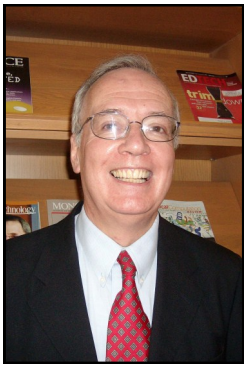
2012 Biostatistics and Computational Biology Annual Newsletter

Message from former interim chair, David Oakes



I would like to express my sincere thanks to all faculty colleagues, staff and students in the department for their support during my long "interimship". All of us who were members of the department in February 2008 were shocked and saddened by Andrei Yakovlev's sudden passing, and for a time the future looked very uncertain. The way everyone rallied over the days, weeks and months that followed did us all great credit. Medical Center leadership under CEO Berk and Deans Guzick, McAnarney and Taubman ensured that the department continued to receive the resources it needed to fulfill its mission of research, collaboration, education and service. Dr. Robert Holloway, Professor of Neurology, deserves our especial gratitude for his leadership of the chair search. I am delighted to welcome Dr. Strawderman to Rochester and eagerly look forward to the next chapter of our storied history.

Message from new chair, Rob Strawderman

Hello alumni, faculty (present & past), and friends of the department! It has now been nearly a year since I became chair, and this is my first newsletter message. I was honored to be chosen to lead this excellent department and I look forward to many more years of its success and growth as we adapt to the changing environment here at URMC. I would like to begin this note by extending my thanks to David on behalf of the department. As I have learned in a short period of time, being chair is not an easy job. David's unselfish decision to take the reins after the unfortunate death of Andrei Yakovlev, and his subsequent steady leadership for more years than he desired, maintained departmental excellence and kept it very much on track. I would like to personally thank David for his counsel during this past year, and also our outstanding department staff that work so hard on its behalf; this place would not nearly run so smoothly without their contributions. Finally, I would like to mention my great appreciation for Jack Hall, who died this past October. Jack's high opinion of this department, as well as the Medical Center and Rochester more generally, were all important factors in my decision to take this job. Despite the brevity, I am very thankful to have had the opportunity to get to know him (and also his wonderful wife, Nancy); the department will surely miss him greatly!

Continued on page 2

2013 Isn't Just Any New Year

Just in case you haven't heard, 2013 is the International Year of Statistics. So, if the Red Sox don't make it to the World Series this fall, we'll still have something to remember! Designed to promote the value of statistics throughout the world, the International Year of Statistics is being celebrated by the many organizations that teach and apply statistics

-taken from Maura Stokes, Editor of SAS® Statistics and Operations Research News

These are exciting, but also challenging, times for the DBCB. Biomedical research has become increasingly reliant on the science of understanding the real information hidden within "big data" that steadily continues to increase in scale as technology advances. Indeed, the ability of modern technology to generate vast amounts of biological and clinical data already risks outpacing the ability of researchers to properly analyze it. There is widespread over-reliance on highly automated analytic procedures that focus on speed and convenience at the expense of basic statistical principles. A clear understanding of these principles, together with a deep familiarity with the specific application, is essential for the correct synthesis and interpretation of such data. So it is really a very exciting time to be a biostatistician; the need for our expertise, in both research and education, has never been greater. At the same time, however, the DBCB is facing some serious financial challenges, primarily because of continued downward pressure on funding for scientific research resulting from the continuing debate in Washington surrounding budget priorities. The net reduction in funding for biomedical research at NIH affects the department in several ways, by increasing the competition for scarce research funds and reducing the ability of the institution to support the department from its central budget. However, I am reassured by my discussions with CEO Berk and Dean Taubman that broadening and strengthening this department remains central to their plans for the future of the Medical Center.

On balance, I remain highly optimistic for the future of the department, and fully intend to expand our capabilities in ways that will allow us to better respond to the challenges and opportunities posed by both the "big data" revolution and research initiatives sparked by health reform. In addition to URMC-centered initiatives, the DBCB is also anticipated to increase its involvement with research and educational initiatives happening over on the River Campus. Faculty are currently involved in the "big data" initiative, which has recently expanded to include efforts to develop a new Center for Data Science and associated cross-campus educational programs. Related to the development of these programs is the undergraduate statistics major. The major has increased in size; moreover, most of the statistics courses offered on River Campus have experienced rapid growth in enrollments from students across the institution. I thus anticipate DBCB becoming more heavily engaged with teaching undergraduate courses, including but not limited to the major coursework, to help alleviate this demand as well as to assist in modernizing the current curriculum.

