

Medical College of Wisconsin

Graduate School of Biomedical Sciences

Division of Biostatistics



PROGRAM OF STUDY

The Division of Biostatistics offers a program leading to a Ph.D. degree. The program is designed for students with strong undergraduate preparation in mathematics and trains students in biostatistical methodology, theory, and practice. Emphasis is placed on sound theoretical understanding of statistical principles, research in the development of applied methodology, and collaborative research with biomedical scientists and clinicians. In addition, students gain substantial training and experience in statistical computing and in the use of software packages. Courses in the program are offered in collaboration with the Department of Mathematics at the University of Wisconsin–Milwaukee. The degree requirements, including dissertation research, are typically completed in five years beyond a bachelor's degree.

RESEARCH FACILITIES

The Division of Biostatistics is located in the Department of Population Health at the Medical College of Wisconsin (MCW). The Medical College has extensive research laboratories and facilities available for faculty and student use. The Division has an up-to-date network of Sun workstations, PCs, and peripherals. The Division's network is equipped with all leading statistical software and tools needed for the development of statistical methodology. The MCW libraries' holdings are among the largest health sciences collections in the Midwest. Students also have access to the University of Wisconsin–Milwaukee's extensive library, and the Division maintains its own library of statistical journals, books, and monographs.

The Epidemiologic Data Service provides access to national data on health, health care and special clinical data sets collected locally. The Medical College is a repository for the National Center for Health Statistics.

The Biostatistics program also houses the Biostatistics Consulting Service. This service affords students the opportunity to experience extensive biomedical research.

COLLABORATIVE RESEARCH

Faculty members are engaged in a number of collaborative research projects at the Center for International Blood and Marrow Transplant Research, Marquette University's College of Bioengineering, the Clinical and Translational Science Institute, the Center for Patient Care and Outcomes Research, the Human and Molecular Genetics Center, and the Cancer Center. Dissertation research topics in statistical methodology often evolve from such participation, and students usually become coauthors on medically oriented papers arising from these projects.

FINANCIAL AID

Students are supported by fellowships for the first 18 months and then by research assistantships. Each includes tuition, stipend, and health insurance. The stipend for 2008–09 was \$25,750 per year. The research assistantships provide students with the opportunity to gain experience in statistical consulting and collaborative research.

LIVING AND HOUSING COSTS

Many rental units are available in pleasant residential neighborhoods surrounding the Medical College. Housing costs begin at about \$550 per month for a married couple or 2 students sharing an apartment. The usual stipend supports a modest standard of living.

STUDENT GROUP

There are 525 degree-seeking graduate students, 715 residents and fellows, and 796 medical students at the Medical College. A low student-faculty ratio fosters individual attention and a close working relationship between students and faculty members. Graduates pursue academic positions and jobs in government and industry.

LOCATION

Milwaukee has long been noted for its old-world image. Its many ethnic traditions, especially from Middle Europe, give the city this distinction. Cultural opportunities are numerous and include museums, concert halls, art centers, and theaters. Milwaukee has a well-administered government, a low crime rate, and excellent schools. It borders Lake Michigan and lies within commuting distance of 200 inland lakes. Outdoor activities may be pursued year-round.

THE COLLEGE

Founded in 1893, it became the Marquette University School of Medicine in 1913. It was reorganized in 1967 as an independent corporation and renamed the Medical College of Wisconsin in 1970. There are more than 1,300 faculty members. MCW is one of six organizations working in partnership on the Milwaukee Regional Medical Complex (MRMC) campus. Full-time students in any department may enroll in graduate courses in other departments and in programs of the University of Wisconsin–Milwaukee and Marquette University without any increase in basic tuition. The College ranks in the top 34% of U.S. medical schools in National Institute of Health research funding.

PROGRAM OVERVIEW

Fellowship for the first 18 months,
Research Assistantship for the remaining part of the program, for a maximum of 5 total years of support.

Benchmarks:

- Preliminary Examinations – Year 2
- Choosing an Advisor and forming a Dissertation Committee – Year 3
- Qualifying Examination – Year 3 or early 4
- Dissertation – Year 4 and 5

BIOSTATISTICS PHD

The PhD program in Biostatistics was established in the spring of 1996. The program is designed to admit 2-3 students per year. The benefit is small class sizes and individual attention to student programs.

The minimum admission requirements are:

- An undergraduate degree in mathematics or closely related fields
- An overall grade point average of B or better
- B average or better in mathematics and science, and
- An average of 60th percentile score on the quantitative and verbal sections of the GRE.
- Applications for consideration need to be at the graduate school by **February 15th** but students are encouraged to complete applications by early January.

