments, linear models, and inference, all taken during the first year of study and on which the qualifying exams are based. The review resulted in the following observations, recommendations, and actions.

1. Among our peer institutions, ours is the only 18-month master's program (all others are 24-month).

The shorter time requirement is an attractive recruiting feature for U.S. students and allows us to turn their focus to doctoral work sooner. Because it is attractive, intensive, unique, and has helped achieve a reasonable mean time to completion of doctoral degrees, it was recommended that this concentrated program be continued.

2. Our first-semester, five-credit, graduate applied statistics course is also unique among our peers. Other institutions typically teach the same material as two separate three-credit courses over two semesters. First-semester coverage gets students into a consulting role, a valuable part of their graduate education, in their second semester. It is also important for proper sequencing in making the 18-month M.S. feasible. However, the five-credit venue has restricted flexibility. First, students who have covered a great deal of the material at another institution often feel it is unwise to skip this course because it is a significant part of the qualifying examination material. Second, a good student having a difficult first semester can find his/her GPA seriously harmed by a subpar grade at five credit hours; this is occasionally deleterious to retention. Finally, a five-credit course does not fit well with the new joint B.S./M.S. programs with other departments. Beginning fall, 2003, the applied statistics course was replaced by two three-credit courses taught concurrently during the fall semester, Stat 5034 (Inference Fundamental with Applications to Categorical Data) and Stat 5044 (Regression and Analysis of Variance).
3. Joining forces with the Department of Mathematics, the new course MATH/STAT 4524: Advanced Calculus for Statisticians will be taught each summer as a bridge course for prospective and entering graduate students. This joint effort will help acclimatize undergraduate students to the rigors of graduate study and will fill any existing gaps in their mathematical preparedness. The course will also play important roles in minority recruiting and for mentor-training of graduate students.
4. A new, required, one-credit graduate course, *Special Topics in Statistics*, is now being offered every semester (initiated spring 2003). This course 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. *Special Topics in Statistics* is team taught and changes each semester. One section of *Special Topics in Statistics* is required for the M.S. degree, while two sections are required for the Ph. D.

RECENT CHANGES IN THE GRADUATE PROGRAM CONTINUED...

5. Our first *Special Topics in Statistics* course met in spring '03: *Topics in Environmental Statistics*, led by **Eric P. Smith**, **Samantha Bates Prins**, and **Golde Holtzman**. The second offering in fall '03 was *Statistics, Ethics, and the Law*, led by **Geoff Vining** and **Bill Woodall**. The third offering in spring '04: *Topics in Functional Data Analysis and Nonlinear Time Series*, was led by **Dan Spitzner** and **Tom Boucher**.
6. Another new course, *Internship in Statistics*, rewards students who seek an active learning experience in government, industry, or on a project in another department by granting appropriate course credit. Students must prepare oral and written presentations for the department, including a final summary report. Supervision is provided by a faculty member and by a qualified person on location. This course is available with varying credit for undergraduates and graduates.
7. The course Statistical Consulting, previously a one-credit course required of all undergraduate majors and graduate students, has been replaced (initiated Spring, 2003) by a two-credit course entitled *Effective Communication in Statistical Consulting*. The change allows for a more pro-active approach to teaching the art of statistical consulting while placing additional emphasis on oral and written communication skills.
8. The department has introduced greater flexibility into the undergraduate course requirements. Students who elect our major during their sophomore year now can receive a Bachelor of Science degree within four years.
9. Five-year Dual Degree programs are being instituted with Physics, Economics, and Mathematics that allow students to receive a B.S. degree in the other discipline and an M.S. degree in statistics. Among other benefits, this program will draw quantitatively-minded students into statistics graduate study who may not have otherwise considered the possibility.
10. Three new tracks have been introduced for the Ph.D., building on existing departmental strengths in bioinformatics, industrial statistics, and environmetrics. These tracks require course work in appropriate applications area disciplines. The primary goal of Ph.D. tracks is to produce true statistical scientists who are ready to collaborate with other scientists and engineers within specific

research areas. Combined with the traditional statistics track, we now provide four options for specialization of doctoral research. We are also implementing an environmetrics track for the M.S. degree.

