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Education

A.B. in mathematics, University of Chicago, 1985.

Ph.D. in mathematics, University of California, Berkeley, 1993.

Research Interests

Classical harmonic analysis, especially weighted norm inequalities.

Research Publications

The class $L \log L$ with weights, The Madison Symposium on Complex Analysis, Contemporary Mathematics, vol. 137, AMS, Providence, 1992.

Piecewise monotonic doubling measures, dissertation (D. Sarason, advisor), Rocky Mtn. J. Math. 26 (1996), 2, 1-39.

The product of unbounded Toeplitz operators, Integral Equations Operator Theory 20 (1994), 231-237.

The structure of the reverse Hölder classes, Trans. Amer. Math. Soc. 347 (1995), 2941-2960. (Joint with C. J. Neugebauer.)

The one-sided minimal operator and the one-sided reverse Hölder inequality, Studia Math. 116 (1995), 255-270. (Joint with C. J. Neugebauer and V. Olesen.)

Norm inequalities for the minimal and maximal operator, and differentiation of the integral, Publ. Mat. 41 (1997), 577-604. (Joint with C. J. Neugebauer and V. Olesen.)

Weighted norm inequalities for a family of one-sided minimal operators, Illinois J. Math. 41 (1997), 77-92. (Joint with C. J. Neugebauer and V. Olesen.)

A new proof of the two weight norm inequality for the one-sided fractional maximal operator, Proc. Amer. Math. Soc. 125 (1997), 1419-1424.

The class $A_{\infty}^{+}(g)$ and the one-sided reverse Hölder inequality, Canadian Bulletin Math. 40 (1997), 169-173.

Weighted norm inequalities for the geometric maximal operator, Publ. Mat. 42 (1998), 239-263. (Joint with C.J. Neugebauer.)

Weighted norm inequalities for geometric fractional maximal operators, JFAA 5 (1999), 45-66. (Joint with C.J. Neugebauer and V. Olesen.)

Weighted norm inequalities for the centered maximal operator on \mathbb{R}^+ , Recherche di Mat. 48 (1999), 225-241. (Joint with C.J. Neugebauer.)

The minimal operator and the geometric maximal operator in \mathbb{R}^n , Studia Math. 144 (2001), 1-37.

Sharp two-weight, weak-type norm inequalities for singular integral operators, Math. Res. Let. 6 (1999), 417-427. (Joint with C. Pérez.)

Two weight extrapolation via the maximal operator, J. Funct. Anal. 174 (2000), 1-17. (Joint with C. Pérez.)

Two-weight, weak-type norm inequalities for fractional integrals, Calderón-Zygmund operators and commutators, Indiana Math. J. 49 (2000), 697-722. (Joint with C. Pérez.)

New proofs of two-weight norm inequalities for the maximal operator, Georgian Math. J. 7 (2000), 33-42.

The A_∞ property for Young functions and weighted norm inequalities, Houston J. Math. 28 (2002), 169-182. (Joint with A. Fiorenza.)

A new proof of weighted weak-type inequalities for fractional integrals, Comment. Math. Univ. Carolinae, 42 (2001), 481-485.

Localization and extrapolation in Lorentz-Orlicz spaces, Function Spaces, Interpolation Theory and Related Topics, M. Cwikel *et al.* Eds., de Gruyter, Berlin, 2002, 273-284. (Joint with M. Krbeč.)

Sharp error bounds for the trapezoidal rule and Simpson's rule, J. Ineq. Pure Appl. Math. 3, Issue 4, Article 49. (Joint with C.J. Neugebauer.)

Endpoint estimates and weighted norm inequalities for commutators of fractional integrals, Publ. Mat. 47 (2003), 103-131. (Joint with A. Fiorenza.)

On the two-weight problem for singular integral operators, Ann. Scuola Norm. Sup. Pisa Cl. Sci. (5) Vol. I (2002), 821-849. (Joint with C. Pérez.)

The maximal function on variable L^p spaces, Ann. Acad. Sci. Fenn. Math. 28 (2003), 223-238, and 29 (2004), 247-249. (Joint with A. Fiorenza and C.J. Neugebauer.)

