

Dear Prospective Statistics Applicant:

Thank you for your interest in for an anticipated tenure-track Assistant Professor position in statistics in the Division of Statistics at Northern Illinois University (NIU) starting August 16, 2015.

The appointee in this position will be expected to maintain a vigorous research program, advise students, provide innovative and excellent instruction, and will work in an active group of statisticians and academic actuaries, with ample consulting opportunities on and off campus. The full-time teaching load is two courses per regular semester at undergraduate/graduate levels. We offer a competitive salary and start-up package, active graduate program with institutional support for students, and a highly interactive faculty.

REQUIRED SKILLS

Applicants must have completed all requirements of a PhD in statistics, biostatistics or actuarial science prior to August 16, 2015. Excellence in teaching, outstanding research potential, and excellent communication skills are required.

PREFERRED SKILLS

Applicants from all areas of statistics and actuarial science are encouraged to apply. Preferred areas of interest include, but are not limited to, statistical methods that are related to large and complex or massive data sets, and actuarial science. Experience in statistical consulting will be counted as a preferred secondary skill.

MATERIALS

Preference will be given to applications received by November 23, 2014; however applications will continue to be accepted until position is filled. Applicants must email a cover letter, a curriculum vitae, an academic transcript, teaching and research statements, and arrange for three confidential letters of recommendation to be sent directly by references, to statistics-search@math.niu.edu , or uploaded at mathjobs.org. All correspondence should be addressed to the Statistics Search Committee. Appointee alone will be required to submit hard copies of application materials.

In compliance with the Illinois Campus Security Act, before an offer of employment is made, the university will conduct a pre-employment background investigation, which includes a criminal background check.

In accordance with applicable statutes and regulations, NIU is an equal opportunity employer and does not discriminate on the basis of race, color, national origin, ancestry, sex, religion, age, physical and mental disability, marital status, veteran status, sexual orientation, gender identity, gender expression, political affiliation, or any other factor unrelated to professional qualifications, and will comply with all applicable federal and state statutes, regulations and orders pertaining to nondiscrimination, equal opportunity and affirmative action.

Information about the Division of Statistics, its missions and people in the division

If you need additional information about any of the topics covered herein, please feel free to write to statistics-search@math.niu.edu

A. General

The Carnegie Foundation for the Advancement of Teaching has classified NIU as a Research University (high research activity). NIU serves, and educates, about 24,000 students. The Division of Statistics was created in 1986, and became an autonomous unit in 1990, within the Department of Mathematical Sciences. The division is one of 17 units in the College of Liberal Arts and Sciences (LA&S).

B. People in the division

Faculty:

Sanjib Basu, Professor and Director, Ph.D. (1991), Purdue University, Bayesian statistical methodology and statistical applications in biomedicine.

Devrim Biligili, Visiting Assistant Professor, Ph.D. (2009), Northern Illinois University, Survival Analysis, Mathematical and Statistical Modeling of Infectious Disease Epidemiology, Statistical Genetics.

Nader Ebrahimi, *Distinguished Research Professor*, Ph.D. (1980), Iowa State University, Aspects of software engineering, Dynamic lifetime models, Genetics, Information theoretic methods, Reliability theory and survival analysis, Nano-reliability

Lei (Larry) Hua, Assistant Professor, Ph.D. (2012), A.S.A., University of British Columbia, Dependence Modeling, Multivariate Non-Gaussian Models, Extreme Value Theory, and Risk Measures.

Rama T. Lingham, Associate Professor, Ph.D. (1985), Purdue University, Bayesian Inference, Inference from Stochastic Processes.

Alan Polansky, Associate Professor, Director of Graduate and Undergraduate Studies, Ph.D. (1995), Southern Methodist University, Nonparametric Statistics, Resampling Methods.

Duchwan Ryu, Assistant Professor, Ph. D. (2005) Texas A & M University, Bayesian Statistical Methodology, Statistical methodology for large data.

Chaoxiong (Michelle) Xia, Assistant Professor, Director of Statistical Consulting Service, Ph.D. (2013), University of British Columbia, Bayesian methods for model identification issues in medical, health and insurance areas.