11. Employ Research Homes and Teams to expose students at all levels to stimulating research problems. Please see the section titled Research Homes & Teams for more information.

RESEARCH HOMES & TEAMS

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. No prior knowledge, other than that possessed by first year graduate students in our department, is required. A Research Home is not coursework! Nor is it like a colloquium ... rather, Research Homes are low-key, interactive gatherings, led by a Professor, to acquaint participants with the fundamentals of one or more active areas of research in statistics.

More formally, the goals behind the Research Home program are 1) to expose first year students (and others who may want to attend) to various ideas and topics in statistics that they may not see in their early courses; 2) to expose students to the research topics, in a non-technical manner, currently studied by the faculty; and 3) to acquaint students with faculty who are not teaching the first year courses.

The Department of Statistics conducted Research Home presentations in the fall, 2003 and the spring, 2004 semesters. For fall, 2003, **John Morgan** discussed Design of Experiments and his research in that area; **Bill Woodall** presented his work in Statistical Process Control; **Dan Spitzner** gave an overview of Functional Data Analysis and Bayesian Decision Theory. For spring, 2004: **Jeff Birch** discussed his research in the area of regression, with emphasis on robustness, nonparametric, and semiparametric methods; **Keying Ye** presented some statistical issues in bioinformatics, environmental science and experimental designs and his research in these areas and **Geoff Vining** lead discussions in industrial experimentation and his research in this area. This fall, **Marion Reynolds**, **Samantha Bates Prins** and **Ina Hoeschele** will discuss their research.

The Research Homes are quite distinct from our Research Teams, organized by faculty working on common research problems or centered on research grants. Teams are comprised of faculty, postdoctoral associates, graduate students and some senior

RESEARCH TEAMS CONTINUED...

undergraduate students. Some teams are interdisciplinary, while others are comprised exclusively of statisticians. Teams typically meet weekly or bi-weekly to keep members apprised of recent developments, to provide accountability for timely progress, and to share common expertise.

Current active Research Teams include the *Statistical Genetics and Genomics Team* led by **Ina Hoeschele** and **Keying Ye**; the *Environmental Team*, includes **Eric P. Smith**, **Keying Ye**, and **Samantha Bates Prins**; The *Quality Profile Monitoring Team*, led by **Bill Woodall** and **Jeff Birch**; the *Experimental Design Team*, directed by **J. P. Morgan**; and the *Pharmaceutical Team*, with **Geoff Vining** and **Jeff Birch**.

Research Team on Profile Monitoring

A profile is useful when the quality of a product or process is best characterized by a relationship between a response variable and one or more independent variables. Profile monitoring extends statistical process control to functional data. This research group consists of **Jeff Birch** and **Bill Woodall** with students **J.D. Williams**, **Mahmoud A. Mahmoud**, **Landon Sego**, **Willis Jensen**, **Mike Joner**, and **Brooke Marshall**. This team has already produced several papers; these are listed in the "Recent Talks and Publications" section.

Environmental Research Team

This team consists of **Eric P. Smith**, **Keying Ye** and **Samantha Bates Prins** along with students **Penelope Pooler**, **Zhengrong Li**, **David Farrar**, **Feng Gao** and **Huizi Zhang**. The team meets to discuss various research topics related to environmental statistics, such as standards assessment, power priors, hierarchical modeling and the environmental monitoring and assessment program (EMAP).

Pharmaceutical Research Team

Jeff Birch, **Geoff Vining** and graduate student **Stephanie Pickle** are investigating a sequential experimental design strategy for high through-put screening in the drug discovery process.

STATISTICAL CONSULTING CENTER



Susanne Aref formally took over as Director of the Statistical Consulting Center in August 2004, replacing Eric Smith. Susanne held a similar position at the University of Illinois Urbana-Champaign.

Traditionally, services through the center were free for University staff, faculty, students, and state agency personnel. However, as of July 1 2004, there is an hourly fee for extended service. Further information on these changes and the charges can be found online at

<http://www.stat.vt.edu/development/consulting.html>.

GRANT NEWS

The National Institute for Aerospace is funding a series of short courses in advanced and emerging technologies. These courses cover technologies of critical interest to NASA. **Bob Schulman's** course on Applied Statistics was one of three proposals that were selected for funding nationwide. The course will be taught to engineers and scientists in aerospace and atmospheric science research at NASA's Langley Research Center in July 2004.

