<u>Curriculum Vitae</u>

Boris Shekhtman

SCHOOL ADDRESS

MATHEMATICS
Arts & Sciences
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PERSONAL AND CONTACT INFORMATION

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EDUCATIONAL QUALIFICATIONS

Year	Degree	Major	Institution	Comments
1980	Ph.D.	Mathematics	Kent State University	
1976	M.S.	Mathematics	Tartu State University	

ACADEMIC EXPERIENCE

Year	Academic Title	Institution	Comments
08/1993	Professor	University of South Florida	
08/1993-12/1993	Visiting Professor	University of California-Riverside	
08/1986-07/1993	Associate Professor	University of South Florida	
08/1983-07/1986	Visiting Assistant Professor	University of California-Riverside	
08/1981-07/1983	Visiting Assistant Professor	University of Southern California	
08/1978-07/1979	Teaching Assi(s)38252 re96.7 11.52		

JOURNAL PUBLICATIONS

In preparation

Submitted:

Published and accepted for publication

1. Boris Shekhtman and Tom McKinley, Polynomials with Vanishing Hessians and some density problems. Approximation theory XV, to appear

2. Boris Shekhtman and Tom McKinley, On a problem of Pinkus and Wajnryb regarding density of multivariate polynomials, Proc of AMS, Volume 145, Number 1 (2017) pp. 185ô 190.

3. Shekhtman Boris , On one class of Hermite projector, Constructive Approximation, vol. 44 (2016), pp. 297ô 311. **DOI: 10.1007/s00365-015-9311-5.**

4. Shekhtman Boris, On regularity of generalized Hermite interpolation Computer Aided Geometric Design (2016), pp. 134-139, DOI information: 10.1016/j.cagd.2015.12.006

5. Shekhtman Boris and L. Skrzypek, On a Characterization of Hilbert Spaces through minimality of orthogonal projections and related topics, JCAAM,(2015) Vol 13, No 3 4, 322 329.

6. Shekhtman Boris and Tatyana Sorokina, Intrinsic Supersmoothness, JCAAM,(2015) Vol 13, No 3 4, 232--241

7. Shekhtman Boris, One characterization of Lagrange projectors. Approximation theory XIV, San Antonoi 2013, Springer (2014), pp. 335--341.

8. Shekhtman Boris and L. Skrzypek. Minimal Versus Orthogonal Projections onto Hyperplanes

16. Shekhtman Boris, On non-existence of certain error formulas for ideal interpolation, Journal of Approximation Theory, 162 (2010) 1398 1406
17. W-X, Ma, Shekhtman, Boris, Do the chain rules for matrix functions hold without commutativity? , 58, Vol. 58, No 1, (2010), 79ô 87.
18. McKinly T and Boris Shekhtman, On simultaneous block- diagonalization of cyclic commuting matrices, *LAMA*, Vol. 58, No. 2, (2010), 245 256.
19. Shekhtman Boris, A taste of ideal interpolation, *Journal of Concrete and Applicable Mathematics*, VOL.8, NO.1, (2010), 125ô 149.
20. Shekhtman Boris, Skrzypek, L., On uniqueness of Fourier projections in Lp spaces, *Journal of Concrete and Applicable Mathematics*, VOL.8, NO.3, (2010), 439 447.
21. Shekhtman Boris, Skrzypek, L., Non-Uniqueness of minimal projections in Lp, *Journal of Approximation Theory*, 161, (2009), 23ô 34.
22. McKinly T and Boris Shekhtman, What do real ideal projectors interpolate, *Nonlinear Analysis* Series A: Theory, Methods & Applications, 71, (2009), 2457 2461.
23. Shekhtman Boris, Ideal Interpolation, Translations to and from Algebraic Geometry, in *Approximate Commutative Algebra, "Texts and Monographs in Symbolic Computation"*, Springer-Verlag, 2009, 163ô 189.
24. Shekhtman Boris, Some tidbits on ideal projectors, commuting matrices and their applications, *ETNA, Elec. Trans. Numer. Anal*., 36(2009), 17ô 26
25. Shekhtman Boris, On the limits of Lagrange projectors, Constructive Approximation, 29, (2009), 293 301.
26. Shekhtman, Boris, On a conjecture of Tomas Sauer regarding nested ideal interpolation, *Proc. Amer. Math. Soc.* **137** (2009), 1723-1728.
27. De Boor, C, Shekhtman, Boris. On the pointwise limits of bivariate Lagrange projectors, *LAA*, 429 (2008), 311--325.
28. Shekhtman, Boris. Bivariate ideal projectors and their perturbations., *Advances in Compt. Mathematics*, Volume 29, (2008), 207--228
29. Shekhtman, Boris, On error formulas for multivariate polynomial interpolation, Approximation Theory XII, San Antonio 2007, (M. Neamtu and L, Schumaker eds.) Nashboro Press 2008, 386--397.
30. Shekhtman, Boris., W-X, Ma, Linear System arising from a Polynomial Problem . *Chinese Annals of Mathematics*, *Chin. Ann. Math, Volume 28B, number 3, (2007), 283—292*
31. Shekhtman, Boris. Perturbations of Ideal Complements. In *Banach Spaces and their Applications in Analysis*, B. Randrianantonina and N. Randrianantonina eds. De Gruyter, Berlin-New York (2007), 413--422
32. Shekhtman, Boris. On a Problem of Carl de Boor regarding the limits of Lagrange Projectors . *Constructive Approximation*, Volume 24, Number 3 / 2006, 365 370.
33. Shekhtman, Boris., Skrzypek, L. Geometric aspects of minimal projections onto planes . Constructive Theory of Functions, Varna 2005 (B.D. Bojanov ed.)*, Martin Drinov Academic Publishing House, (2006), 267 277*.
34. Shekhtman, Boris. On one question of Ed Saff . *ETNA*, Elec. Trans. Numer. Anal., Vol 25, (2006), 439-445
35. Shekhtman, Boris., Skrzypek, L. Norming points of Orthogonal projections . *Abstract and Applied Analysis*, vol. 2006, Article ID 42305, 17 pages.
36. Shekhtman, Boris. On a Naive Error Formula for Multivariate Interpolation. *Splines and Wavelets*, Wavelets and Splines, Athens 2005, Mod. Methods Math., (2006), 416--427
37. Shekhtman, Boris., Rakhmanov, E. Discrete norms of Polynomials on the Circle. *Journal of approximation theory*, (2006), no. 1-2,n0 1-2 2 7