Instructors:

Michael Eraas

Joel Gimbel

Suman Gupta

Matthew Grugel

Carrie Helmig, Advising and Recruiting Assistant

Claudine Meyers

Office Staff:

Shelley Harold, Office Manager

Shannon Peura, Office Support Specialist

Bincy Varghese, Receptionist

- 71% of faculty are PIs in external funded grants including grants from NIH, NSA, NSF, Society of Actuaries (SOA) and Abbvie Pharmaceuticals.
- Professor Nader Ebrahimi is a Distinguished Research Professor and a Fellow of the American Statistical Association. He is the P.I in research projects that have been supported by the National Security Agency and the NSF.
- Professor Basu is a Fellow of the American Statistical Association and is engaged in on-going collaborative research with biomedical researchers and scientists at Rush University Medical Center in Chicago. He is also the P.I in a multi-year research project that has been by the NIH.
- Professor Lei Hua is a P.I in a research project that has been supported by the Society of Actuaries
- Professor Michelle Xia's research has been supported by the Society of Actuaries
- Several faculty members serve on multiple editorial boards of main-stream statistical journals.
- Professors Rama Lingham and Alan Polansky have published research monographs and books.
- The division has hosted several research conferences and workshops. Many scholars from institutions near and far visit the division to conduct research collaboratively with the faculty of the division.
- The Division faculty have been involved in presenting invited talks, workshops, tutorials and short courses at professional conferences, universities and

pharmaceutical companies

C. Statistical Consulting Service (SCS)

The Statistical Consulting service is an integral part of Division of Statistics. It provides statistical consulting services including short-term statistical analyses, long-term collaborative research and assistance in preparation of research grant proposals. Professor Michelle Xia is the director of the SCS.

- The mission of SCS is to support administrators, faculty, graduate students of NIU, and outside clients in their research and professional work involving statistics

D. Teaching

The Division of Statistics offers statistics curricula at the BS, MS and PhD levels. The Division also offers a program in Actuarial Science at the baccalaureate level. In addition the Division offers lower and upper level undergraduate statistics courses including courses meeting the General Education and Core Competency requirements of the University. Here is a complete list of the programs that we offer and support:

1. PhD in Mathematical Sciences. Statistics track
2. MS in Applied Probability and Statistics.
3. Graduate Certificate in Applied Statistics.
4. BS - Emphasis 4- Probability and Statistics.
5. BS -Emphasis 6- Actuarial Science.
6. Certificate of Undergraduate Study in Actuarial Science.
7. Minor in Applied Probability and Statistics
8. Minor in Actuarial Science
9. A Gen-Ed/ Core Competency course, namely STAT 208.
10. Two Math Core Competency courses, namely STAT 301 and STAT 350.

D.1.Ph.D. in Mathematical Sciences

The Department of Mathematical Sciences and the Division of Statistics jointly offer the Ph.D. program, which has around 40 students at any given time. The program has a central core of graduate level courses in Pure and Applied Mathematics, Numerical Analysis and Statistics. All students in the program are required to take the seven core courses before following a more specialized track in Pure Mathematics, Applied Mathematics, Statistics or Mathematics Education. The broad-based core, in conjunction with the Applications Involvement Component, have been identified in conversations with the chairs of university departments that hire graduates of the program as key factors that distinguish the department's graduates. Graduates from the statistics track of the degree have options to work in industry in addition to academics. The department and the division have an extremely good record of employment for the graduates of the PhD program. Evidence from alumni indicates that graduates of the program are successful in their chosen careers.

D.2. M.S. in Applied Probability and Statistics

The primary objective of the master's program in applied probability and statistics is to prepare students with the coursework, research, project and software experiences, and other training, needed for employment as professional statisticians at the master's level. The MS program also provides the depth of course work and research skills for entry to, and continued success in, PhD programs. The division has been quite successful so far, with a strong and diverse set of courses, steady enrollment, sustained and timely graduation rate, competitive student-to-faculty ratio, high employment rate among the graduates of the MS program, strong faculty, and a high level of satisfaction among its alumni. Between 30 and 40 students typically pursue this M.S. program. The MS in Applied Probability and Statistics is one of only two such programs in public universities in the entire state of Illinois. Over the years, students graduating from the MS and the PhD (statistics track) have been gainfully employed nationally at pharmaceutical companies, banks, consulting companies, etc.

