

GEORGE ANDROULAKIS
CURRICULUM VITAE

EDUCATION

Ph.D. in Mathematics	1996
University of Texas, Austin	1990-1996
Thesis Advisor: H.P. Rosenthal	
B.S. in Mathematics	1989
University of Crete, Greece	1985-1989

ACADEMIC CAREER

Visitor	Georgia Tech	2008-2009
	Visiting: Prof. Jean Bellissard	
Associate Professor	University of South Carolina	2006-present
Assistant Professor	University of South Carolina	2000-2005
Visiting Assistant Professor	Texas A & M University	1998-2000
Postdoctoral Fellow	University of Missouri at Columbia	1996-1998

HONORS and AWARDS

NSF Workshops in Linear Analysis and Probability

Texas A&M University; College Station, TX

Invited participant

Summers: 95, 96, 97, 98, 99, 00, 01, 02, 04, 05, 08

Program on Convex geometry and Geometric Functional Analysis

Mathematical Sciences Research Institute; Berkeley, CA

Invited Participant and member of the MSRI

January 1996

Professional Development Award

University of Texas at Austin; Austin, TX

Recipient of Graduate Teaching and Research award

AY 95-96

RESEARCH

PUBLICATIONS

In preparation

- [26] G. Androulakis, K. Beanland *Embedding c_0 in the space of all operators on a dual Banach space.*
- [25] G. Androulakis, A.I. Popov, A. Tcaciuc, V.G. Troitsky, *Notes on the almost invariant half space problem.*
- [24] G. Androulakis, Th. Schlumprecht, *On the subsymmetric sequences in S .*

Submitted

- [23] G. Androulakis, N.J. Kalton, A. Tcaciuc *On Banach spaces containing ℓ_p or c_0 .*
- [22] G. Androulakis, A. Flattot, *Hyperinvariant subspace for weighted composition operator on $L^p([0, 1]^d)$.*
- [21] G. Androulakis, S.J. Dilworth, N.J. Kalton, *A new approach to the Ramsey-type games and the Gowers dichotomy in F -spaces.*

Accepted

- [20] G. Androulakis, F. Sanacory, *An extension of Schreier unconditionality.*, Positivity.
- [19] G. Androulakis, P. Dodos, G. Sirotkin, V.G. Troitsky, *Classes of strictly singular operators and their products*, Israel J. Math.

Appeared

- [18] G. Androulakis, K. Beanland, *Descriptive set theoretic methods applied to strictly singular and strictly cosingular operators*, Quaestiones Mathematicae, **31** (2008), 151-161.
- [17] G. Androulakis, F. Sanacory, *Some equivalent norms on the Hilbert space*, Banach spaces and their applications in analysis, 241–250, Walter de Gruyter, Berlin, 2007.
- [16] G. Androulakis, *A new method for constructing invariant subspaces*, J. Math. Anal. Appl. **333** (2007) 1254–1263.
- [15] G. Androulakis, K. Beanland, *A Hereditarily Indecomposable Asymptotic ℓ_2 Banach Space*, Glasgow Mathematical Journal **48** (2006) 503-532.
- [14] G. Androulakis, K. Beanland, S.J. Dilworth, F. Sanacory, *Embedding ℓ_∞ in the space of bounded operators on certain Banach spaces*, Bull. London Math. Soc. **38** (2006) 979-990.
- [13] G. Androulakis, E. Odell , Th. Schlumprecht and N. Tomczak-Jaegermann, *On the structure of the spreading models of a Banach space*, Canadian J. Math. **57** (4), (2005), 673–707.
- [12] G. Androulakis and S. Dostoglou, *Space averages and homogeneous fluid flows*, Mathematical Physics Electronic Journal, Vol. **10**, no 4 (2004), 1–12.
- [11] G. Androulakis and P. Enflo, *A property of strictly singular 1-1 operators*, Ark. Mat. **41** (2003), 233–252.
- [10] G. Androulakis, *A note on the method of minimal vectors*, Trends in Banach spaces and operator theory (Memphis, TN, 2001), Contemp. Math., (Amer. Math. Soc., Providence, RI), **321**, (2003), 29–36.