As the remaining newsletter contents might suggest, the department is otherwise in excellent shape. Faculty continue to be very active in publishing a mix of high profile methodological and collaborative research, pursuing funding opportunities (primarily through NIH and NSF), teaching our excellent graduate students, engaging in statistical consultation, and serving the profession in a variety of ways, including national committee work, appointments on NIH study sections and other grant review panels, and various editorial board positions (e.g., Editor of Lifetime Data Analysis, as well as Associate Editor positions at JASA, Biometrics, Biostatistics, and several other journals). Rather than review these and other accomplishments here, I ask that you read all about them – cover to cover!

I would like to end by drawing your attention to the William Jackson Hall Graduate Student Fellowship that the department is establishing in honor of Jack Hall; please see page 4 for details. For those who have already made donations, please let me express my sincere appreciation once more, as well as request your continued generosity as you contemplate the possibility of philanthropy in the future. For those who have not yet made a donation, we would be most grateful for your consideration. No amount is too small – or too big. Our goal is to reach an eventual endowment of $250,000 or more, an amount that will permit us to honor a deserving student in Jack's name each year with a full semester of financial support. The department, and also Jack's family, views the establishment of this fellowship as a most fitting tribute to his legacy. We sincerely hope that you agree!

W. Jackson Hall, PhD 1930—2012

Most readers of this newsletter will know that Professor W. Jackson ("Jack") Hall passed away on October 14, 2012 after a long illness, bravely borne. Jack had remained active until, and even after, his retirement from the Department in July 2012. Obituaries for Jack have been published by the University of Rochester Medical Center http://www.urmc.rochester.edu/news/story/index.cfm?id=3649, in the Bulletin of the Institute of Mathematical Statistics http://bulletin.imstat.org/2012/12/obituary-w-jackson-hall-1930%E2%80%932012/ and in the Amstat News, https://www.amstat.org/news/pdfs/hallasaobit.pdf. A memorial service for Jack was held at the First Unitarian Church in Rochester on November 3, 2012, and well attended by family, friends, and many members of the department and community. Several members of Jack's extended family spoke and played music in his honor. I was also asked to speak, as a friend and representative of the department. Since not everyone receiving this newsletter was able to attend this touching service, I thought it most fitting to share with you some of the remarks that I made in tribute to Jack.

"I have been a close friend and colleague of Jack for almost 30 years. Indeed, his warm and encouraging letter in response to my application for a position in the Statistics Department at the University of Rochester was a major factor in my decision to move here from the United Kingdom in 1983. At that time, I was aware of some of Jack's contributions to the field of mathematical statistics, but I did not know him personally. However, once my wife, Peggy, and I moved here, we rapidly became close friends with Jack and Nancy.

To do justice to Jack's professional accomplishments would take much longer than there is time available and require many more voices than mine. But here is a brief summary of his career. Jack graduated with a Ph.D. in Statistics from UNC Chapel Hill in 1955. His earliest papers, written while he was working at what is now the Center for Disease Control and Prevention in Atlanta, concern the 1950's poliomyelitis epidemic and the methods taken to monitor and control it. He was appointed to the faculty at Chapel Hill in 1957, reaching the rank of full professor in 1966. In 1969 he moved to the University of Rochester to chair the new Department of Statistics and set up its graduate program.

Jack made substantial contributions in many areas of mathematical statistics. His work, published in the very best journals in the field, addresses fundamental concepts and ideas and has influenced many of today's premier researchers in this discipline. He received numerous professional accolades including a Fulbright scholarship – enabling him as a graduate student to visit the Universities of Manchester and Cambridge in England – and elected fellowships of the American Association for the Advancement of Science, the Institute of Mathematical Statistics and the American Statistical Association. In recent years, working with colleagues in the Heart Research Program at Rochester, he applied his skills to the design of clinical trials in cardiology.

