

Daniel Birmajer

Assistant Professor of Mathematics

Nazareth College · Department of Mathematics · 4245 East Avenue · Rochester, NY 14618-3790

Phone: (585) 389-2661 · Email: abirmaj6@naz.edu

EDUCATION

Ph.D. Mathematics, Temple University, Philadelphia, PA

Degree expected by Fall 2003, under the direction of Professor Edward Letzter.

Dissertation: *Polynomial detection of matrix subalgebras.*

M.A. Mathematics, Temple University, Philadelphia, PA, May 2002

GPA: 4.0/4.0

Solid background in Math Finance and Probability Theory: Arbitrage Pricing Theory, Pricing European and American Options, Excel-implemented Numerical procedures based on the Binomial Model for Options. Continuous time stochastic analysis and martingale theory.

A year-long course in contemporary statistical methods

Licenciado en Matematicas (Licentiate in Mathematics)

University of Buenos Aires, Argentina, December 1991

GPA: 9.09/10.0

Thesis topic: Lambda calculus and compilation of functional programming languages.

WORK EXPERIENCE

Teaching Experience

Nazareth College, Rochester, NY (2003 -)

Assistant Professor, Department of Mathematics and Computer Sciences.

Temple University, Philadelphia, PA, (1998 - 2003)

College Math Instructor: Taught Calculus I and II with applications and Elementary Algebra. Recently, I have taught courses in Differential Equations and Applied Statistics, both for non majors (Summer 2002), Calculus I and Applied Statistics for actuarial science (Fall 2002).

Math instructor position in the Summer Bridge Session of the Act 101 Program of the Russell Conwell Educational Services Center. The six week Summer Bridge course is designed to help students make a smooth and successful transition from high school to college. The overall program provides a foundation for the academic and personal skills necessary for success at Temple.

Computer Experience

Designed and programmed tutorials and interactive problem sets using Perl, HTML, Java Script and Maple for Calculus on the Web (COW). COW is a web-based interactive calculus software package, hosted by the Temple University Department of Mathematics. This internet tool has been used successfully, both in traditional and on-line courses, at many institutions (including the University of Pennsylvania, the University of Massachusetts and the University of Utah, among others).

For more information please visit www.math.temple.edu/~cow.

Extensive knowledge of Perl programming, Maple, Latex, HTML and the computer algebra system Macaulay 2. Familiarity with Unix, Windows and Microsoft Office. Experience with Statistical Software S-Plus and Methods of Data Analysis.

WORK EXPERIENCE continued...

ORT High School, Buenos Aires, Argentina, (1990 - 1998)

Taught Math and Computer Science courses. Developed and taught annual courses in computer algorithms aimed to prepare academically gifted high-school students to participate in the International Olympiad in Informatics. One of my students was medal winner in Haninge, Sweden, 1994.

Tarbut High School, Buenos Aires, Argentina, (1990 - 1998)

Taught Math, Computer Science, Statistics and Scientific Models Simulation in computer.

University of Buenos Aires, Argentina, (1990 - 1998)

College Professor for courses on a wide range of subjects including Logic, Programming in Functional Languages, Calculus, Algebra and Differential Equations.

AWARDS

Project NExT Fellow 2003 -2004

Project NExT is a professional development program for new and recent Ph.D.s in the mathematical sciences. The program is designed for improving the teaching and learning of undergraduate mathematics, engaging in research and scholarship, and participating in professional activities.

Temple University, The College of Science and Technology, May 2002

Robert Gordon Memorial Award for outstanding work in the field of Algebra.

Russell Conwell Educational Services Center, August 2000

In Appreciation of Commitment and Service.

PAPERS

On subalgebras of $n \times n$ matrices not satisfying identities of degree $2n - 2$.

to appear in Linear Algebra and its Applications.

Polynomial detection of matrix subalgebras.

to appear in Proceedings of the American Mathematical Society.

Effective representation of finitely presented algebras.

to be submitted.

TALKS

An application of binomial trees for pricing a stock option

Joint Mathematics Meetings, MAA session on Applications of Mathematics in Computer Science, Phoenix, January 2004.

Finding Matrix Representations

MAA Seaway section regional meeting, Rochester Institute of Technology, November 2003.

Polynomial detection of matrix subalgebras

National Meeting of the American Mathematical Society; Baltimore, MD; invited 20 minute talk in the special session "Algebras, Actions and Algorithms" (January 2003).

An algorithmic approach to representation of finitely presented algebras

Temple University Algebra Seminar; Temple University, PA (October 2002).

Rosset's proof of the Amitsur-Levitski theorem

Temple University Candidates' Seminar; Temple University, PA (April 2002).

OTHER ACTIVITIES AND PERSONAL INFORMATION

Publications

Published articles in PC Users Argentina of several topics in programming, including: Searching and Sorting, Divide-and- Conquer Algorithms, Graph Coloring and Storage allocation.

Languages

Fluent in English and Spanish (native speaker).

Professional Activities and Affiliations

Organized the Project NExT session “Project and Activities in Upper Level Courses”, Joint Mathematics Meetings, Phoenix, Az, January 2004.

Member of the American Mathematical Society.

Member of the Mathematical Association of America, SEAWAY Section.

Family

I am married with two children.

For more information please visit my web page at www.naz.edu/pub/~abirmaj6

REFERENCES

Research & Teaching

Edward Letzter, Ph.D. advisor, Professor of Mathematics
Department of Mathematics, Temple University, (215) 204-8438.
letzter@math.temple.edu

Martin Lorenz, Professor of Mathematics
Department of Mathematics, Temple University, (215)204-5013.
lorenz@math.temple.edu

Boris Datskovsky, Professor & Director of Undergraduate Studies
Department of Mathematics, Temple University, (215) 204-7847.
bdats@math.temple.edu

Teaching Experience

Susan Riegle, Department Chair
Department of Mathematics, Nazareth College, (585) 389-2665.
smriegle@naz.edu

Jack Schiller, Professor & Department Chair
Department of Mathematics, Temple University, (215) 204-7853.
schiller@math.temple.edu

David Zitarelli, Professor of Mathematics
Department of Mathematics, Temple University, (215) 204-7844.
davidz@math.temple.edu

Expertise in Probability, Statistics and Math Finance

Wei-Shih Yang, Professor of Mathematics
Department of Mathematics, Temple University, (215) 204-1658.
yang@math.temple.edu