Student News

Taylor Wins Both Greenberg Award and Barry H. Margolin Award

Dr. Douglas J. Taylor has been awarded the 2001-02 Bernard G. Greenberg Award for the outstanding doctoral dissertation in the UNC-CH School of Public Health, and the 2001-02 Barry H. Margolin Award for the Outstanding Doctoral Dissertation in the Department of Biostatistics. Taylor's dissertation, entitled "Mixture Models for Occupational Exposure Data With Limits of Detection," was directed by Dr. Lawrence Kupper.

Taylor (right) accepts the Margolin (left) award.

Taylor's dissertation addresses an important and common problem associated with occupational health data. Personal exposure measurements are gathered on workers in a plant over time to quantify levels of exposure to possibly harmful substances. However, it is very often the case that a significant number of such measurements fall below detection limits, and it is not known whether such a measurement is either truly zero or greater than zero but still unobservable (i.e., is left-censored). By cleverly utilizing the information in these non-detectable values, Taylor was able to develop useful maximum likelihood methods for mixed model analyses of complicated and commonly encountered longitudinal occupational health data sets. His research also demonstrated that the typical treatment of non-detectable values (e.g., assigning such measurements some fixed value at or below the detection limit) can lead to biased statistical inferences.

Dr. Taylor already has one first-authored paper emanating from his dissertation research that has appeared in *Biometrics* (2001, Vol. 57, 681-688), and he has another first-authored paper that will appear in *Statistics in Medicine*. Taylor has recently begun work as Associate Director of Biostatistics at Family Health International in Research Triangle Park.

Kistner Receives Departmental Award and NIEHS Award

Emily Kistner won the 2001-02 Max Halperin Award last spring, and has since been awarded a Technical Intramural Research Training Award (IRTA) by the National Institute of Environmental Health Sciences. The Technical IRTA is a two-year traineeship allowing Kistner to work under the direction of Dr. Clarice Weinberg, who will advise Kistner on her dissertation research in the area of statistical genetics. This traineeship delivers a stipend and is not a regular government appointment. The NIH describes the purpose of a technical IRTA: "to produce a cadre of highly trained research support professionals capable of performing the latest advanced techniques… by developing the trainees' skills in the conduct of basic and applied research."

Kistner was awarded the Max Halperin Award by the Department of Biostatistics during the annual awards ceremony at the Foard Lecture. The Halperin Award, which provides a $2,000 stipend, is designed to encourage the development of young biostatisticians. Kistner's nominators spoke of her strong interest in the field of biostatistics and her consistently high standard of achievement in all of her biostatistical activities. She has an excellent academic record in both theoretical and applied biostatistical courses. She holds a BSPH and a MS degree from the School of Public Health Department of Biostatistics, and she was a predoctoral trainee on Dr. Lawrence Kupper's training grant in environmental biostatistics before beginning her PhD dissertation.

The Halperin award is named in honor of Dr. Max Halperin, who was a graduate of the UNC-CH Department of Statistics. Dr. Halperin spent his entire professional career at the National Institutes of Health and at George Washington University. He had a close working relationship with several Carolina biostatistics faculty members, and spent a sabbatical here from 1979-80. Dr. Halperin was known for his intellectual fervor and for his interest in working with students and young faculty.

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Scharf and Li Receive Best Master's Paper Award

Dan Scharf (Michael Schell, advisor) was awarded one of the two Master's Paper Awards for 2001-02. Scharf developed an involved SAS macro to perform reduced isotonic regression for the matrix partial order. A matrix partial order holds when the true means of a response variable are non-decreasing with respect to two ordinal independent variables, e.g. college grade point average (GPA) as a function of high school GPA and ACT test score. To obtain this macro, Scharf first modified a FORTRAN program to determine the matrix partial order estimates into SAS. These estimates are the least-squares set of mean values that satisfy the matrix order. The number of distinct mean estimates can often be reduced considerably, thereby providing a more parsimonious model and reducing the overfitting often associated with isotonic regression. To achieve this reduced model, one needs to perform simulations with a null hypothesis model where all the true means are the same. Scharf taxed the limits of current Pentium computers (with 256 MB of RAM) in order to perform the simulations. The simulations provided critical significant-level-to-stay (SLS) values for the backward elimination procedure for various matrix orders (2x2, 2x3, …, 4x4) and sample sizes (n = 5, 20 and 100 per matrix cell) corresponding to .01, .05 and .10 alpha levels (no-trend vs. trend hypothesis). These SLS values were then built into the macro and a 24-page user's guide was written to describe the options. The paper involved theoretical development, simulation studies, computer programming and documentation. The excellence of this paper was judged to be "first-rate." Scharf is a biostatistician at PPD Development.

Dan Scharf and Yun Li

Yun Li also received a 2001-02 Best Masters Paper Award from the Department of Biostatistics. Her paper, directed by Dr. Lawrence Kupper, was entitled "Modeling Correlated Count Data with an Application to Domestic Violence." The motivation for the paper was that appropriate statistical analyses of couple-based domestic violence data (with responses being counts) must directly account for intra-couple response correlations and over-dispersion for a Poisson model. Li took considerable initiative and used such complicated techniques as generalized estimating equations, generalized linear mixed models for Poisson outcomes, and bootstrap methods to analyze these data. At the same time, she numerically compared these various analysis strategies with regard to validity and precision. Li demonstrated the ability to learn advanced statistical methods that went beyond her MS training, and then applied these methods in a clever and thorough manner to a unique data set.