The US EPA STAR program funded a proposal titled "Model-Based Clustering for Classifications of Aquatic Systems and Diagnosis of Ecological Stress". Investigators include **Eric P. Smith** and **Samantha Bates Prins**. The objectives of this research are to develop methodologies for classifying watersheds and to evaluate the ability of this classification system to delineate areas of biological stress. The novel aspect of our classification system will be in the grouping of watersheds by empirical relationships between watershed attributes and aquatic ecosystem conditions. We further propose to develop methods to assess differences in ecosystem vulnerability and to evaluate a suite of biological characteristics that are both sensitive to environmental change and applicable across different regions (transferability study). Further information can be obtained online at the URL: <http://www.stat.vt.edu/~strclstr/>.

RECENT TALKS AND PUBLICATIONS

Selected talks and publications from the 2003-2004 academic year follow. A comprehensive list will be in the 2003-2004 annual report available at <http://www.stat.vt.edu/> in the near future.

Papers

- Bates, S.C., Cullen, A.C.; and Raftery, A.E. (2003). "Bayesian Uncertainty Assessment in Multicompartment Deterministic Simulation Models for Environmental Risk Assessment", *Environmetrics*, 44, pp. 355-371.
- De la Fuente, A., Bing, N., Hoeschele, I., and Mendes, P. (2003) Discovery of topologically meaningful associations in 'omic' data using partial correlation coefficients. *Proceedings of the 4th International Conference for Systems Biology* pp. 106-107.
- Gao, G., and Hoeschele, I. (2004) A note on a conditional enumeration haplotyping method in pedigrees. *Lecture Notes in Bioinformatics*, New York: Springer-Verlag (in press).
- Gao, G., and Hoeschele, I. (2004) Conditional probability methods for haplotyping in pedigrees. *Genetics* (in press).
- Hoeschele, I., and Li, H. (2004). A note on joint versus gene-specific mixed model analysis of microarray gene expression data. *Biostatistics* (in revision).
- Mahmoud, M. A., and Woodall, W. H. (2004), "Phase I Analysis of Linear Profiles with Calibration Applications", To appear in *Technometrics*.
- Mahmoud, M. A., Woodall, W. H., and Parker, P. A. (2004), "A Change Point Method for Linear Profile Data", submitted for publication.
- Ryan, T. P., and Woodall, W. H. (2004), "The Most-Cited Statistical Papers," Submitted for publication.
- Spitzner, D. J., Marron, J. S., and Essick, G. K. (2003). "Mixed-model functional ANOVA for studying human tactile perception." *Journal of the American Statistical Association*, 98(462):263-272.
- Williams, J.D., Woodall, W. H., and Birch, J.B. (2004), "Phase I Analysis of Nonlinear Product and Process Profiles", Submitted for publication.
- Woodall, W. H., Spitzner, D. J., Montgomery, D. C., and Gupta, S. (2004). "Using Control Charts to Monitor Process and Product Quality Profiles". To appear in the *Journal of Quality Technology*.
- Woodall, W. H., and Mahmoud, M. A. (2004), "The Inertial Properties of Quality Control Charts", Submitted for publication.

Book chapters

Hoeschele, I. (2003) "Mapping quantitative trait loci in outbred pedigrees." *Handbook of Statistical Genetics*, DJ Balding, M Bishop & C Cannings (eds.), New York: John Wiley, Vol. 2, pp. 477-519.

Book reviews

Bates, S.C. (2004). "Book Review: Introductory Statistics with R". *The American Statistician*, 58(1), pp. 88-89.

Presentations

Faculty members from the Department of Statistics who gave talks at the 2004 Meeting of the Statistics Section of the Virginia Academy of Sciences, held in Richmond, VA, May 27-28 were **Tom Boucher** on "Some Implications of V-Uniform Ergodicity on Inference with Nonlinear Time Series" and **J. P. Morgan** on "The Search for E-optimal Designs."