In these last few weeks I have received a number of communications from Jack's former colleagues and students. A common theme is his love of teaching and dedication to his students. A colleague at Chapel Hill described him as "providing the necessary glue to make the graduate program functional and a warmth of personality engendering departmental operation and congeniality". At Rochester he was the dissertation advisor for a total of 12 students, and influenced many more. In recognition of his unique contributions, in 2004 the University conferred on him its first Lifetime Award in Graduate Education. We received letters supporting his nomination from all his former students here. Common points included the care and attention he gave to all his advisees, the assistance he would provide on personal matters, before and after they graduated, and that many became lifetime friends. Many letters commented on the clarity of his lectures and the depth of preparation that went into them.

These points are echoed in the recent tributes. Shande Chen writes "We all experienced different days: Some were bright, some were dark, some rainy and some sunny … when it was dark, Jack gave us some light, when it was raining Jack provided us some shelter and when it was sunny and bright he shared happiness with us". Kelly Zou, in a long tribute, writes "We'll forever miss your kindness and wisdom. The rigor and thoughtfulness in your statistical and medical research have influenced us in many profound ways. We sincerely thank you for being such a wonderful leader and a caring mentor…"

When Peggy and I visited Jack in his last week of life at the comforting Webster Care Home, talking was difficult for him and we questioned Nancy whether we should stay or let him rest. Nancy asked him and he mumbled "Peggy and David stay".

"Jack will always stay with me."

David Oakes

William Jackson Hall Graduate Student Fellowship

The Department of Biostatistics and Computational Biology at the University of Rochester Medical Center is embarking on an endeavor to endow the creation of the William Jackson Hall Graduate Student Fellowship in honor of Jack's lifetime achievements. Jack joined the University of Rochester faculty as professor and chair of the Department of Statistics in the College of Arts and Sciences in 1969. During his nearly 40 years here, he has made highly significant contributions to several areas of mathematical statistics, recognized in part through honorary fellowship in the American Association for the Advancement of Science, the Institute of Mathematical Statistics and the American Statistical Association. Jack was also a major force behind the formation of the Division of Biostatistics in the School of Medicine and Dentistry, the forerunner of the present department, and he played an especially instrumental role in developing Rochester's doctoral program in Statistics.

Jack's dedication to the graduate program and its students, commitment to teaching, and collaboration in translational research is a testament to the significance of this legacy. His depth of care for his students and unparalleled effort to teaching has produced a loyal and grateful group of alumni from the program. Many of his students have gone on to prominent roles in academia and industry. Jack's impact on the program was formally recognized in his receipt of the first Lifetime Achievement in Graduate Teaching Award, bestowed upon him by the University of Rochester at the 2004 Commencement Ceremony. Common themes of the letters in support of his nomination for this award included Jack's commitment to teaching, the sheer breadth of his knowledge in the theory and applications of statistics, and the individual attention, hospitality and friendship that he freely gave to his students and their families. Siddartha Dalal, Jack's first PhD student at Rochester and Chief Technology Officer at RAND Corporation, writes "He was a great teacher, his lectures were always thoughtful, and he challenged students to think about basic issues. He took great pride in their accomplishments and spoke highly about those to others. Jack's interests in his students also did not end with the completion of their thesis, but have continued to the extent that many students count him as part of their extended family." Jack has been involved in many clinical trials and other collaborative projects at the Medical Center, where the department sits at the core of all research and plays a pivotal role in planning for future research initiatives. Arthur J. Moss, Professor of Medicine (Cardiology) and Jack's collaborator for nearly 30 years, remarks that "Jack has been intimately involved in our longstanding research related to the Long QT Syndrome and more recently in our Multicenter Automatic Defibrillator Implantation Trial. His unique insights into statistical issues have been at the heart of the design of our programs. It is through these interactions that I myself became one of his students in the sense that I learned from each and every interaction with him."

This merit-based fellowship intends to recognize one or more Statistics doctoral students in their last semester or year of study whose academic record reflects the major cornerstones of Jack's distinguished career. Recipients will have distinguished themselves through combination of outstanding performance in coursework and qualifying exams; excellence in their service as a graduate student teaching assistant; and timely completion of a dissertation containing work judged to be of particular significance in both its methodological contribution and potential impact in one or more application areas.

The department specifically intends for this fellowship to be an enduring tribute to Jack's legacy and enormous influence on the Statistics doctoral degree program and its students through his many outstanding contributions to research, graduate teaching, and doctoral student mentorship. Your generosity affords us the ability to continue to attract the best and brightest students, to train outstanding scientists of tomorrow, and to further elevate the department to new levels of prominence in education and research. To make a gift please contact Carmen Aiezza, Director of Advancement, 585-275-0808, carmen.aiezza@rochester.edu. Alternatively, you may also use the secure website www.rochester.edu/advancement by selecting **'Make an Online Gift'**.