- [9] G. Androulakis and Th. Schlumprecht, *The Banach space S is complementably minimal and subsequentially prime*, *Studia Math.* **156** (3), (2003), 227–242.
- [8] G. Androulakis and Th. Schlumprecht, *Strictly singular, non-compact operators exist on the Gowers-Maurey space*, *J. London Math. Soc.* (2) **64**, no 3, (2001), 655–674.
- [7] G. Androulakis, P. Casazza and D. Kutzarova, *Some more ℓ_2 -saturated weak Hilbert spaces*, *Canad. Math. Bull.* **43**, no. 3, (2000), 257–267.
- [6] G. Androulakis and S. Dostoglou, *Positivity results for the Yang-Mills-Higgs Hessian*, *Pacific J. Math*, **194**, no. 1, (2000), 1–17.
- [5] G. Androulakis and E. Odell, *Distorting mixed Tsirelson spaces*, *Israel J. Math.* **109** (1999), 125–149.
- [4] G. Androulakis and S. Dostoglou, *On the stability of monopole solutions*, *Nonlinearity* **11** No 3 (1998), 377–408.
- [3] G. Androulakis, C. D. Cazacu and N. J. Kalton, *Twisted sums, Fenchel-Orlicz spaces and property (M)*, *Houston J. Math.* **24** No 1 (1998), 105–126.
- [2] G. Androulakis, *A counterexample to a question of R. Haydon, E. Odell and H. Rosenthal*, *Proc. Amer. Math. Soc.* **126** No 5 (1998), 1425–1428.
- [1] G. Androulakis, *A subsequence characterization of sequences spanning isomorphically polyhedral Banach spaces*, *Studia Math.* **127** No 1 (1998), 65–80.
- [0] G. Androulakis, *Isomorphically polyhedral Banach spaces and mixed Tsirelson spaces of arbitrary distortion*, Ph.D. dissertation, University of Texas, Austin, TX, 1996.

RESEARCH GRANTS

National Science Foundation DMS-9970547 <i>Isomorphic Theory of Banach Spaces</i> Principal Investigator	\$ 56,709	06/99-07/02
No cost extension of above grant		07/02-07/03
National Science Foundation DMS-9623260 NSF Young Investigator	\$ 7,000	07/98-08/98

INVITED COLLOQUIUM ADDRESSES

- | | |
|--|-------|
| 11. University of Alberta, (seminar)
<i>A simple proof of a theorem of Gowers</i> | 3/08 |
| 10. University of Crete
<i>An new proof of Gowers' dichotomy</i> | 6/07 |
| 9. University of North Texas
<i>Games in Banach spaces</i> | 10/06 |
| 8. University of Mississippi
<i>Some Ramsey type results in Banach spaces</i> | 04/04 |
| 7. East Carolina University
<i>Spreading models in Banach spaces</i> | 10/00 |

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| 6. University of South Carolina | 03/00 |
| <i>Towards a positive solution of the invariant subspace problem in Banach spaces</i> | |
| 5. Kent State University | 03/00 |
| <i>Existence of strictly singular non-compact operators in Hereditarily Indecomposable Banach spaces</i> | |
| 4. Miami University of Ohio | 02/00 |
| <i>On the stability of Yang-Mills-Higgs Hessian</i> | |
| 3. Bowling Green State University | 02/00 |
| <i>On a question of Gowers and Maurey</i> | |
| 2. University of Texas; San Antonio | 10/99 |
| <i>New classes of weak Hilbert spaces</i> | |
| 1. Miami University of Ohio | 09/97 |
| <i>Distortion of Banach spaces</i> | |

INVITED CONFERENCE ADDRESSES

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|---|-------|
| 27. International Conference on Interdisciplinary Mathematical and Statistical Techniques
Memphis, TN | 5/07 |
| <i>A new approach to Ramsey-type results in F-spaces</i> | |
| 26. AMS Regional Meeting: Special Session on Vector Measures
Miami, OH | 03/07 |
| <i>Some of my favourite problems and related results on spaces of operators</i> | |
| 25. Conference in honor of N.J. Kalton's 60th birthday
Miami University at Ohio | 05/06 |
| <i>The invariant subspace problems in Banach spaces</i> | |
| 24. AMS Regional Meeting: Special Session on Banach spaces and applications
Florida International University | 04/06 |
| <i>Some operator ideals and their products</i> | |
| 23. Workshop in Linear Analysis and Probability
Texas A & M University | 08/05 |
| <i>A new method for constructing invariant subspaces</i> | |
| 22. Workshop in Linear Analysis and Probability
Texas A & M University | 08/05 |
| <i>Gowers' trichotomy in F-spaces</i> | |
| 21. AMS Regional Meeting: Special Session on spaces of vector valued functions
Atlanta, GA | 01/05 |
| <i>Some remarks about the Invariant subspace problem</i> | |
| 20. Workshop in Linear Analysis and Probability
Texas A & M University | 08/04 |
| <i>Embedding ℓ_∞ in the space of all operators</i> | |
| 19. AMS Regional Meeting: Special Session on Recent trends in Banach spaces
Athens, OH | 03/04 |
| <i>Banach spaces which admit homogeneous measures</i> | |

