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Department of Mathematics and Statistics

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TROY VANAKEN
(PH.D. IN MATHEMATICS, 1994)
IS THE 19TH PRESIDENT OF
THIEL COLLEGE

To read article, see "Troy VanAken"
in Alumni News on page 3

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DEPARTMENT OFFICERS

Kit Chan	CHAIR
David Meel	ASSISTANT CHAIR
Tong Sun	GRAD CHAIR
Elmas Irmak	UNDERGRAD COORD

We hope to include news of many more alumni in future issues, so please tell us about you: new and updated career news, family news, and anything you would like to share. A survey is provided for your convenience on the last page, or simply send an email to one of the editors.

Maria Rizzo, Editor
mrizzo@bgsu.edu

Message from the Chair

What is new with BGSU? As you know the University has many new buildings on campus, as a result of the first phase of the Master Plan. We are now embarking on the second phase: $200 million-plus investment in academic facilities. Over the next seven years, the University will create modern learning spaces to better align new technology with our teaching mission. We are very excited about this new plan, which will definitely help us better serve the university's research and teaching missions. You can find out more at http://www.bgsu.edu/masterplan/index. html.

Starting this Fall semester, we will teach our basic algebra courses in a temporary 100-seat computer laboratory, called the Math Emporium, in Olscamp Hall. A permanent 250-seat Emporium is yet to be constructed. The larger Emporium will allow us to run many other courses. As I mentioned in the previous issue of Math.Stat.Chat, an Emporium is designed to provide the students with basic math skill training, with help from an instructor whenever needed. However, basic math concepts will be still taught in a classroom setting.

Early last fall semester, the University launched a Big Data Initiative, which is to encourage multidisciplinary research across the campus on the subject. As you may have heard in the media, Big Data has become a hot research topic in different sectors, ranging from weather forecasting to credit card transactions, and from the military to internet usage. The problem arises when we need to manage huge data sets that a supercomputer is not efficient enough to handle, which calls for developing new mathematical ideas.

This year our PhD program's ranking has risen to a new height of 73rd in the nation by the National Research Council in terms of basic quality. You can find out more at http://graduate-school.phds.org/rankings/ mathematics. Perhaps, what is even more exciting is that our program is ranked 14th in the country in terms of student outcomes, which include placement record and time to completion etc. We are very proud of these rankings. You have certainly contributed to the success of the department, one way or other. Our department is honored by your success stories. Please write back to let us know how you are doing.

Kit Chan, Chair
Department of Mathematics and Statistics

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David Meel

David Meel has been selected as the next Bailey Family Endowed Professor in Mathematics, succeeding the first Bailey Professoor, Barbara Moses, who recently retired. The Bailey Chair is endowed by the Jim Bailey family.

James Bailey and wife Judy with the first two recipients of the Bailey Family Endowed Professorship in Mathematics Education, 2008 (or first) recipient Barbara Moses (left center) and 2012 (or second) recipient David Meel (right center).

Jim Albert

Jim Albert was the Buckingham Scholar at a meeting on Statistics in Sports at Miami University, September 28-29, 2012. Jim gave three talks at this meeting, "Looking at Spacings to Assess Streakiness", "On-base Percentage: The Moneyball Statistic", and "Beyond Runs Expectancy".   Jim was also the featured speaker at the Michigan Undergraduate Mathematics Conference at Siena Heights University in February 2013.

Xiangdong Xie

Xiangdong Xie attended the program "Interactions Between Analysis and Geometry" at Institute of Pure and Applied Mathematics, University of California at Los Angeles, from March 11 to June 14, 2013.

Mihai D. Staic

On December 13 2012, Mihai D. Staic was awarded "The Gheorghe Titeica prize of the Romanian Academy of Sciences for Mathematics for 2010". This prize is awarded yearly to four or five Romanian mathematicians.

Vic Norton

Vic Norton is retired from the BGSU Department of Mathematics & Statistics, and continues to work on mathematics, primarily in the area of quantitative finance. He publishes work at http://www.arXiv.org/ under the name "Vic Norton" and maintains a personal web page at http://vic.norton.name.

Craig Zirbel

Craig Zirbel received the University Community Fellowship Award from the Department of Higher Education and Student Affairs in September, 2012. The University Community Fellowship Award is presented each year in recognition of extraordinary contributions by faculty, staff, and students to building collegial working relationships at Bowling Green State University. Nominations for the award are solicited each summer and the University Community Fellowship award committee, comprised of faculty and students of the HESA department, selects the recipient(s).