Important: If you wish to make a gift and choose to do so online, please be sure to select **School of Medicine and Dentistry** as the gift designation and in the comment box add: **Hall Graduate Student Fellowship (A09765).**

Robert L. Strawderman, ScD

Robert L. Strawderman, ScD was honored with an appointment as Dean's Professor at the University of Rochester School of Medicine and Dentistry Convocation on August 30, 2012.

Dean's Professorships were established in 1983 to be assigned to individuals of outstanding research excellence, usually, but not limited to, newly appointed faculty to the School of Medicine and Dentistry and are designated by the Dean of the School.

Dr. Strawderman is the new chair and Professor of Biostatistics and Computational Biology, effective July 1, 2012.

Dr. Strawderman was elected a Fellow of the Institute of Mathematical Statistics, receiving the award for innovative methodological contributions to survival analysis, recurrent events, and small sample asymptotics and their applications, as well as for excellence in editorial service. Each Fellow nominee is assessed by a committee of his/her peers for the award. In 2012, following a review of 47 nominations, 17 were selected for Fellowship. Created in 1935, the Institute of Mathematical Statistics is a member organization which fosters the development and dissemination of the theory and applications of statistics and probability. The IMS has 4,300 active members throughout the world. Approximately 8% of the current IMS membership has earned the status of fellowship.

Together with **Annette Molinaro** and **Karla Kerlikowske** at UCSF, Dr. Strawderman received a statistical methodology grant (R01) from NCI to develop new loss-based partitioning methods (e.g., regression trees) for building clinically relevant risk prediction models in settings where outcomes are right-censored, possibly in combination with competing risks, and where missing covariate data may arise as the result of two-stage and other related sampling designs. This work is motivated by a large and ongoing case-cohort study of women diagnosed with ductal carcinoma in situ that is being run by Dr. Kerlikowske out in San Francisco. One of the important scientific goals of this research is to determine the availability of a prognostic clinical and genetic signature that better delineates those women most likely to recur with invasive cancer (hence, benefit from adjuvant therapy) from those who are not (hence, benefit from repeated mammographies and active surveillance, rather than invasive therapy).

The NCI grant follows on the heels of a strongly related statistical methodology paper in Biometrics with Annette, along with 5 other publications in Statistics in Medicine, Statistical Methods in Medical Research, Health Services Research, Journal of Hospital Medicine, and an article written in honor of Dr. Strawderman's father, a distinguished Professor of Statistics at Rutgers, as part of a festschrift for his 70th birthday.

Finally … Dr. Strawderman is also working with a new URMC entity called SHORE (Surgical Health Outcomes & Research Enterprise). Part of the Department of Surgery and led by John Monson, MD. SHORE is dedicated to filling a critical institutional void in health services research for surgical outcomes, the ultimate goal being to improve the quality, safety and cost effectiveness of care delivered to surgical patients here at URMC (and beyond).

Promotions

Changyong Feng, PhD was promoted to Associate Professor

Shuang Wu, PhD was promoted to Research Assistant Professor

Jeanne Holden-Wiltse, MPH was promoted to Senior Associate

Wan Tang, PhD was promoted to Research Associate Professor

Hulin Wu, PhD

Hulin Wu, PhD was honored with an appointment as Dean's Professor at the University of Rochester School of Medicine and Dentistry Convocation on August 30, 2012.

Dean's Professorships were established in 1983 to be assigned to individuals of outstanding research excellence, usually, but not limited to, newly appointed faculty to the School of Medicine and Dentistry and are designated by the Dean of the School.

Dr. Wu is currently a Professor of Biostatistics and Computational Biology, a position he has held since 2003 when he joined the School of Medicine and Dentistry faculty.

Welcome to the Center for Integrative Bioinformatics and Experimental Mathematics (CIBEM)

Recent advances in the development and application of cutting-edge biomedical technologies have significantly accelerated the generation of complex high-throughput data that potentially enable us to gain new insights into life sciences. However, to analyze and extract meaningful information from such complex data, novel and sophisticated quantative techniques and approaches must be developed and integrated systematically. The quantative and computational methods for high-throughput data have become a major component in biomedical research and an indispensable tool in interrogating biological systems in the modern era.