Li graduated with an MS degree in biostatistics during the summer of 2001, and her academic performance in all aspects of the MS program was superb. She is currently working full time at Duke University as a biostatistician.

Two Students Win Scholars for Tomorrow Awards

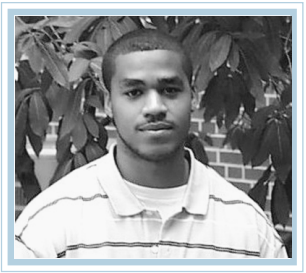
Tania Robbins, new biostatistics MS student, has received a Scholars for Tomorrow Award from the UNC-CH graduate school. Tania came to the School of Public Health from Purdue University's strong program in mathematics and statistics. At Purdue she gained work experience and interest in bioinformatics and genetics. This combination of statistics and genetics uniquely qualified her for this scholarship in the interest area of computational sciences.

Chris Slaughter, new biostatistics PhD student, has also received a Scholars for Tomorrow Award from the UNC-CH graduate school. Chris holds a master's degree in biostatistics from the University of Washington (UW) at Seattle. He has been a research scientist at the UW/EPA Northwest Research Center for Particulate Matter and Health. His work experience and academic qualifications uniquely qualified him for this scholarship in the interest area of computational sciences, enabling him to make contributions in an interdisciplinary research setting covering biostatistics, environmental health, medicine and environmental engineering.

The graduate school describes the Scholars for Tomorrow Award as follows: Scholars for Tomorrow is an innovative, cross-disciplinary fellowship program that supports creative new concepts in learning, including interdisciplinary education, cutting-edge research and discovery. It enables Carolina to compete with other top research universities for the very best graduate students in the country. Scholars for Tomorrow allows us to bring together diverse students around a general theme of mutual interest and importance to society.

Student News

Emma Huang was chosen by the University to receive the William N. Reynolds Fellowship, which carries an academic year stipend of $17,000, tuition, and fees for five years. She also received one of two Fryer Scholarships awarded by the Department of Biostatistics. The Fryer Scholarship is offered to outstanding applicants by the department as a supplement to a traineeship or graduate research assistantship. It carries an award of $4000 and is made possible by John and Diane Fryer.



Sean Simpson won both a Royster Award from the University, and a Fryer Scholarship from the Department of Biostatistics. The Royster Society of Fellows provides graduate students with a $17,000 stipend, tuition, fees and health insurance every year for five years, plus travel funds in the fifth year. The society is named for UNC-CH alumnus Dr. Thomas S. Royster Jr. and his wife, Caroline H. Royster, who along with other donors gave numerous gifts to support talented graduate students.

Jamie Perin won the Greenberg Scholarship, an award offered to outstanding applicants by the Department of Biostatistics as a supplement to a traineeship or graduate research assistantship. This scholarship includes an award of $2500 per year. It is named for Dr. B. G. Greenberg , founder and former chair of the Department of Biostatistics, and is made possible by generous contributions by the Greenberg family and friends.

The Proctor & Gamble Fellowship is an annual award given to an outstanding Department of Biostatistics doctoral student. **Lan Kong** received this award for the second consecutive year. She expects to complete her PhD degree by May of 2003; she has already received her MS degree in biostatistics at UNC-CH. The title of her dissertation is "Semiparametric Transformation Models for Case-Cohort Studies." Her dissertation advisors are Dr. Jianwen Cai and Dr. Pranab K. Sen. She currently works with Dr. Gary Koch as a graduate research assistant.

Angela Blotzer, a biostatistics undergraduate student, was inducted into the North Carolina Chapter of Phi Beta Kappa last fall. She is currently pursuing a bachelor of science in public health and a double major in music. Angela is also working on an honors thesis for both degrees.

Guosheng Yin received a R. L. Anderson Student Award from the Southern Regional Council on Statistics. This student paper competition awarded funds to attend the 2002 Summer Research Conference in Statistics.

Brooke Rittgers won the GlaxoSmith-Kline Scholarship which, made possible by a GlaxoSmithKline donation, awards $1000 to an applicant chosen by the Department of Biostatistics.

Doug Schaubel and **Jianmin Wang** won student travel awards from the Biometrics Society to attend the 2002 spring meetings. Schaubel won this award for his paper, "Weighted Estimating Equations for Recurrent Event Data with Missing Events", (with J. Cai). Wang's award was for his paper, "Jackknife Method Under Successive Sampling with Varying Probabilities without Replacement", (with P. K. Sen and C. M. Suchindran).

Haiku, by Richard Zink

Correlated bi-
nary outcomes. Your moments
are hard to come by.