Dr. Klaus Hinkelmann served as an instructor at a summer course for Nordic Ph.D. students "Design of Data Generation - Experimental Design" in Mustiala, Finland, sponsored by the Nordic Informatics Network in Agricultural Sciences.

HONORS

Bo Jin won First Prize in the Student Paper Competition at the 2004 Meeting of the Statistics Section of the Virginia Academy of Sciences, held in Richmond, VA, May 27-28. Bo's talk was entitled "Optimal Incomplete Designs with Two Blocks." **Val Parvu** received Honorable Mention for his talk "E-Optimal Designs with Three Treatments in Multiway Blocking Schemes." Bo and Val both expect to complete their Ph.D.s in late 2004.

Ayca Ozol-Godfrey recently won the 2004 Mary G. Natrella Scholarship from the Quality & Productivity Section of the ASA. This year the scholarship was worth \$2,000. This is two years in a row that a VT student has won this scholarship. We currently have 3 students in our department that are past winners (Ayca (2004), J.D. Williams (2003), and Willis Jensen (2001)).

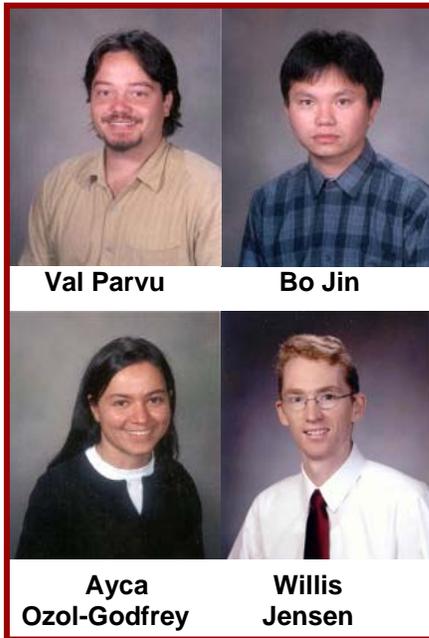
Undergraduate Award Winners - Best in Class -

2004	Ashley Edwards
2005	Jake Zielinski
2006	Andrea Lamas
2007	Arwin Thomasson

HONORS CONTINUED...

On April 25th **Bill Woodall** was selected to receive the Pamplin MBA Faculty Award. This award is voted on by MBA students.

In October 2003, **Willis Jensen** and **J.D. Williams** were two of five student scholarship winners to attend the 2003 Fall Technical Conference in El Paso, TX. This scholarship paid for registration fees, lodging, and food for the entire conference.



Val Parvu

Bo Jin

Ayca
Ozol-GodfreyWillis
Jensen

For the 2004 Graduate Research Symposium poster session, **J.D. Williams** tied for first place in the Physical Sciences category. This award included a \$300 honorarium and a certificate given at Graduate Research Symposium Awards Banquet.

The Department of Statistics is proud to announce that our Ph. D. student, **James (J.D.) Williams**, has received two very prestigious awards. From Virginia Tech, J. D. was selected as the College of Science Most Outstanding Graduate Student for the 2003-2004 academic year. On the national level, J. D. received the Ellis R. Ott Scholarship for Applied Statistics and Quality Management, in the amount of \$5,000, for the academic year 2004-2005.

J.D. joined our department in August 2001 with B. S. and an M. S. in statistics from Brigham Young University. J. D. is a leader in the advancement of statistics within our department and the profession

and has disseminated his acquired knowledge on a regional, statewide, and national level.

Academically, J.D. was an outstanding student in his Ph. D. coursework. His dissertation topic, under the direction of Bill Woodall and Jeff Birch, is "Phase I Monitoring of Nonlinear Profiles". J. D. has submitted one paper for publication in *Technometrics* and is nearly ready to submit a second paper.



His work in the areas of quality and productivity has already been recognized as first-class research. Competing against students from all over the world, J. D. was awarded two scholarships in 2003, the prestigious \$5,000 Freund International Scholarship from the American Society for Quality and the Natrella Scholarship for \$1,000 from the Quality and Productivity Section of the American Statistical Association (ASA).

While excelling as a researcher and teacher, J. D.'s commitment to the service component of our department is perhaps his most remarkable distinguishing characteristic. He has become an expert on ways in which graduate students in our field can develop leadership skills. For example, at the national conference of the American Statistical Association (ASA) last summer, J. D. presented an invited talk on this very topic.