The **CIBEM** was established in March 2012 within the Department of Biostatistics and Computational biology (DBCB) to integrate and consolidate available bioinformatics and computational biology resources and expertise at the University of Rochester to meet these challenges. Dr. Hulin Wu, newly named as Dean's Professor of Biostatistics and Computational Biology, has been appointed as the founding director of CIBEM. Although most of the faculty members will have primary appointments in DBCB, the Center's membership may also include adjunct faculty from other departments.

The Center for Biodefense Immune Modeling (CBIM) (Hulin Wu, PI, Martin Zand, PI) hosted the 2012 Summer School in Computational Biology, June 10th – 14th. A total of 40 registered participants from 14 states and from Canada, The Netherlands, Israel, Japan, India and the Czech Republic attended the 4.5 day summer school. Topics included basic concepts of mathematical and computational modeling to more specific lectures on ordinary differential equation models and agent based models of immune response. A number of lectures focused on statistical concepts ranging from basic concepts to experimental design and model fitting/parameter estimation, with specific lectures for statistical methods for immunology assay data processing/analysis and for bioinformatics. Morning classroom lectures by CBIM and external faculty were generally followed by afternoon hands-on computer lab tutorials. Travel awards were provided to 18 graduate students and post docs. Overall, the summer school was reported as a success, with 90% reporting they would recommend this summer school if offered again.

Following the summer school, the CBIM hosted the 2012 Symposium on Modeling Immune Responses from Complex Data, June 14th-15th. Presentations by 14 (12 invited) speakers covered 3 major themes: bioinformatics modeling for immunology; bridging immunology and mathematics; bridging immunological data and mathematical models. A total of 117 people registered for the symposium with over half coming from outside the University. During the lively poster session, speakers judged and selected 4 winners among the 31 posters. The poster session fostered engaging conversations not only between faculty and students/post docs but between researchers with different backgrounds in statistics, immunology or computational modeling. The poster session, balanced a mix of computational biology/statistics/vaccine response talks, and the opportunity to attend all the talks was rated as highlights. Overall, the symposium was reported as a large success, with 94% reporting very good or excellent satisfaction with the event. The summer school and symposium were funded by the NIAID Modeling Immunity for Biodefense program.

3rd Annual Student Workshop - Friday, May 18, 2012

Ollivier Hyrien, PhD (l) with Fei Ma (r)

Hua Liang, PhD (l) with Hui Yang (r)

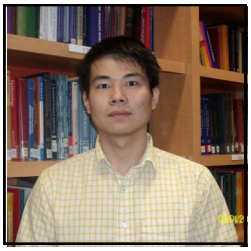
Xin Tu, PhD (l) with Yu Han (c) and Changyong Feng, PhD

All the participants with their mentors. Graduate Program Director Michael McDermott, PhD, is pictured 2nd from the right

Our annual Statistics PhD Student Workshop was held on Friday, May 18, 2012. The workshop included presentations by PhD students who had passed the Advanced Examination but had not yet had (or scheduled) their proposal examination. Each student presented on his/her dissertation topic, providing some background and an update on the progress of his/her research. For students who had not yet identified a dissertation topic, the presentation was on material covered in a recent reading course (ideally, a potential dissertation topic).

Sanjukta Bandyopadhyay, a part-time Master's student earned her BS from St. Xavier's College, University of Calcutta, India and Master's from Banaras Hindu University. Sanjukta's hometown is Kolkata (Calcutta), India.

Danielle Boselli, a Master's student, earned her BS in Special Education and a BA in Mathematics from SUNY at Geneseo. Danielle's hometown is Paramus, NJ.



Chongshu Chen, a first year PhD student, earned his Bachelor's Degree at Penn State University at University Park and his Master's Degree at the University of Pittsburgh. Chongshu is from Pittsburgh, PA.

Amy LaLonde, a first year PhD student, earned her BS in Applied Mathematics from SUNY Oswego. Amy is from Dryden, NY.

Graduate student **Katie Evans** was awarded the "Early Career Researchers Travel Grant" to attend the 2012 World Meeting of the International Society for Bayesian Analysis (ISBA) in Japan on June 25-29 where she presented her poster "Outlier Identification in Model-Based Clustering: An Application to the Seychelles Child Development Nutrition Study".