18. Workshop on Banach spaces and Ramsey Theory 02/03
Fields Institute, Toronto, Canada
Constructing hyper-invariant subspaces of certain operators in Banach spaces
17. Workshop in Geometric Functional Analysis 08/02
University of British Columbia, Vancouver, Canada
A new sufficient condition for the existence of invariant subspaces
16. AMS Regional Meeting: Special Session on Banach spaces and applications 03/02
Georgia Institute of Technology
A property of strictly singular 1-1 operators
15. Conference on “Trends on Banach spaces and Operator Theory” 10/01
University of Memphis
A note on the method of minimal vectors,
14. Workshop in Linear Analysis and Probability 08/00
Texas A & M University
Strictly singular non compact operators
13. AMS Regional Meeting: Special Session on Banach and Operator Spaces 08/99
University of Texas, Austin
Subsymmetric sequences in Schlumprecht space
12. Workshop in Linear Analysis and Probability 08/99
Texas A & M University
Candidates for prime Banach spaces
11. Workshop in Geometric Functional Analysis 07/99
University of British Columbia, Vancouver, Canada
The Banach space S is subsequentially prime
10. Workshop in Linear Analysis and Probability 08/98
Texas A & M University
New ℓ_2 saturated weak-Hilbert spaces
9. AMS Regional Meeting: Special Session on Banach spaces 03/98
University of Louisville
Twisted sums of Orlicz spaces
8. AMS Regional Meeting: Special Session on Banach spaces and Wavelets 10/97
Georgia Institute of Technology
Spectral analysis of Yang-Mills-Higgs functionals
7. Workshop in Linear Analysis and Probability 08/97
Texas A & M University
On the spectrum of Quadratic forms
6. Wabash Extramural Modern Analysis Mini-conference 10/96
Indiana University- Purdue University at Indianapolis
A subsequence characterization of sequences spanning isomorphically polyhedral Banach spaces
5. Workshop in Linear Analysis and Probability 08/96
Texas A & M University
Isomorphically polyhedral Banach spaces

4. AMS Regional Meeting: Special Session on Banach spaces and related topics 06/96
University of Missouri, Columbia
Distorting mixed Tsirelson spaces
3. Concentration on Infinite-dimensional Convex Geometry 02/96
Mathematical Sciences Research Institute, Berkeley
The ℓ_1 index as an invariance for distortion
2. Workshop in Linear Analysis and Probability 07/95
Texas A & M University
Estimates of the ℓ_1 index for some mixed Tsirelson spaces
1. AMS Annual Meeting: Special Session in Banach space Theory 01/93
University of Texas, San Antonio
On a question of R. Haydon, E. Odell and H. Rosenthal

**REFEREE FOR PROFESSIONAL JOURNALS, MANUSCRIPTS
AND GRANT PROPOSALS**

33. Collectanea Math. 2008
32. Studia Mathematica
31. Journal of Mathematical Analysis and Applications
30. National Science Foundation proposal review
29. Abstract and Applied Analysis
28. Proceedings of the American Mathematical Society
27. Discovery Grant for NSERC (National Sciences and Engineering Research Council of Canada)
26. Houston Journal of Mathematics
25. Proceedings of the American Mathematical Society
24. Journal of Functional Analysis 2007
23. Proceedings of the American Mathematical Society
22. Conference Proceedings in honor of N.J. Kalton
21. Canadian Journal of Mathematics 2006
20. Archiv der Mathematik
19. International Journal of Mathematics and Mathematical Sciences 2005
18. Journal of Function spaces and Applications 2004
17. Indiana University Mathematics Journal
16. Research and productivity Scholarship awards, USC
15. Proceedings of the American Mathematical Society 2003
14. Proceedings of the American Mathematical Society
13. Proceedings of the Royal Society of Edinburgh
12. International Journal of Mathematics and Mathematical Sciences
11. Israel Science Foundation
10. Proceedings of the American Mathematical Society 2002
9. Proceedings of the Royal Society of Edinburgh
8. Journal of Functional Analysis
7. Contemporary Mathematics: Trends in Banach spaces and Operator Theory
6. Journal of Australian Mathematical Society
5. National Research Council 2001