Dr. Zirbel was nominated for this award in recognition of his leadership in establishing the quantitative literacy requirement, strengthening student expectations, and shifting the academic culture in positive ways. He now moderates a listserv with more than 2000 instructors to encourage the sharing of successful teaching practices and has facilitated meetings among faculty to discuss ideas and concerns about teaching. In his nomination Dr. Stephen Langendorfer, professor of kinesiology, wrote that Dr. Zirbel "is truly an 'unsung hero' who ought to be acknowledged despite his own reticence for acclaim."

Learning Community

Jim Albert, Beth Burns, and Konra Friedberg participated in a Learning Community on "Using Principles from Video Games to Facilitate Learning" for the 2012-13 academic year. This learning community explored underlying principles from video games; many of these principles such as risk taking and the use of rewards can be used to improve our teaching of mathematics and statistics.

Curriculum Development: New Proof Writing Course

At long last, the department has a course that is devoted entirely to helping students learn to write proofs. Math 3280, Mathematical Techniques and Foundations, is a 3-hour course at the same level as Discrete Math and Linear Algebra, but with no specific content requirements other than developing proof-writing skills. In Fall 2013, the course was taught in an entirely activity-oriented format. Students read a chapter of the textbook outside of class, took careful notes, and attempted problems from the textbook. In class, a graduate teaching assistant read their notes and solutions so that the students would get immediate feedback. In class, the students worked in groups of 3 on carefully-designed activity sheets which would, for example, introduce the definition of even and odd, have the students do a few examples to make sure they were clear on the definition, then do simply exercises, for example, if n is odd, show that n+12 is odd; show that the product of two odd numbers is odd; show that the sum of two odd numbers is even; show that a number cannot be both odd and even. While students worked, the instructor circulated among the groups answering questions and noting logical errors that needed to be fixed up. This gave students instant feedback on their attempts. It is remarkable how many things students trip over when setting out to write proofs! Fortunately, being able to focus on it for a semester makes a big difference, and students noticed that their other courses were going smoothly as a result.

Correction & Update
on Department History

Janet (Blair) Roll (Ph.D. 1976) was accidentally omitted from the list of our first doctoral students, due to an error on our department history web page that incorrectly listed her graduation year. With our apologies for the omission, and also for not getting the update into our 2012 newsletter, we have updated our web page and department history with the correction. Janet's advisor was Charles Holland. Janet wrote "I am fairly certain that I was the first student admitted to the program and that was in 1972. I was employed as a high school teacher when Herb Hollister called and asked if I would come back for the program. I had received my master's degree at BGSU in 1968 and then remained as an instructor until 1970. I was thrilled that the program had been approved and that I could study again at BG so I asked to be released from my contract and started back in the fall of 1972."

Janet's son Jim Roll is currently completing his doctoral studies in our statistics Ph.D. program, under the supervision of Craig Zirbel.

In our next issue of Math.Stat.Chat, we plan to feature interviews with several of our doctoral students who graduated in the first five years of the program.

Carol Jermann Alf O'Connor	Summer 1975	V. K. Rohatgi	On Rates of Convergence In Some Strong Limit Theorems For Banach Space-Valued Random Variables
Thomas Alfonso O'Connor	Summer 1975	R. G. Laha	Applications Of Extreme Point Methods To Probability Theory
Janet Dale (Blair) Roll	Summer 1976	W. Charles Holland	On Manipold Groups A Generalization Of The Concept Of Cyclically Ordered Groups
Jeffrey Lynn Spielmann	Summer 1975	R. G. Laha	Stochastic Processes With Independent Increments Values In A Hilbert Space
Robert Daniel Tortora	Summer 1975	V. K. Rohatgi	Some Problems In Sequential And Fixed Sample Point Estimation
Vijaya Lakshmamm Mannepalli	Fall 1975	M. Satyanarayana	Multiplication Semigroups

Math-Stat & the Big Data Initiative at BGSU

In October of 2012, a weekly seminar on Bioinformatics was started by faculty in Mathematics and Statistics, Computer Science, Biology, and Chemistry. Undergraduates, graduate students, and faculty were invited to attend. Those from math/stat and CS learned some molecular biology and by the end of the Spring 2013 semester, all participants learned to write basic programs in Python. Two undergraduate students worked with a professor in Biology on a project to search for homologues of known protein-coding genes in a newly-sequenced genome. A number of students were supported by scholarships through the Choose Ohio First program, a state-funded initiative to prepare students for employment in the state of Ohio.