Department Achievements

Hua Liang, PhD was given the H. O. Hartley Award by the Department of Statistics at Texas A&M University. The H. O. Hartley award is given annually to a former student of the Institute of Statistics (now the Department of Statistics) at Texas A&M University for distinguished service to the discipline of Statistics. The award is in honor of Professor H. O. Hartley who founded the Institute of Statistics in 1962. Hartley was a pioneer and leader in the development of the theory and real world applications of statistics. He was also an avid proponent of good statistical practices who, through his teaching, lectures and national/international service, significantly advanced the understanding and use of statistics across a myriad of other disciplines. Thus, the intent of the Hartley award is to provide recognition to former students that reflect the Hartley tradition of outstanding service to the discipline in the broadest sense. The award was presented for the first time in 1980. Nominations are solicited each spring and the recipient is announced at the Aggie Reunion, which is held at the annual Joint Statistical Meetings.

It should also be noted that part of the work in Estimation and variable selection for generalized additive partial linear models by Wang, L., Liu, X., **Liang, H**. and Carroll, R. (Annals of Statistics, 2011) was selected by ASA to give a poster presentation at the Coalition for National Science Funding (CNSF) Capitol Hill Exhibtion on May 15, 2012. The purpose of the event is to raise awareness for the importance of NSF funding to Members of Congress.

Tanzy Love, PhD reported the department continued to have an active collaboration with the Seychelles Child Development Study. This year, Professors **Sally Thurston, PhD** and **Tanzy Love, PhD** worked on projects in the study assisted by programmer **Joanne Janciuras**, Master's statistician Don Harrington and PhD students **Katie Evans** and **Van Tran**. This collaboration produced 3 papers appearing in the *Journal of Nutrition, British Journal of Nutrition*, and *NeuroToxicology*. These included papers coauthored with alumni **Miranda Lynch (PhD 2011)** and **Abbie Stokes-Riner (Bellamy) (PhD 2010).** Graduate students involved in the project are supported by training grant T32 ES 007271 (Training in Environmental Health Biostatistics, Principal Investigator, **David Oakes, PhD**). This training grant is also supporting postdoctoral fellow **Jelani Wiltshire**, who is working with Dr. Oakes on analysis of data from studies of the cardiovascular effects of ultrafine particle exposure.

Hongyu Miao, PhD is a co-investigator on an R01 grant with Dr. Ben Miller from the Department of Biophysics, titled ”RNA-Targeted Small Molecules: Connecting Binding Kinetics to Sequence Selectivity”. Hongyu also shared a statistical image analysis paper with **Dr. Na Lu** (his postdoc) published on Pattern Recognition, titled *“Directional Histogram Ratio at Random Probes: A Local Thresholding Criterion for Capillary Images”.*

Rui Hu, PhD was invited as a keynote speaker for the 3rd International Conference on System Science, Engineering Design and Manufacturing Informatization (ICSEM), Chengdu, China, in October 2012. The title was “Detecting Gene Differential Association in Microarray Data”.

Ollivier Hyrien, PhD was awarded a new R01 grant from the National Institutes of Health. Some of the objectives of this project are to develop novel statistical methods for flow cytometry data as well as stochastic models of the dynamics of populations of lymphocytes.

Department Achievements - continued

Robert Strawderman, ScD was awarded a sub-contract from Cornell on "Electronically Mediated Interventions for Pregnant and Postpartum Women". He was also awarded a four-year USCF grant, "Sub Novel Tree-based Statistical Methods for Cancer Risk Prediction", effective July 2012.

Derick Peterson, PhD reports that 2012 was another very busy year in collaborative activities for him, as he continued to average a new joint publication in cancer research, heart research, infectious diseases, etc. every 1 -2 months as various studies (and, unfortunately, associated funding) reached completion. With several projects ending, it was more important than ever to help write a large number of new grant applications in hopes of securing future funding in this economic climate. He's enjoying more involvement in planning and conducting clinical trials, including a huge device trial with Heart Research that will begin in 2013, though he misses Jack Hall's insight and collaboration in this regard, in addition to his wit and friendship.

Michael McDermott, PhD received a five-year renewal of 2CARE R01, "Coordination and Statistics for Coenzyme Q10 in Huntington's Disease", effective October 2012.

Hua Liang, PhD received a three-year NSF grant, "Generalized Partially Addictive Models for High-Dimensional Data", effective August 2012.