38. Shekhtman, Boris., Uniqueness of Tchebysheff subspaces and their ideal relatives, Frontiers in Interpolation and Approximation, *Pure and Applied Mathematics* , *Chapman&Hall, (2006), 407—425*

39. Shekhtman, Boris. " Ideal projections onto planes. " *Approximation theory XI: Gatlinburg 2004 Mod. Methods Math., Nashboro Press, Brentwood, TN, 2005.* (2005): 395-404

40.

58. Shekhtman, Boris, and Ivan Ivanov. "Linear discrete operators and recovery of functions." *Approximation theory IX, Vol. I. (Nashville, TN, 1998), Innov. Appl. Math., Vanderbilt Univ. Press, Nashville, TN* (1998): 157-164.

59. Shekhtman, Boris. "On the discrete norms of polynomials." *Approximation theory IX, Vol. I. (Nashville, TN, 1998), Innov. Appl. Math., Vanderbilt Univ. Press, Nashville, TN* (1998): 303-307.

60. Shekhtman, Boris, and B. L. Chalmers. "Actions that characterize $l_\hat{\sigma}$." *Linear Algebra Appl.* (1998): 155-169.

61. Shekhtman, Boris, W. Edwin Clark, and Gregory L. Mccolm. "An application of spanning trees to k-point separating families of functions." *J. London Math. Soc. (2)*

78. Shekhtman, Boris. "Duality principle in linearized rational approximation." *Methods of approximation theory in complex analysis and mathematical physics (Leningrad, 1991), Lecture Notes in Math., Springer, Berlin* 1550 (1993): 173-177.
79. Shekhtman, Boris, and P. Borwein. "The density of rational functions in Markov systems: a counterexample to a conjecture of D. T. Newman." *Const. Approx.* 9:1 (1993): 105-110.
80. Shekhtman, Boris, and G. Gierz. "On Archimidian ordered vector spaces and a characterization of simplices." *Proc. Amer. Math. Soc.* 116:2 (1992): 369-375.
81. Shekhtman, Boris. "Discrete approximating operators on function algebras." *Constr. Approx.* 8:3 (1992): 371-377.
82. Shekhtman, Boris. "Some examples concerning projection constants." *Approximation theory, spline functions and applications, (Maratea, 1991), NATO Adv. Sci. Inst. Ser. C Math. Phys. Sci., Kluwer Acad. Publ., Dordrecht* 356 (1992): 471-476.
83. Shekhtman, Boris, B. L. Chalmers, and K. C. Pan. "A strategy for proving extensions of the 4/3 conjecture." *Approximation theory (Memphis, TN, 1991), Lecture Notes in Pure and Appl. Math., Dekker, New York* 138 (1992): 207-215.
84.

100.   Shekhtman, Boris, and G. Gierz. "Non-linear Approximation from a Hyperplane: Rational Approximation versus Product Approximation". Approximation Theory V, Academic Press (1986). p.347-350

101.   Shekhtman, Boris, and D. J. Newman. "A Losynski-Kharshiladze theorem for Muntz polynomials." *Acta Math. Hungar.* 45:3-4 (1985): 301-303.

102.   Shekhtman, Boris, and Bruce L Chalmers. "Minimal projections and absolute projection constants for regular polyhedral spaces." *Proc. Amer. Math. Soc.* 95:3 (1985): 449-452.

Editor of: Journal of Applied Functional Analysis,
Editor of: Journal of Abstract and Applied Analysis,

Referee for 17 leading journals in mathematics.

Ph. D. students:

K. C. Pan (1990), I. Ivanov (1992), R. Taylor (2007), D. Prokhorov (in progress), T. McKinley (in progress)
Member of over 30 Ph. D. committees.

TEACHING AND RESEARCH INTERESTS

Approximation Theory and Classical Analysis
Algebraic Geometry
Functional Analysis
Harmonic Analysis
Linear Algebra
Graph Theory

Contracts and Grants from FAST

Proposal Title Projections in Approximation Theory, $15, 000, NSF, 06/1981-07/1982
Proposal Title Cooperative research USF-Inria (France), $25, 000, NSF-FR, 06/1996-07/1996
Proposal Status Description : Declined by Sponsor
Proposal Begin Date : 05/01/08   **Proposal End Date** : 04/30/11

GOVERNANCE/COMMITTEES

Year	Name of Committee	Role	Institution
05/2008-09/2009	New Appointments Committee	Member	USF
08/2007-05/2008	Library Committee	Member	USF, Department of Mathematics and Statistics
2007	member college of arts and sciences		
08/2006-05/2008			

08/1979-05/1980	University Fellowship, Kent State University
01/1976	Republic prize for the best diploma in Mathematics, Tallin, USSR
01/1974	Medal of Estonian Students Math. Society, Tartu, USSR