

Michael Papadimitrakis

Curriculum Vitae

Personal

Place and date of birth: Athens, May 13, 1959.

Family: Married to Maria Spiropoulou.

With two children, Dimitris and Myrto-Aspasia.

Studies

9/1977 - 6/1981: Undergraduate, Department of Mathematics, University of Athens, Greece.

9/1981 - 3/1987: Graduate, Department of Mathematics, UCLA, Los Angeles, USA.

Doctorate

PhD: Winter 1987, Department of Mathematics, UCLA, Los Angeles, USA.

Thesis advisor: Professor John B. Garnett.

Title of thesis: *On best approximation of continuous functions by bounded holomorphic functions.*

Professional Career

Spring 1987: Lecturer, Department of Mathematics, UCLA, Los Angeles, USA.

9/1987 - 8/1990 : Van Vleck Assistant Professor, Department of Mathematics, University of Wisconsin-Madison, USA.

9/1990 - 6/1992 : Visiting Assistant Professor, Department of Mathematics, Washington University-St. Louis, USA.

9/1992 - 4/1993 : Visiting Assistant Professor, Department of Mathematics, University of Crete, Greece.

5/1993 - 10/1997 : Assistant Professor, Department of Mathematics, University of Crete, Greece.

11/1997 - present: Associate Professor, Department of Mathematics, University of Crete, Greece.

Research Interests

Functions of one complex variable, classical harmonic analysis, fourier analysis, potential theory, convex bodies.

Original Publications

1. *Best uniform approximation by bounded analytic functions.* Proc. AMS, 103 (1988)882-886.
2. *The Schrödinger-Hill equation $-\ddot{y}(x) + q(x)y(x) = \mu y(x)$; on odd potentials q .* Illinois J. of Math. 33(1989)375-383.
3. *Almost isometric maps of the hyperbolic plane.* (with J. B. Garnett) J. London Math. Soc. 43(1991)269-282.
4. *On convexity of level curves of harmonic functions in the hyperbolic plane.* Proc. AMS, 114(1992)695-698.
5. *On the Busemann-Petty problem about convex, centrally symmetric bodies in \mathbf{R}^n .* Mathematika, 39(1992)258-266.
6. *Continuity of the operator of best uniform approximation by bounded analytic functions.* Bull. London Math. Soc. 25(1993)44-48.
7. *On best uniform approximation by bounded analytic functions.* Bull. London Math. Soc. 28(1996)15-18.
8. *Extensions of a theorem of Marcinkiewicz-Zygmund and of Rogosinski's formula and an application to universal Taylor series.* (with E. S. Katsopriakis) Proc. AMS, 127(1999)2083-2090.
9. *Isotropic surface area measures.* (with A. Giannopoulos) Mathematika, 46 (1999)1-13.
10. *The Steinhaus tiling problem and the range of certain quadratic forms.* (with M. Kolountzakis) Illinois J. of Math. 46(2002)947-951.
11. *A class of non-convex polytopes that admit no orthonormal basis of exponentials.* (with M. Kolountzakis) Illinois J. of Math. 46(2002)1227-1232.
12. *Hausdorff and quasi-Hausdorff matrices on spaces of analytic functions.* (with P. Galanopoulos) Canad. J. Math. 58(2006)548-579.
13. *Hankel and Toeplitz transforms on H^1 : continuity, compactness and Fredholm properties.* (with J. Virtanen) Integral Equations and Operator Theory 61(2008)573-591.
14. *Singular oscillatory integrals on \mathbf{R}^n .* (with I. Parissis) submitted.

Teaching Experience

Lecturing

Undergraduate courses: trigonometry, linear algebra, advanced linear algebra, calculus, advanced calculus, ordinary differential equations, partial differential equations, stability of ordinary differential equations, complex analysis, group theory, number theory, statistics, optimization theory, functional analysis, Fourier series, theory of sets, real analysis, Galois theory, inequalities, Euclidean geometry.

Graduate courses: Fourier series and H^p spaces (at the University of Wisconsin-Madison), classical potential theory, spaces of holomorphic functions and harmonic measure (at Washington University), measure theory, complex analysis, spaces of holomorphic functions, theory of distributions and the Fourier transform, functional analysis, harmonic analysis (at the University of Crete).