Hua He, PhD, **Rui Hu, PhD** and **Yinglin Xia, PhD** were each funded for a CTSI Pilot Project, effective July 2012.

2012 Colloquia

Judith Lok, PhD, Assistant Professor in the Department of Biostatistics at the Harvard School of Public Health lectured on the "Choice of Optimal Estimators in Structural Nested Mean Models with Application to Initiating HAART in HIV Positive Patients after Varying Duration of Infection". (January 19, 2012)

Dawn Woodard, PhD, Assistant Professor from Cornell University lectured on "HARK: A New Method for Regression with Functional Predictors, with Application to the Sleep Heart Health Study". (February 9, 2012)

Haibo Zhou, PhD, Professor in the Department of Biostatistics at the University of North Carolina at Chapel Hill lectured on the "Study Design and Statistical Inference for Data from an Outcome Dependent Sampling Scheme with a Continuous Outcome". (March 8, 2012)

Ian W. McKeague, PhD, Professor in the Department of Biostatistics at Columbia University lectured on "Growth Trajectories and Bayesian Inverse Problems". (April 19, 2012)

Richard J. Cook, PhD, Professor and Research Chair with the Department of Statistics and Actuarial Science at the University of Waterloo spoke on "Misspecification of Cox Regression Models with Composite Endpoints". (October 25, 2012)

Elizabeth Schifano, PhD, Assistant Professor in the Department of Statistics at the University of Connecticut lectured on "Testing with Correlated Data in Genome-wide Association Studies". (November 29, 2012)

Xuelin Huang, PhD, Associate Professor in the Department of Biostatistics at the University of Texas MD Anderson Cancer Center spoke of the "Optimization of Dynamic Treatment Regimes for Recurrent Diseases". (December 13, 2012)

2012 PhD Recipient

Zhen Chen, shown here with advisors **Ollivier Hyrien** (l) and **David Oakes** (r), successfully defended his thesis, "A Flexible Copula Model for Bivariate Survival Data" on Friday, September 14, 2012. Zhen has now begun a career with Novartis in East Hanover, NJ as a principal statistician specializing in critical heart failure projects.

News from around the World

Dear Friends and Colleagues:

After some time on leave of absence, I have taken the position of Director, Institute of Statistics at the National Tsing Hua University in Taiwan since August 1, 2012. The time has come for me to say farewell to you as my absence leave ended on Janauray 31, 2013.

In parting, I want to thank the entire Department for all the help and support through 2000-2010. I'd like to thank the Seychelles team for challenging and rewarding, but always enjoyable collaborations. Even though I will miss the time in Rochester, I look forward to a new phase of my career.

Please know you can still reach me at lhuang@stat.nthu.edu.tw

Kindest Regards,
Li-Shan Huang

Former Student News

Miranda Lynch, (PhD 2011) has achieved an Assistant Professor position in the Department of Mathematics and Statistics at the University of Minnesota, Duluth, MN

Saria Awadalla, (PhD 2012) accepted a faculty position at the University of Illinois-Chicago School of Public Health where he will be an instructor in the Division of Epidemiology and Biostatistics.

Kelly Hong Zou, (PhD 1997) was nominated by **Aiyi Liu, (PhD 1997)** and has been selected as a Fellow of the American Statistical Association for her outstanding contributions to the statistical profession. Currently, Kelly is serving as the Secretary of the Health Policy Statistics Section (HPSS). Starting in January 2013, she will serve on the ASA Statistical Partnerships Among Academe, Industry and Government (SPAIG) Committee through 2015.

Kelly Zou (left) and PhD student **Fei Ma** (right) at JSM 2012.

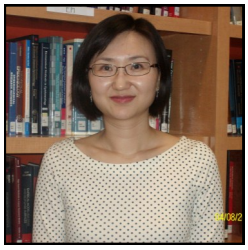
New Postdoctoral Associates

Zhiping Lu working with Hulin Wu, PhD
Wenjuan Wang working with Wan Tang, PhD
Lequin Wu working with Hulin Wu, PhD

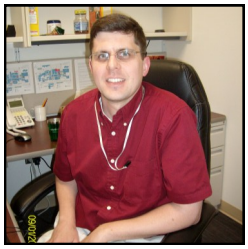
The newest members of the department

Anthony Corbett was hired in March 2012 with a background in Bioinformatics. He has been working with Dr. Hulin Wu in the Center of Integrated Bioinformatics and Experimental Mathematics. As a part of the Center, Anthony provides bioinformatics and data management support for multiple NIH funded grants, mainly the Respiratory Pathogens Research Center.

