

# ELIZABETH ANNE BEER

DEPARTMENT OF APPLIED MATHEMATICS & STATISTICS, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MD 21218  
BEER@AMS.JHU.EDU

**Education:** **Johns Hopkins University, Baltimore, MD**  
Master of Science in Engineering, Applied Mathematics & Statistics (May 2006)  
Candidate, Doctor of Philosophy, Applied Mathematics & Statistics (expected graduation May 2009)

**University of Nebraska–Lincoln, Lincoln, NE**  
Bachelor of Science in Mathematics (minor: Computer Science)  
Bachelor of Arts in History, Classics, and Medieval & Renaissance Studies (minor: Religious Studies)  
Graduated May 2004. GPA: 3.93/4.00

**Relevant Skills:** **Mathematics:** See Experience (below) and attached course list.  
**Computing:** Perl, L<sup>A</sup>T<sub>E</sub>X, HTML, R, Maple, MATLAB, Excel.  
**Languages:** Elementary French, German, Arabic; some exposure to Greek, Latin, Russian, Italian.

**Experience:** **Consultant**  
Technorati, Inc., San Francisco, CA, June 2006 - present

- Developing and enhancing search and serendipity applications for blog post data.
- Projects focus on using topic and link graphs to improve assessment of topical authority.

**Research Assistant**  
Center for Imaging Science, Johns Hopkins University, 2005-2006  
Department of Applied Mathematics & Statistics, JHU, 2005 (via Dissertation Research course)

- Analyzed theoretical and Monte Carlo behavior of extreme value statistics (scan statistics) on graphs.
- Reported on research for Department of Applied Math and Statistics seminar, October 2005.
- Collaborated with faculty and industry researchers at Graduate Summer School on Intelligent Extraction of Information from Graphs and High Dimensional Data, Institute for Pure and Applied Mathematics, UCLA, July 2005 (supported by Acheson J. Duncan Fund for the Advancement of Research in Statistics).

**Reseach Intern**  
Center for Computing Sciences (Institute for Defense Analyses), Bowie, MD, Summers 2003-2005

- Analyzed classified data using a variety of statistical pattern recognition methods.
- Designed and implemented algorithms in Perl and MATLAB for statistical analysis.
- Applied graph theory and matrix analysis to model networks using random dot product graphs.

**Teaching Assistant / Head Teaching Assistant**  
Department of Applied Mathematics & Statistics, Johns Hopkins University, 2004-2005  
Department of Mathematics, University of Nebraska–Lincoln, 2002

- As Head Teaching Assistant, supervised graders and teaching assistants for a large discrete math class.
- Conducted weekly discussion sections, office hours, and tutoring appointments.
- Maintained web sites for course information.

**Undergraduate Assistant**  
Nebraska Conference for Undergraduate Women in Mathematics, 2001-2004

- Maintained conference web pages, forms, and databases for participant registration and information.
- Communicated with registrants to request information, make announcements, and answer questions

**Director's Summer Program**  
National Security Agency, Summer 2002

- Designed and implemented algorithms for statistical processing of classified data.
- Obtained security clearance (maintained during IDA summer internships listed above).

**Leadership, Awards, & Honors:** National Defense Science & Engineering Fellowship (tuition & \$30,000/yr stipend, 2006-present); Co-president & webmaster, Women of Whiting (2005); Co-president, Women's Undergraduate Math Network (2002-04) ; Dean's Fellowship, Whiting School of Engineering, JHU (\$5000/yr, 2004-present); Phi Beta Kappa (2004); Rhodes Scholarship Finalist, District VI (2003); Barry M. Goldwater Scholarship (2001); UNL Regents Scholarship (full tuition, 2000-04); Peter Kiewit Distinguished Scholar Award (\$6500/yr, 2000-04); Eastman Mathematics Scholarship (\$3000/yr, 2000-04)

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## Relevant

### Coursework:

(courses in reverse  
chronological order)

#### Johns Hopkins University:

550.750, Topics in Operations Research (Applied Matching) (fall 2006)  
550.463, Network Models (fall 2006)  
550.436, Data Mining (fall 2006)  
550.770, Topics in Discrete Math (Graph Classes and Representations) (spring 2006)  
550.426, Stochastic Processes (spring 2006)  
550.630-631, Statistical Theory and Statistical Theory II (2005-06)  
550.671, Combinatorial Analysis (fall 2005)  
550.800, Dissertation Research (scan statistics on graphs) (fall & spring 2005)  
550.430, Introduction to Statistics (spring 2005)  
550.672, Graph Theory (spring 2005)  
550.661, Foundations of Optimization (fall 2004)  
550.692, Matrix Analysis (fall 2004)  
600.465, Natural Language Processing (fall 2004)

#### University of Nebraska–Lincoln:

MATH 852, Graph Theory (spring 2004)  
CSCE 230, Computer Organization (spring 2004)  
MATH 450, Combinatorics (fall 2003)  
MATH 423, Introduction to Complex Variables (fall 2003)  
CSCE 340, Numerical Analysis (fall 2003)  
MATH 445, Introduction to the Theory of Numbers (fall 2002)  
MATH 825-826, Real Analysis (first-year graduate sequence) (2001-02)  
MATH 221, Differential Equations (summer 2001)  
MATH 310-417, Introduction to Modern Algebra (2000-01)  
MATH 325, Elementary Analysis (spring 2001)  
MATH 314, Matrix Theory (fall 2000)  
MATH 398, Special Topics: Fractals & Chaos (fall 2000)  
MATH 398, Special Topics: Maple & Mathematics (fall 2000)  
MATH 398, Special Topics: Mathematics & Music (spring 2000)  
MATH 939, Algorithms in Biological Sequence Analysis  
(graduate topics course) (spring 2000)