J. D. hopes to complete his dissertation in December 2004 and become an industrial statistician. Congratulations to J. D. for your many outstanding accomplishments.

Dr. Bill Woodall received the 2002 Shewhart Medal from the American Society for Quality. This medal is named for Walter Shewhart, who is the founder of modern quality control. The Shewhart Medal is the American Society for Quality's highest award for technical contributions to the field of quality over the span of a career. Congratulations to Bill on this achievement! Further information on the award can be found at

<http://www.cos.vt.edu/news/releases/Woodall-Award.pdf>.



I.J. GOOD ELECTED HONORARY FELLOW OF THE ROYAL STATISTICAL SOCIETY

I. J. Good, Virginia Tech University Distinguished Professor emeritus of Statistics, Philosophy, and Science Studies, has been elected to Honorary Fellowship in the Royal Statistical Society (RSS). The award was granted, "in recognition of his extraordinary, deep contributions to cryptography, to the philosophy of science including theories of evidence and causality, and to the foundations of electronic computing, subjective probability and Bayesian statistical theory," according to the March 2004 *Royal Statistical Society News*.

The RSS website (<http://www.rss.org.uk/about/awards.html>) explains that "Honorary fellowships are awarded for the Society to recognize the contribution of individuals of great eminence working in fields related to statistics who are not members of the statistical profession. The award is open to all nationalities."

The honorific was presented to Professor Good by Dr. Andy Grieve, president of the RSS, at a Virginia Tech reception and dinner in Blacksburg on May 21, 2004. The citation on the framed certificate reads:

The Royal Statistical Society
in recognition of achievements which have
enhanced the use and understanding of Statistics
by those working outside the discipline
have elected
Professor I J Good
to Honorary Fellowship
of the Society
Signed by the President and the Senior Honorary Secretary
London
14th January 2004

I.J. ("Jack") Good received advanced degrees from both Oxford and Cambridge. In World War II he helped with the reading of the German ciphers, Naval Enigma and "Fish", at Bletchley Park (a.k.a. Station X, or Government Code and Cipher School, or Room 47 Foreign Office), in the sections headed by the famous Alan Turing, Hugh Alexander, and Max Newman. Fish was used by Hitler for communicating with his generals. Good helped with the work on Colossus, the main cryptanalytic machine used to crack Fish on a daily basis. It was the first large-scale electronic computer, but special-purpose. After the war Good was the equivalent of an Associate Professor in mathematics and electronic computing in Manchester University, but, because of the Cold War, he moved to Government Communications Headquarters in Cheltenham, England and later became a Special Merit Deputy Chief Scientific Officer at the Admiralty Research Laboratory. He came to Virginia Tech Department of Statistics in 1967 as a Research Professor. In 1969 he was appointed as one of the first six University Distinguished Professors. He became an adjunct professor in the Department of Philosophy and in the Center for the Study of Science in Society. He became emeritus in 1994. He has written three books on probability and was the general editor of *The Scientist Speculates* which was translated into French and German. Among the most prominent of the many honors Professor Good has received are Fellow of the Institute of Mathematical Statistics, Fellow of the American Statistical Association, Fellow of the American Academy of Arts and Sciences, Honorary Member of the International Statistical Institute, Computer Pioneer Award of the IEEE, and Honorary Fellow of the Royal Statistical Society.



Dr. Good continues to write and publish in his home in Blacksburg. One of the more recent of his numerous articles corrects a non-trivial error made by Einstein in a 1918 book that ran to many editions. Another is a pair of short articles published in *Nature*, correcting a misstatement made, by Harvard Law Professor Alan Dershowitz, in relation to the O.J. Simpson trial, regarding the probability that a batterer murdered his wife.

Further information, including Dr. Good's curriculum vitae, can be found at the website: <http://www.stat.vt.edu/facstaff/ijgood.html>. For photos of the May 21 reception in honor of Dr. Good and Dr. Grieve, see

<http://www.ofoto.com/BrowsePhotos.jsp?showSlide=true&Uc=7fnu73an.3qjujbj&Uy=-vwygwc&Ux=1>