Student News

2002 Induction into Delta Omega Honorary Public Health Society

Delta Omega is a national honor society which exists to encourage research, provide scholarships among students enrolled in graduate study and recognize achievements in the field of public health. The Delta Omega Society accepts only students that meet high academic standards. The candidates must also demonstrate potential for making significant contributions to the field of public health. The 2002 biostatistics inductees for the Delta Omega, Theta Chapter are: Carie Kimbrough, MPH; Mike Pennell, MS; and Daniela Sotres Alvarez, MS.

Pictured above, clockwise from top left: Danyu Lin, Adam Gilbert, John Kairalla, Mike Pennell, Daniela Sotres Alvarez, and Carie Kimbrough.

The Theta Chapter of Delta Omega Society also confers annual awards for outstanding academic performance to senior students enrolled in any of the undergraduate programs leading to the BSPH degree. This year's recipient of the Undergraduate Award for Excellence was John Kairalla.

The Delta Omega Society Service Award was given to Adam Gilbert for his outstanding service to the students and to the School.

The Delta Omega Theta Chapter recognized Danyu Lin, member of the faculty, for his outstanding scientific contributions.

2002 Graduates

May 2002

Luzmila Akins	BSPH
William B. Allshouse, III	BSPH
Ryan M. Burns	BSPH
John A. Kairalla	BSPH
Sarah C. Kandefer	BSPH
Amanda J. Morrison	BSPH
Karthi K. Natarajan	BSPH
Melissa J. Whitney	BSPH
L. Joshua Davis, III	MPH
Fang Gai	MPH
Adam C. Gilbert	MPH
Lisa A. V. Moorehead	MPH
Ping Shen	MPH
Hae-Young Kim	MS
Hongjian Li	MS
Shane L. Rosanbalm	MS
Seleshi H. Demissie	DrPH
Carlos F. Henriques-Roldan	PhD

August 2002

Joshua D. Sawyer	BSPH
Jungeun Ahn	MPH
Robert C. Barrier, Jr.	MS
Jennifer L. Beaumont	MS
Tomomi Kaneko	MS
Lauren E. Lindblad	MS
Michael L. Pennell	MS
Daniela T. Sotres Alvarez	MS

December 2002

Kevin J. Clark	MPH
Heidi O. Toms	MPH
Lisa Wrage	MPH
Michael A. Getter	MS
Sonja Greven	MS
Ruby E. Johnson	MS
Bing Lu	MS
Liyun Ni	MS
Marla DeLuca	DrPH
Michael R. Jiroutek	DrPH
Sean M. O'Brien	PhD
Douglas E. Schaubel	PhD

Visit Us Online

Keep up with departmental events on-line at **www.sph.unc.edu/bios/.** We continue to make additions and improvements to our website and are interested in your comments and suggestions, so please click on "Contact Us" and give us your feedback.

Alumni, we want to hear from you. Update your contact information and find fellow alumni in the online SPH alumni directory by visiting **www.sph.unc.edu/alumni/.**

Opportunities for Giving

Gifts to the Department of Biostatistics may be earmarked for one of our gift funds. If you make a gift with no designation, the gift will go into a general fund for the department.

Biostatistics Alumni Fund - to support the Master's Paper Award and Barry H. Margolin Dissertation award for the best doctoral dissertation in the department each year.

Bernard Greenberg Scholarship Fund - to provide support for merit-based scholarship for students in the Department of Biostatistics.

The C. David and Lucy S. Hardison Endowed Scholarship Fund in Bioinformatics - to support a scholarship fund in honor of David and Lucy Hardison.

Roy Kuebler Fund - to support faculty sabbaticals.

Max Halperin Scholarship Fund - to provide a fellowship to a deserving first or second year doctoral student currently enrolled in the Department of Biostatistics.

Mohberg Scholarship in Biostatistics - to support a scholarship fund.

PK Sen Visiting Professorship in Biostatistics- to support visiting faculty from developing countries.

The Biostatistics Student Travel Fund- to support biostatistics student travel. Dr. Gary Koch, a biostatistics faculty member, will match your gift dollar-for-dollar up to $15,000, if your gift is designated to the BIOS Student Travel Fund.

The Biostatistics Staff Development Fund - to support an annual Staff Award for Excellence in the department.

Checks should be payable to: The UNC-CH Department of Biostatistics. So that your gift may be properly credited, please indicate that is should be applied to one of the gift funds named above. Mail to:

Vera Bennett
Department of Biostatistics, UNC-CH
3108 McGavran-Greenberg Hall
School of Public Health, CB#7420
Chapel Hill, NC 27599-7420.

All contributions are tax deductible. If your employer matches gifts to educational institutions, please enclose the appropriate forms.

Gifts to the Department (July 1, 2001 through June 30, 2002)

We thank the following individuals and corporations, whose donations provide much needed funds to support BIOS graduate education. We are very grateful for your help. If for any reason, you know of a name we have omitted, please let us know and we will see that he/she is recognized in the next issue of *BiosRhythms*.

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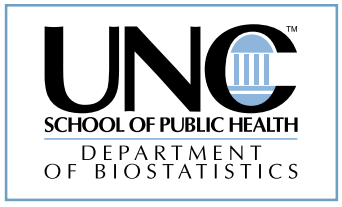

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