4. Prentice Hall
3. International Journal of Mathematics and Mathematical Sciences
2. Far East Journal of Mathematical Sciences 2000
1. Journal of Functional Analysis

REVIEWER FOR MATHEMATICAL REVIEWS

26. Contemporary Mathematics 2008
25. Archiv der Mathematik
24. Studia Mathematica
23. J. London Math. Soc. 2007
22. RACSAM Rev. R. Acad. Cienc. Exactas Fis. Nat. Ser. A Mat.
21. Bull. Cl. Sci. Math. Nat. Sci. Math.
20. J. Korean Math. Soc. 2006
19. J. Funct. Anal. 2005
18. Israel J. Math.
17. Math. Rep. (Bucur.)
16. Chinese Ann. Math. Series B
15. Hokkaido Mathematical Journal 2004
14. Sequences spaces and Applications 2003
13. Bull. Fac. Educ. Utsunomiya Univ.
12. Nonlinear Functional Analysis and Applications 2002
11. Acta Math. Hungar.
10. Set Valued Analysis
9. Bull. Australian Mathematical Society
8. Extracta Math. 2001
7. Nonlinear Funct. Anal. Appl.
6. Comment. Math. Univ. Carolinae
5. Israel Journal of Mathematics 1999
4. Contemporary Mathematics
3. Functional Analysis, Conference proceedings, Narosa, New Delhi 1998
2. Functional Analysis, Conference proceedings, Narosa, New Delhi
1. Atti Sem. Mat. Fis. Univ. Modena

BOOK REVIEWS

3. *Calculus*, Anton, Bivens, Davis, Editor: Wiley (8th edition). 2006
2. *Ramsey methods in Analysis*, S.A. Argyros, S. Todorcevic, Editor: Birkhauser. 2005
1. *Calculus*, J. Rogawski, Editor: Freeman, to appear.

OTHER RESEARCH GRANTS APPLIED

- | | |
|--|------|
| National Science Foundation | 2007 |
| DMS-0802784 | |
| <i>Set theory and topology methods for Banach spaces and operators</i> | |
| Principal Investigator | |
| National Science Foundation | 2006 |
| DMS-0701152 | |

The richness of the space of operators on a Banach space
 Principal Investigator
 National Science Foundation 2005
 DMS 0600886

Invariant subspaces and the space of all operators
 Principal Investigator USC Research and Productivity Award 2005
Examining the structure of the space of all operators
 Principal Investigator
 Co-Principal Investigator-Sponsor: Prof. M. Girardi
 National Science Foundation 2004
 DMS-0500843

The geometry of the space of all operators
 Principal Investigator
 National Science Foundation 2003
 DMS-0404532

The geometry of the space of operators and related properties of the underlying Banach space
 Principal Investigator
 USC Research and Productivity Award 2003
The Invariant subspace problem
 Principal Investigator

National Science Foundation 2002
 DMS-0301277
New geometric aspects of Banach space theory
 Principal Investigator

National Science Foundation 2001
 DMS-0200654
Operators on Banach spaces and spreading models
 Principal Investigator

