Dzung Minh Ha

Associate Professor
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Academic Background

June 1994 Ph. D (Mathematics), University of Toronto
Ph. D thesis: *Operators with Gaussian Distributions, L^2-entropy, and almost everywhere convergence*

June 1990 M. Sc (Mathematics), University of Toronto

December 1988 B. A. (Mathematics, Specialized Honors), York University, Toronto.

Employment History

Associate Professor, Department of Mathematics, Ryerson University, Sept 2007- present

Assistant Professor (tenure-track), Department of Mathematics, Physics, and Computer Science, Ryerson University, Sept. 2002 - 2005.

Assistant Professor (limited term), Department of Mathematics, Physics, and Computer Science, Ryerson University, Sept. 2000 - May 2002.

Contract Faculty Member, Department of Mathematics and Statistics, York University, Jan. 1999 - Sept. 2000.

Visiting Research Assistant Professor in Mathematics, The University of Toronto, Feb. 1999 - May 1999 .

Visiting Assistant Professor in Mathematics, The Middle East Technical University Ankara, Turkey, Sept. 1997 - December 1998

Mathematics Lecturer, Sultan Qaboos University, Oman, Sept. 1995 - Aug. 1997

Mathematics Instructor, University of Toronto, Sept. 1994 - May 1995

Honours and Awards

1. My book "A gentle introduction to Functional Analysis, Volume I" by Matrix Editions (June 2006) was selected as one of the Outstanding Academic titles of 2007
2. Faculty of Engineering and Architecture 2004-2005 Teaching Excellence Award
3. Postdoctoral Research Fellowship, University of Toronto, Summer 1994
4. University of Toronto Open Doctoral Fellowship, University of Toronto, 1993-1994
5. Natural Sciences and Engineering Research Council of Canada Post Graduate Scholarship, University of Toronto, 1989-1993
6. Alice Turner Award in Mathematics, York University, 1998-1989
7. York In-Course Scholarship, York University, 1988-1989
8. Moshe-Shimrat Award in Mathematics, York University, 1987-1988
9. Natural Sciences and Engineering Research Council of Canada Undergraduate Student Award, York University, Summer 1987

10. York In-course Scholarship, 1986-1987, York University

11. Moshe-Shimrat Award in Mathematics, York University, 1986-1987

12. Norman Bethune College Student Award, York University, 1985-1986

13. York In-course Scholarship, 1985-1986, York University

Mathematics Competitions

Ranked 7^{th} out of 5000 students in the Canada-wide Descartes Mathematics Contest (1985)
Ranked in the top 4 percent in the North America wide Putnam Math Competition (1987)

Research Fundings

Dean's Research Grant: $ 10 000 (2005-2006)
NSERC Research Grant : $18 000 (2002-2005)
Ryerson Publication Grant : $750 (2002)
Dean's Research Starter Grant, 2001-2002: $15,000.

Scholarly and Professional Activities

Research Interests

Almost everywhere convergence in ergodic theory; Operator Theory

Publications

I. **Books**

(A) I have been involved in a large project on completing a 3-volume treatise on Functional Analysis. The first volume has recently been published (June 2006). Most of the core writing for the remaining two volumes have been completed. However, revisions/additions of content will require quite a bit of time to carry out. Below is some more details about the first volume and tentative titles for the remaining two volumes.

Volume 1 *Functional analysis, a gentle introduction.*, Matrix Editions, Ithaca, New York.

ISBN-13: 978-0-9715766-1-2; ISBN-10: 0-9715766-1-0
640 pages, Hardcover.
Web page : http://matrixeditions.com/FunctionalAnalysisVol1.html

Volume 2 *The spectral theorem for compact normal operators on Hilbert spaces* (Approx 450 pages).

Volume 3 *Banach algebras and the spectral theorem for normal operators* (Approx 350 pages).

(B) *Analysis in Vector Spaces*, Mustafa A. Akcoglu, Paul F.A. Bartha, Dzung Minh Ha.
Published by Wiley, ISBN: 978-0-470-14824-2
web page: http://ca.wiley.com/WileyCDA/WileyTitle/productCd-0470148241.html Hardcover 480 pages
January 2009

II. **Research Papers**

(a) *Bounded linear operators with no adjoints*, with C. Grandison and A. Kushpell, in preparation.

(b) *A simple extension of Korovkin's theorem*, preprint.

(c) *Optimal SK-spline approximation and reconstruction on the torus and sphere*, with C. Grandison and A. Kushpel, International Journal of Pure and Applied Mathemnatics, Vol. 29, 2006, 469-490.

(d) *Divergence of ergodic averages along subsequences*, Acta Math. Szged Hungarian, Vol. 68, 2002, 697-703

(e) *Operators with Gaussian distribution property*, Acta Math. Szged Hungarian, Vol. 66, 2000, 47-62

(f) *Operators commuting with mixing sequences*, Illinois J. of Math. , Vol. 43 (3), 1999, 427- 446

(g) *Weighted ergodic averages*, Turkish Journal of Mathematics, Vol. 22 (1), 1998, 61-68.

(h) With M. A . Akcoglu, J. Baxter, R. L. Jones, *Approximation of L^2 processes by Gaussian processes*, New York Journal of Mathematics, Vol. 4, 1998, 75-82.

(i) With M. A. Akcoglu and R. L. Jones, *Sweeping-out property of operator sequences*, Canadian Journal of Mathematics, Vol. 49 (1), 1997, 3-23.

(j) With M. A. Akcoglu and R. L. Jones, *Divergence of ergodic averages*, Topological vector spaces, algebras and related areas (Anthony To-Ming Lau and Ian Tweddle editors), Pitman Research Notes in Mathematics, Vol. 316, 175-192.

(k) *A remark on Fourier transforms and weighted ergodic averages*, preprint.

(l) *An application of the Baires Category Theorem*, unpublished

Memberships in Professional Societies and Academic Organizations

Mathematical Association of America (MAA)

Administrative Involvement

I have been responsible for putting together a proposal for the "Master of Science in Applied Mathematics" program. The proposal has just been approved by SGS to proceed to the next stage. We are now preparing to submit our proposal to the OCGS.

In addition, I am a member of

1. Undergraduate curriculum committee
2. Research committee
3. NSSE[1] Advisory Committee
4. DAC

I am also the Library Liaison person for the Mathematics Department at Ryerson.

Teaching Experiences

I have taught a wide range of course in mathematics from first year undergrad to first year graduate level. By and large, I have received excellent evaluations from both students and colleagues. Please see the booklet *Teaching Dossier* for more details.

Courses taught at Ryerson and other institutions

First Year Level: Foundation Mathematics I, Calculus I, Introduction to Calculus, Discrete Mathematics and Logic, Applied Calculus, Statistics and Reasoning, Mathematics of Finance

[1] the National Survey of Student Engagement

Second Year Level: Calculus II, Linear Algebra I, Linear Algebra II, Calculus for Sciences and Engineering, Differential Equations, Discrete mathematical structures, Probability and Statistics

Third Year Level: Problem Solving for Maths Teachers, Introduction to Analysis, Advanced Calculus III, Complex analysis, Linear Algebra II, Number Theory

Fourth Year Level: Real Analysis I, Hilbert Space Techniques

Graduate Level: Topics in Operator Theory