In the Fall of 2012, the Vice President for Research and Economic Development announced a new University focus on data-intensive research and big data. A significant portion of new tenure-track hiring will be targeted toward these areas, and toward encouraging collaborations between departments. In this vein, a seminar on Data-Intensive Research was started in the Department of Mathematics and Statistics with the goal of bringing together researchers on campus who share an interest in generating, modeling, and analyzing data. Speakers from Geology, Geography, Psychology, Computer Science, Photochemistry, and Sociology gave talks. A group of faculty from three different departments has been meeting weekly to work on a project in which GPS receivers are strapped onto homing pigeons, which are released from various sites in order to track how they make their way back to the loft owned by the BGSU Department of Psychology. Of particular interest is how quickly the pigeons learn the most efficient route home over multiple releases from the same site. Another active project uses satellite imagery in visible and non-visible bands of the spectrum to identify different minerals, for example, in a desert or mountainous region that is not covered by vegetation.

Undergraduate Mathematics Competition

In 2012-2013, BGSU undergraduates were active in local, regional, and national mathematics competitions.

- On Saturday March 16 2013 we had the first Edition of the "BGSU Mathematics Competition". The organizers were: Mary Koshar, Darya Fillipova, Ana Kashikova and Mihai Staic. The winners of the competition were Christian Burns and Kyle Brown (for the beginners section), Mike Hughes and Andrew Sapp (for the advanced section). Each winner received a $50 prizes from the Department of Mathematics and Statistics.

- On December 1-st 2012, six BGSU students participated to the Putnam Exam. The best score among BGSU students was obtained by Mike Hughes (Mathematics major) who places in the top 30% among all participants. The second best result among BGSU students was obtained by Nick Miller (Chemistry major).

- On October 27 2012, three BGSU students participated to the Virginia Tech Regional Mathematics Contest. The best score among BGSU students was obtained by Mike Hughes (Mathematics major) who placed in the top 20% among all participants.

2013 is the International Year of Statistics

Miami University is producing a series of radio programs to promote the International Year of Statistics. Their first show is Baseball and Statistics and Jim Albert was the featured guest on this segment. www.statsandstories.net

BGSU has planned several activities to celebrate the International Year of Statistics. An exciting event for this fall features invited speaker Alan Schwarz, known for his fascinating integration of probability and statistics into narrative and investigative reporting. Additional speakers include Jim Albert, Ph.D., Professor of Statistics, BGSU; Miriam Krause, Ph.D., CCC-SLP, Assistant Professor of Communication Sciences and Disorders, BGSU; and Andrew Schocket, Ph.D., Director of American Culture Studies and Associate Professor of History and American Culture Studies, BGSU.

Friday, October 4, 9 a.m. – 12 p.m.
101 Olscamp Hall
Bowling Green State University

Schwarz is the author of The Numbers Game, a best-selling history of baseball statistics, He is best known for his reporting in a series that exposed the seriousness of concussions among athletes of all ages, which may have had a major impact on the attention to dangers of head injuries in almost every major youth and professional sport.

This event, which is jointly sponsored by the Center for Business Analytics and the Department of Mathematics and Statistics, is free, but registration is required. RSVP to cmathis@bgsu.edu.

Dr. Troy D. VanAken

Dr. Troy D. VanAken (MA in Mathematics, 1991; Ph.D. in Mathematics, 1994) was inaugurated as the 19th president of Thiel College in 2009. He holds a bachelor's degree from Hillsdale College, and earned his master's and doctorate degrees in mathematics from Bowling Green State University. His doctoral dissertation was "Affine Difference Sets" supervised by John Hayden (retired). Following graduation he was appointed Assistant Professor of Mathematics at University of Evansville. He served as Assistant Vice President for Instructional Technology there, then as Vice President for Information Technology at Albion College in Michigan, in 1999. He worked at San Jose University 2002-2003, then returned to Albion College in administrative positions, and was named Executive Vice President in 2006.

He and his wife, Annette, are the parents of a son, Trey, and a daughter, Gabriella. For more information about Thiel College and Dr. VanAken, see the full biography and inauguration event details at the Thiel College web http://www.thiel.edu/president/biography.htm.

Alumni News

Dr. Deane Arganbright

Dr. Deane Arganbright (BS, BS in Ed. 1962) and his wife Susan live in Martin, TN. After earning a PhD in finite groups at the University of Washington, he taught in the U.S. at Iowa State University, Whitworth, Colorado, and University of Tennessee at Martin. In addition, he taught 15 years overseas at the University of Papua, New Guinea, Bendigo CAE (Australia), University of Vienna, Korea Advanced Inst. Of Science & Technology and Divine Word U. (PNG) where he is Professor Emeritus. He has numerous publications and international presentations in mathematical applications of spreadsheets, and currently teaches online classes for DWU.