TEACHING

COURSES TAUGHT AT USC

TERM	COURSE	COURSE TITLE	ENROLLMENT	Class Avg.	Student Evaluations	
					G.A.	DEPT.
Spring 08	Math 141	Calculus I	28 + 25	1.85	3.8/5	
	Math 242	Diff. Equations	37	1.85	4.4/5	
Fall 07	Math 524	Nonlinear Optim.	16	1.97	3.2/5	
	Math 141	Calculus I	30 + 30	2.23	3.5/5	
Spring 07	Math197X	Research & Careers	10	N/A	Not Obtained	
	Math 757	Funt. An. II	5	4	4	
Fall 06	Math 142	Calculus II	26+24	2.15	2.9	
	Math 756	Funct. An. I	8	4	3.3	
	Math 890	Graduate Sem.	1	S	-	
	Math 899	Dissertation	1	T	-	
Spring 06	Math 241	Vector Calculus	45	2.44	2.87	
	Math 550	Vector Analysis	15	2.29	3.15	
	Math 899	Dissertation	2	T	-	
Fall 05	Math 142	Calculus II	26+25	1.99	3.05	3.02
	Math 242	Elem. Diff. Eq.	51	2.31	3.167	3.02
	Math 890	Grad. Sem.	1	S	-	
	Math 899	Dissertation	2	T	-	
Sum. II 05	Math 899	Dissertation	2	T	-	
Spring 05	Math 704	Real Analysis	16	3.16	2.81	3.09
	Math 890	Grad. Sem.	2	S	-	
	Math 899	Dissertation	2	T	-	
Fall 04	Math 141	Calculus I	26+24	1.94	2.36	2.86
	554-703I H	Analysis I	10	3.25	3.8	2.86
	Math 890	Grad. Sem.	2	S	-	
	Math 899	Dissertation	2	T	-	
Sum. II 04	Math 798	Dir. Read. Res.	1	4	-	
Spring 04	Math 544H	Linear Alg.	13	3	2.7	2.94
	Math 757	Funct. An. II	5	4	3.8	2.94
Fall 03	Math 142H	Calculus II	25	2.48	3.3	2.87
	Math 756	Funct. An. I	6	4	4	2.87
Spring 03	Math 704	Compl. An.	5	3.3	3.00	2.98
Fall 02	Math 141	Calculus I	31+35	2.52	3.53	3.01
	Math 703	Real Analysis	10	3.61	2.33	3.01
Spring 02	Math 142	Calculus II	31	2.48	3.63	3.00
	Math 554	Analysis I	11	1.86	3.50	3.00

					Student Evaluations		
TERM	COURSE	COURSE TITLE	ENROLLMENT	Class Avg.	G.A.	DEPT.	
Fall 01	Math 141	Calculus I	26+33	2.00	2.88	2.95	
	Math 241	Calculus III	33	2.09	2.47	2.95	
Spring 01	Math 142	Calculus II	25+35	2.46	3.33	3.21	
	Math 550	Vector An.	14	2.00	2.85	3.21	
Fall 00	Math 141	Calculus I	32+35	2.28	3.08	2.86	

POSTDOCTORAL FELLOW ADVISOR

Dr. Bünyamin Sari; AY 2004-2005 (co-advised by Prof. S.J. Dilworth)

Dr. Antoine Flattot, AY 2006-2008

GRADUATE STUDENT RESEARCH SUPERVISION

Ph.D. Advisor

Kevin Beanland; graduated in 08/06

Frank Sanacory; graduated in 06/07

SERVICE

USC COMMITTEES

DEPARTMENT

Committee for writing and grading the graduate analysis qualifying exam

12/02, 8/03, 8/05, 1/06, 1/07

Masters theses committee

01 (for Joseph Patterson), 04 (for Geoffrey Dillon)

Calculus Textbook Committee

03-04, 04-05

Graduate Advisory Council

Spring 06, 06-07, 07-08

Undergraduate Advisory Council

02-03, 03-04

Chair of the Committee of tenured faculty

4/15/07-4/15/08

Chair of the Colloquium Committee

00-01

Faculty Mentor (for Antoine Flattot)

Faculty Advisory Committee

01-02, 02-03, 04-05, 06-07

Physical Facilities Committee

01-02

Undergraduate Advisor

00-01, 01-02, 02-03, 03-04, 04-05, 05-06

Post tenure review committee

06-08

Textbook Committee

04-05

UNIVERSITY

Faculty Senate

03-06

OTHER SERVICE TO USC

Visited and provided feedback on TA taught classes at the request of the Graduate Director: 2004, 2005, 2006, 2007, 2008.

Reference letters written for students: 2001 (1 letter), 2004 (2 letters), 2005 (7 letters), 2006 (4 letters), 2007 (2 letter), 2008 (2 letter).

EXTERNAL SERVICE

Referee for 13 research papers

Reviewer for 3 research grant proposals

Reviewer for 3 books

Regular reviewer for Mathematical Reviews where I have reviewed 17 papers

Reviewer for 1 paper for Math Zentralblatt

CONFERENCE ORGANIZING COMMITTEES

AMS Regional Meeting: Special Session on Banach spaces

03/16/01-03/18/01

University of South Carolina at Columbia

co-organizer with Professors S.J. Dilworth and M. Girardi