Andy Straw, MS joined the department in March 2012 as a research associate. He received a BS in mechanical engineering from the University of Virginia, and an MS in computer and systems engineering from Rensselaer Polytechnic Institute. Andy has over 30 years of professional software development experience focused on architecture and development of applications for managing complex business and scientific data. Andy is lead developer and administrator for BLIS, the web-based data management application that supports several department grants/centers, including NYICE, CBIM, and RPRC. Andy is a long-time resident of Fairport.



Lu Wang, MS, graduated from the Economics Department of North Carolina State University and later the Biostatistics Department at SUNY Buffalo. She joined our department on July 1st, 2012 as a Faculty Assistant. She provides biostatistical programming and analysis support for the Center for Biodefense Immune Modeling (CBIM), the Developmental Center for AIDS Research (D-CFAR), the New York Influenza Center of Excellence (NYICE), and the Respiratory Pathogens Research Center (RPRC). Previously, she worked as a statistical programmer and analyst in the Public Health Science Department at the University of Rochester.



Matthew Bernhardt, MS was hired in March 2012. He works with Dr. Dongwen Wang on the New York State Clinical Education Initiative (CEI) website (ceitraining.org). This project assists in educating clinicians in New York State about HIV/AIDS and has recently expanded to STD and Hepatitis C education. In addition to receiving funding from the New York State Department of Health, this project was recently awarded an R24 grant from the National Institutes of Health.

Jyoti Arora, MS (Statistics) was hired in March 2012. She has been working with **Drs. Xin Tu, Naiji Lu, Yinglin Xia** and **Robert Bossarte** on projects funded by the Center of Excellence at the VA in Canandaigua, NY.

Sanjukta Bandyopadhyay, MS has joined the department as an Information Analyst. She has an MS in Biotechnology and years of experience in biomedical research. She provides data management support to the database development team for the Center for Integrative Bioinformatics & Experimental Mathematics (CIBEM) led by Dr. Hulin Wu. She is also a part-time graduate student in the Department of Biostatistics and Computational Biology.

24th Charles L. Odoroff Memorial Lecture

Nancy L. Geller, PhD was the speaker for the 24th Charles L. Odoroff Lecture held on Thursday, May 3, 2012. Dr. Geller lectured on "Has Time Come to Give up Blinding in Clinical Trials?" Dr. Geller is the director of the Office of Biostatistics Research at the National Heart, Lung and Blood Institute.

Dr. Nancy L. Geller (left) with **Setta Odoroff**

2012 Yakovlev Fall Colloquium

Dr. Ying Kuen Cheung (right) is pictured with **Nina Yakovlev**.

On September 6, 2012 the department hosted **Ying Kuen K. Cheung, PhD** from the Mailman School of Public Health at Columbia University, who was the speaker for the 2012 Yakovlev Fall Colloquium, fifth in the series. Dr. Cheung lectured on "The Efficiency of Nonparametric Variance Estimation in Sequential Dose Finding".

Department Activities

On Tuesday, May 8, 2012, the department celebrated a "milestone" birthday with David Oakes. David's wife, Peggy was able to join us for cake and ice cream.

We hosted a retirement party for our Jack Hall on Friday, July 26, 2012.

and more Department Activities

2012 Winter Family Celebration at Clover Lanes

On Friday, January 27, the department held a family celebration at Clover Lanes with over 120 bowlers.

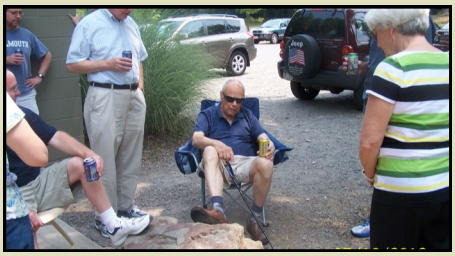




2012 Summer Picnic at Seneca Park Zoo

Friday, July 13 was a beautiful day for a picnic and a good day at the zoo.



BIOSTATISTICS AND COMPUTATIONAL BIOLOGY

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Saunders Research Building
Home of the CTSI
http://www.urmc.rochester.edu/ctsi/information/saunders-research-building.cfm

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