Extrapolation from A_∞ weights and applications, J. Funct. Anal., to appear. (Joint with J.M. Martell and C. Pérez.)

Weighted endpoint estimates for commutators of fractional integrals, preprint. (Joint with A. Fiorenza.)

Approximate identities in variable L^p spaces, preprint. (Joint with A. Fiorenza.)

The boundedness of classical operators on variable L^p spaces, preprint. (Joint with A. Fiorenza, J.M. Martell and C. Pérez.)

The Fractional maximal operator on variable L^p spaces, preprint. (Joint with C. Capone and A. Fiorenza.)

Expository Publications

Prelim Workshop Lecture Notes, Berkeley Mathematics Lecture Notes 5, 1993.

Between the converted and the curmudgeons: another view of calculus reform, UME Trends 7, September 1995.

The relation between the root and ratio tests, Math. Mag. 70 (1997), 214-215.

Thoughts on the math wars, Trinity Mosaic, January 2000. (Joint with J. Moran.)

Fourier Analysis, translation and revision of the Spanish edition by Javier Duoandikoetxea, Amer. Math. Soc., Providence, December, 2000.

The Hardy-Littlewood maximal operator on variable- L^p spaces, Seminar of Mathematical Analysis, Universidad de Sevilla, 2003.

An elementary proof of error estimates for the trapezoidal rule, Math. Mag. 76 (2003), 303-306.

Invited Addresses

2003: Mathematical Institute of the Czech Academy of Sciences, Istituto de CNR, Naples, Italy.

2002: University of Naples (Faculty of Science), Functional Analysis Seminar, University of Sevilla.

2001: University of the Basque Country (Bilbao), New Mexico Analysis Seminar, AMS special session on harmonic analysis (Williamstown), conference co-organizer.

1999: New Mexico Analysis Seminar, Autonomous University of Barcelona, University of Naples (Faculty of Science), University of Naples (Faculty of Architecture), Mathematical Institute of the Czech Academy of Sciences;

1998: Brown University, Autonomous University of Madrid;

1997: Autonomous University of Madrid, University of Naples, SUNY Albany, Yale University, AMS special session on harmonic analysis (Albuquerque), Rutgers University;

1996: Howard University, Vassar College, Center of Communications Research-La Jolla, Williams College, University of Malaga;

1995: AMS special session on harmonic analysis (Burlington), University of California, Berkeley, New Mexico State, University of Malaga, Wabash Extra-mural Analysis Conference, University of Indiana, University of Chicago;

1994: Wabash Extra-mural Analysis Conference, Southeastern Analysis Meeting.

Positions

Research Assistant Professor, Purdue University, 1993 to 1996.

Assistant Professor, Trinity College, 1996 to 2002.

Associate Professor, Trinity College, 2002 to present.

Honors

Ford Foundation Minority Postdoctoral Fellowship, 1998-1999.

National Science Foundation Minority Graduate Fellowship, 1989-1992.

Phi Beta Kappa, University of Chicago chapter, 1984.

Professional Activities

Qualifying exam workshop, Purdue University, Summer 2001.

Mentor, New England Board of Higher Education Science Network, 1999 to present.

Research adjunct, Institute for Defense Analysis, CCR-LaJolla, Summer 1998, 2001.

Reading group on Cryptography, Trinity Center for Collaborative Teaching and Research, Spring 1999.

Invited speaker, Classical Magnet Program (Quirk Middle), 1998 to present.

Invited speaker, Classical Magnet Program (Hartford Public High), December 1997, Spring 2002.

Invited lecturer, trimester in variational problems, University of Naples, July 1997.

Invited speaker, Dean's freshman honors seminar, Purdue School of Science, October 1994.

Volunteer instructor, Minority Middle School Summer Science Program, Purdue School of Science, Summer 1994, 1995.

MARC/AIM application review committee, Purdue, 1994.

Member, Berkeley Mathematics Opportunity Committee, 1990-1993.

Instructor, Mathematics Opportunity Committee preliminary examination workshop, Berkeley, 1990-1992.

Other Information

Professed lay brother, Secular Franciscan Order.