D.3. Statistics and Actuarial Programs at the BS level

The BS(MATH) program has a total of six emphases. The track on Probability and Statistics has been offered for over two decades, and the graduates typically seek jobs or enter graduate programs upon completion of the degree. The BS (MATH) program has produced many practicing actuaries over the last several years. These alums and the division have yearned for a more formal program in actuarial science at NIU, particularly because NIU is in close proximity to the Society of Actuaries (SOA) and numerous insurance companies. We therefore launched an advanced foundational BS (MATH) track in actuarial science in 2007. The first batch of students from this new program graduated in May 2009. This inter-disciplinary track prepares students for careers in the actuarial profession and helps them learn material included in the Exams P / 1 (Probability), FM / 2 (Financial Mathematics), MLC / 3L (Life Contingencies), and MFE/3F (Financial Economics) of the SOA / Casualty Actuarial Society (CAS). A few

courses relevant to Exam C / 4 (Construction and Evaluation of Actuarial Models) of the SOA / CAS are also available to actuarial students. Actuaries from area companies, including Aon, Allstate, Milliman, State Farm and Zurich, visit us and give presentations at the meetings of the *Northern Illinois University Actuarial Club*.

E. Academic Life of Faculty of the Statistics Division

1. Workload

- (a) **Expected Duties for Assistant Professors:** Teaching (45%), Research (45%) and Service (10%).
- (b) **Expected Duties for Associate and Full Professors:** Teaching (40%), Research (40%) and Service (20%).

Please note that the workload of the faculty consultant who serves as the Director of the Statistical Consulting Services (SCS) is different from those of the other faculty members of the division.

2. Research

Faculty members are expected to pursue an active research program. Submission of research proposals to receive extra-mural funding from outside agencies is expected. The Division and the University provide support for research and support for travel to professional conferences that is feasible within the budget.

3. Teaching

A full-time regular faculty member of the division teaches two courses, typically one undergraduate course and one graduate, per regular semester. The total number of semester-hours taught per regular semester would be 6 to 7. In the summer semester, he/she may teach optionally one course out of a limited number of courses depending on student enrollment and budgetary allocations to the division.

4. Statistical Consulting Service

Faculty members are encouraged to participate in the activities of the Statistical Consulting Service (SCS). The director of the SCS provides guidelines for such work. With permission from the Office of the Provost, regular faculty of the division can also engage in personal outside research or consulting.

5. **Service**

Each faculty serves on a select few of the standing committees of the division.

F. Reward System

Every spring, the Personnel Committee of the division is required to provide an assessment of the merit of each of the faculty members in each of the categories teaching, research and service/consulting, and assign a composite score for him/her. The College of LA&S has historically used these annual merit scores to determine how much pay raise each faculty should receive.

G. Tenure & Promotion

Tenure of the faculty of the Statistics Division resides in the Department of Mathematical Sciences. Recommendations regarding tenure matters of the faculty of the Statistics Division originate in the division, move to the Department of Mathematical Science for approval, and then are forwarded to the College of LA&S. However, recommendations regarding promotions from Assistant to Associate-professorship, and Associate to Full-professorship, are forwarded directly to the College of LA&S.

H. Residential Options and Employee Benefits

The DeKalb campus of NIU is located about 65 miles west of Chicago, Illinois. Hence, the options for residence, schooling for children, etc., are too many to mention here. The closest commuter train that provides connections to a host of suburbs and downtown Chicago has a terminus in Elburn, IL, which is 15 miles east of the main campus. While a few faculty members of the division live in, and commute from, nearby towns like Creston (zip 60113), Geneva (zip 60134) and Naperville (Zip 60564), many others live in the DeKalb area itself. For information about insurance and benefits at NIU, please visit

<http://www.hr.niu.edu/ServiceAreas/InsuranceAndBenefits/Index.cfm>