Apply online at: <http://www.mcw.edu/gradschool/>

OR

Send completed applications to: Graduate Admissions Graduate School of Biomedical Sciences Medical College of Wisconsin Milwaukee, Wisconsin 53226-0509 Phone: 414-456-8218 E-mail: gradschool@mcw.edu	Contact Information: E-mail: biostat@mcw.edu Website: http://www.mcw.edu/biostatistics.htm Division of Biostatistics 8701 Watertown Plank Road Milwaukee, WI 53227 Phone: 414-456-6513
--	--

THE FACULTY AND THEIR RESEARCH

- **Kwang Woo Ahn, Assistant Professor**, PhD, University of Iowa. Nonlinear time series, Epidemiology, Markov Chain Monte Carlo.
- **Ruta Bajorunaite, Assistant Professor**, PhD, Medical College of Wisconsin. Survival analysis.
- **John P. Klein, Professor and Director**, PhD, University of Missouri. Survival analysis. Elected member of the International Statistical Institute and fellow of ASA.
- **Prakash W. Laud, Professor**, PhD, University of Missouri. Bayesian statistical methods. Faculty biostatistician in the Center for Patient Care and Outcomes Research. Director of Graduate Programs.
- **Jennifer Le-Rademacher, Assistant Professor**, PhD, University of Georgia. Symbolic data analysis.
- **Brent R. Logan, Associate Professor**, PhD, Northwestern University. Multiple comparison procedures. Serves as biostatistician for the Bone Marrow Transplantation Clinical Trials Network, an NIH collaborative trials network.
- **Aniko Szabo, Associate Professor**, PhD, University of Memphis. Mathematical modeling of cancer screening and oncogenesis. Director of the Biostatistical Consulting Center.
- **Sergey Tarima, Assistant Professor**, PhD, University of Kentucky. Methods of using additional information in statistical estimation.
- **Tao Wang, Assistant Professor**, PhD, North Carolina State University. Statistical genetics. Joint appointment with the Human Molecular Genetics Center.
- **Mei-Jie Zhang, Professor**, PhD, Florida State University. Survival analysis.

JOINT FACULTY (MEDICAL COLLEGE OF WISCONSIN)

- **Timothy L. McAuliffe**, PhD, University of California-Los Angeles, Professor, Psychiatry, Biostatistics.
- **Daniel B. Rowe**, PhD, University of California-Riverside, Associate Professor, Biophysics, Biostatistics.

ADJUNCT FACULTY (UNIVERSITY OF WISCONSIN-MILWAUKEE)

- **Jay Beder, Professor**, PhD, George Washington University. Gaussian processes, design of experiments, applications to biology.
- **Vytaras Brazauskas, Associate Professor**, PhD, University of Texas-Dallas. Robust and nonparametric methods, actuarial science.
- **Daniel Gervini, Associate Professor**, PhD, University of Buenos Aires. Robustness, functional data analysis.
- **Jugal Ghorai, Professor**, PhD, Purdue University. Nonparametric estimation, survival analysis, applications to meteorology.
- **Eric Key, Professor**, PhD, Cornell University. Probability theory.
- **Tom O'Bryan, Associate Professor**, PhD, Michigan State University. Empirical Bayes decision theory, mathematics education.
- **Gil Walter, Professor Emeritus**, PhD, University of Wisconsin. Applied Mathematics, Statistics.

PROMINENT ALUMNI

- **Nicholas Pawajski, PhD, 2008**. Post-doctoral Fellow, Statistical Genetics Section, Dept of Biostatistics, University of Alabama-Birmingham.
- **Xiaolin Fan, PhD, 2008**. Senior Biostatistician, Oncology Biostatistics, Novartis Pharmaceuticals Corporation.
- **Yinghua (Grace) Zhang, PhD, 2007**. Biostatistician, Discovery Stats Biopharms US, GlaxoSmithKline.
- **Xu Zhang, PhD, 2005**. Assistant Professor, Department of Mathematics and Statistics, Georgia State University.
- **Hong Wang, PhD, 2004**. Assistant Professor, Department of Biostatistics, University of Pittsburgh.
- **Ruta Bajorunaite, PhD, 2003**. Assistant Professor, Department of Population Health, Medical College of Wisconsin.
- **Matthew Hayat, PhD, 2002**. Assistant Professor of Biostatistics, The Johns Hopkins University School of Nursing.
- **Youyi Shu, PhD, 2001**. Associate Director, Biostatistics Global Respiratory R&D, Teva Pharmaceuticals.
- **Jingtao Wu, PhD, 2001**. Senior Biostatistician, TAP Pharmaceuticals.