James M. Brown

James M. Brown (MS Applied Statistics, 1982) is Senior Quality Improvement Consultant at Cincinnati Childrens Hospital Medical Center. He married Lora Niese Brown (BGSU BS in Math and CS 1982; MS in Applied Statistics, 1984).

Marshall Donaldson

Marshall Donaldson (BS Mathematics, 1970) retired in 2008 after 37 years of teaching secondary school mathematics at Eastwood Local Schools 1970-1972, Findlay City Schools 1972-1978, Libby MT Public Schools 1978-1993, Flathead Valley Community College 1987-1990, and Montpelier Exempted Village Schools, Ohio 1994-2008.

Donald Esber

Donald Esber (BS Ed., 1973) retired as Mathematics Teacher (grades 7-12) in 1996 from Olentangy Local Schools. He is married to Linda (Geil) Esber, who retired in 2010 as a Hospice Home Health Aide for Riverside (Ohio Health) Hospital. "We are very busy traveling and visiting our two grandsons, Evan (16 mo.) and Miles (9 mo.) We also help with babysitting duties two to three days per week for Miles.

Jon Mitchell

Jon Mitchell (BS Math, 1994) is Plant Manager at Hobart Brothers in Troy, Ohio. He is married to Amberly Mitchell.

Tim Newman

Tim Newman (BS Math, BS Computer Science, 1986) is Professor at the University of Alabama in Huntsville. He recently completed a term as President of the Faculty Senate at the University of Alabama in Huntsville, and as a faculty representative to the University of Alabama System Board of Trustees. In August, he also gave the faculty greeting address at the Installation Ceremony for the new university president of the institution.

William C. Pepple

William C. Pepple (BS Math. Educ., 1971) is Co-Managing Partner, Pepple & Waggoner Ltd., Cleveland, Ohio. He is married to Dr. Nancy L. Ryland and resides in Copley, Ohio.

Kathy (Yonkura) Renfro

Kathy (Yonkura) Renfro (BS Ed. Secondary Mathematics, 1988) is Adjunct Faculty at Lakeland Community College.

Ron Taylor

Ron Taylor (PhD, 2000) now at Berry College in Georgia, received the MAA Southeastern Section Distinguished Teaching Award.

William D. Thomas

William D. Thomas CPA (BS Mathematics, 1989) is Senior Tax Manager at GBG Partners LLC in Columbus, Ohio.

Obituary

Karis Baker Woodrich (BS Mathematics, 1949) passed away on June 2, 2012 in Naples, Florida. She is survived by her husband of 64 years, Glenn C. Woodrich (BGSU 1950), son Kirk, daughter Carol, and two grandsons. Glenn was kind enough to enclose her obituary with a very nice letter, where he writes "Your Math.Stat.Chat addressed to my wife arrived yesterday. It featured a picture of Dr. F. C. Ogg who was my wife's mentor during her studies at Bowling Green. She spoke of him often and gave him credit for her continued passion for teaching mathematics. In following my climb up the corporate ladder she acquired teaching certificates in five states. Her students excelled wherever she taught. Today they include scientists, stock brokers, engineers, financial advisors, teachers, and statistical pollsters. Many of them have kept in touch over the years."

Recent PhDs

Yanran Chen

Yanran Chen (Ph.D. in Statistics, August 2013) "Influence of Correlation and Missing Data on Sample Size Determination in Mixed Models" supervised by Junfeng Shang and Hanfeng Chen.

Nicholas Immormino

Nicholas Immormino (Ph.D. in Mathematics, August 2013) "Clean Rings & Clean Group Rings" supervised by Warren McGovern.

Yong Lin

Yong Lin (Ph.D. in Statistics, August 2013) "A Partitioning Approach for the Selection of the Best Treatment" supervised by John Chen.

Junvie Pailden

Junvie Pailden (Ph.D. in Statistics, August 2012) "Applications of Empirical Likelihood to Zero-In Inflated Data" supervised by Hanfeng Chen.

Abeer Hasan

Abeer Hasan (Ph.D. in Statistics, August 2013) "A Study of Skew t Distribution with Application" supervised by Arjun Gupta & Wei Ning.

Gokul Kadel

Gokul Kadel (Ph.D. in Mathematics, August 2013) "Hypercyclic Extensions of an Operator on a Hilbert Subspace with Prescribed Behaviors" supervised by Kit Chan.

Grace Ngunkeng

Grace Ngunkeng (Ph.D. in Statistics, August 2013) "Statistical Analysis of Skew Normal Distribution and Its Applications" supervised by Wei Ning.

Khyam Paneru

Khyam Paneru (Ph.D. in Statistics, August 2013) "Regression analysis for zero inflated population under complex sampling designs" supervised by Hanfeng Chen.