Reading Courses

Undergraduate reading courses: Fourier series and functional analysis (at the University of Wisconsin-Madison).

Graduate reading courses: complex analysis (twice), optimization theory, Fourier transforms (twice), convex bodies, Fourier series, Fourier transforms and distributions, harmonic analysis (at the University of Crete).

Class Notes

Undergraduate courses: Optimization Theory, Complex Analysis, Fourier Series, Inequalities, Linear Algebra II, Calculus I, Analysis I, Analysis II, Number Theory, Classical Analysis (at the University of Crete).

Graduate courses: Spaces of Holomorphic Functions, Classical Potential Theory (at Washington University), Complex Analysis, Theory of Distributions and the Fourier Transform (at the University of Crete).

Thesis Supervision

Undergraduate Diploma theses:

1. *The Prime Number Theorem*, by M. Alevizaki (1999).
2. *The Theorem of Dirichlet about the Distribution of Prime Numbers in Arithmetical Progressions*, by D. Nika (1999).
3. *The Interpolation Theorems of M. Riesz and G. Thorin*, by D. Varsos (2006).
4. *The Interpolating Sequences Theorem of L. Carleson*, by D. Mavridi (2006).
5. *The Theorem of Mergelyan*, by N. Pattakos (2008).

Master's theses:

1. *Optimal Young and Brascamp-Lieb Inequalities*, by I. Stefanakis (1998).
2. *The Best Constant in the Hausdorff-Young Inequality*, by I. Parissis (2002).
3. *Historical Roots of the Integral of Stieltjes*, by F. Tsifountidou (2006).
4. *Certain topics in geometric measure theory*, by C. Chatzifountas (in preparation).

PhD theses:

- Oscillatory Integrals with Polynomial Phase*, by I. Parissis (2007).

Committee Participation

I have been in various committees of the Department of Mathematics of the University of Crete: Undergraduate Studies Committee, Graduate Committee, Graduate Admissions Committee (four times), Library Committee, six committees for the election/promotion of regular faculty members, three committees for hiring visitors and in the examining committees of six undergraduate diploma theses, four master's theses and two PhD theses.

Other Work

1. I was the scientist-in-charge of the Pythagoras II (Support of Research Groups in the Universities) project “Harmonic Analysis: Geometric Problems and Problems of Classical Spaces of Functions” (Jan. 2005 - Dec. 2007).
2. I was the scientist-in-charge of the node in Greece of the “Harmonic Analysis and Related Problems 2002-2006 IHP Network” (July 2002 - July 2006)(Contract number: HPRN-CT-2001-00273-HARP).
3. I was the scientific coordinator of the node in Crete of the INTAS project “Function Spaces and Harmonic Analysis” (June 2000 - Dec. 2002)(Reference number: INTAS 99-01080).
4. I was member of the organizing committee of the international conference “Harmonic Analysis and Related Problems” held on 19-23 June 2006 in Zaros, Greece.
5. I was member of the scientific committee of the international conference “Complex and Harmonic Analysis” held on 25-27 May 2006 in Thessaloniki, Greece.

Talks

Mathematics Departments:

1. University of Tuscaloosa, Alabama, USA (1990).
2. De Paul University, Illinois, USA (1990).
3. Orsay, Paris, France (1991).
4. Kent State University, Ohio, USA (1992).
5. University of Athens, Athens, Greece (1993).
6. Aristotle University, Thessaloniki, Greece (2003).
7. University of Edinburgh, United Kingdom (2004).
8. Aristotle University, Thessaloniki, Greece (2007).
9. University of Malaga, Malaga, Spain (2008).

Conferences:

1. Conference in Honor of W. Rudin, Madison, USA (1991).
2. Conference in the Memory of S. Pichorides, Anogia, Greece (1995).
3. Panhellenic Conference on Mathematical Analysis, Anogia, Greece (1996).
4. Second Göteborg Conference on Harmonic Analysis and PDE, Göteborg, Sweden (2001).
5. Workshop on Fourier Analysis and Convexity, Milan, Italy (2001).
6. International two-day Meeting on Complex, Harmonic and Functional Analysis and Applications, Thessaloniki, Greece (2003).
7. 11th Panhellenic Conference on Mathematical Analysis, Thessaloniki, Greece (2006).