

CURRICULUM VITÆ

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DMITRY GOKHMAN

Associate Professor, Department of Mathematics,
The University of Texas at San Antonio, San Antonio, Texas 78249
1 210 458 5697 · gokhman@math.utsa.edu · <http://zeta.math.utsa.edu/~gokhman>

Academic Training

1974–1975: Coral Gables Senior High School; Diploma 1975
1975–1979: University of Miami, Coral Gables; B.Sc. Mathematics *Summa Cum Laude*, Dept. Honors, 1979
1980–1990: University of California at Berkeley; Ph.D. Mathematics, Advisor: Maxwell Rosenlicht

Work Experience

Academic Positions:

1985: Acting Instructor, University of California at Berkeley
1991: Visiting Scholar, Massachusetts Institute of Technology
1991–1997: Assistant Professor, University of Texas at San Antonio
2000–2001: Visiting Associate Professor, University of Michigan, Ann Arbor
1997–present: Associate Professor, University of Texas at San Antonio
2006–2007: Associate Dean for Academic Affairs, College of Sciences, University of Texas at San Antonio

Industrial Positions:

1986–1988: Senior Software Engineer, Guzik Technical Enterprises, Sunnyvale, California
1989: Consultant, Guzik Technical Enterprises (magnetic media analysis), San José, California
1990–1991: Senior Researcher, Fluid & Power Research Institute, San Francisco, California
1992: Consultant, Galactic Technologies, Inc. (signal processing), San Antonio, Texas
1994: Consultant, Southwest Research Institute (finite element software), San Antonio, Texas

Honors and Awards

1976–1979: University of Miami Physics Department Scholarship
1979–1980: Eastman-Kodak Scholarship
1980–1981: University of California Regents Fellowship
1982–1983: University of California Regents Fellowship
1984: University of California at Berkeley Junior Specialist
1996: University of Texas at San Antonio International Development Grant
1999: Faculty Excellence Award for Excellence in Teaching from UTSA students and disability services
2003: The Amber award for outstanding contribution and service to students from the UTSA Ambassadors
2003: Faculty Excellence Award for Excellence in Teaching from UTSA students and disability services
2006: President's Distinguished Achievement Award in recognition of teaching excellence

Grants

1993–1994: Co-principal investigator, *The Effect of Disease on Signal Processing Characteristics of the Human Visual System*, U.S. Department of the Air Force, Brooks Air Force Base, San Antonio, Texas and Conceptual Mindworks, Inc., San Antonio, Texas
1995: Sole investigator, *Highly Accurate Numerical Methods for Fluid Flow*, University of Texas at San Antonio Faculty Research Award
2006–2011: Co-principal investigator, *Undergraduate Mathematics and Biology scholars program*, National Science Foundation

Bibliography

Refereed Journal Articles:

1. D. Gokhman, *An asymptotic existence theorem in \mathbf{C} for the Riccati equation*, Complex Variables, **24**:145–159 (1994)
2. D. Gokhman, *Regular growth of solutions of the Riccati equation $W' + W^2 = e^{2z}$ in the complex plane*, Complex Variables, **27**:365–382 (1995)
3. D. Gokhman, *Limits in differential fields of holomorphic germs*, Complex Variables, **28**:27–36 (1995)
4. A. Gokhman, D. Gokhman, *A high-precision algorithm for axisymmetric flow*, Mathematical Problems in Engineering: Theory, Methods and Applications, **1**:11–25 (1995)
5. D. Gokhman, *Differentially transcendental formal power series*, Complex Variables, **29**:41–44 (1996)
6. D. Gokhman, *Functions in a Hardy field not ultimately C^∞* , Complex Variables, **32**:1–6 (1997)
7. A. Gokhman, D. Gokhman, *Boundary Element Method for Internal Axisymmetric Flow*, Mathematical Problems in Engineering: Theory, Methods and Applications, **5**:55–81 (1999)
8. M. L. Zeeman, D. Gokhman, W. Weckesser, *Resonance in the menstrual cycle: a new model of the LH surge*, Reproductive BioMedicine Online, **7**:295–300 (2003)
9. D. Gokhman, *Topologies for hybrid systems*, Nonlinear Analysis: Hybrid Systems and Applications **2**:468–473 (2008)
10. A.L. Morales, O. Acevedo, M. Martinez, D. Gokhman, C. Corredor, *Functional discrimination of sea anemone neurotoxins using 3d-plotting*, Central European Journal of Biology **4**(1):41–49 (2009)
11. G. Aliev, H. Palacios, A. Aguirre, G. Pacheco, E. Gasimov, L. Morales, D. Gokhman, M. Obrenovich, V. Bragin, A. Solis, J. Leszek, *Oxidative stress induced mitochondrial failure and cellular hypoperfusion: implication in the pathogenesis of Alzheimer disease*, Psychogeriatrics Polska **6**(4):155–179 (2009)
12. G. Aliev, H. Palacios, E. Gasimov, M. Obrenovich, L. Morales, J. Leszek, A. Solis Herrera, D. Gokhman, *Oxidative stress induced mitochondrial failure and vascular hypoperfusion as a key initiator for the development of Alzheimer disease*, Pharmaceuticals **3**(1):158-187 (2010)
13. G. Aliev, H. Palacios, E. Gasimov, D. Gokhman, J. Leszek, M. Obrenovich, V. Bragin, A. Solis Herrera, *Targeting oxidative stress-induced brain hypometabolism and brain mitochondrial failure as new and effective strategies for the prevention and treatment of cognitive decline in elderly demented/depressed patients and those with Alzheimer's disease: new scents on the trail?*, Alzheimer's & Dementia **6**(4):doi:10.1016/j.jalz.2010.05.1973 (2010)
14. G. Aliev, H. Palacios, E. Gasimov, D. Gokhman, J. Leszek, L. Morales, M. Obrenovich, V. Bragin, A. Solis Herrera, *Oxidative stress-induced mitochondrial failure and brain hypometabolism underlay the pathophysiology of Alzheimer's disease and offer target for treatment: Astonishing effect of melanin and mitochondrial antioxidants*, Alzheimer's & Dementia **6**(4):doi:10.1016/j.jalz.2010.05.1982 (2010)
15. G. Aliev, K. Gasiorowski, H. Palacios, D. Gokhman, V. Shadlinski, V. Bragin, J. Leszek, *Oxidative stress-induced mitochondrial DNA overproliferation and deletion, cellular hypoperfusion and brain hypometabolism in the context of Alzheimer's disease: past, present and future*, Alzheimer's & Dementia **7**(4):doi:10.1016/j.jalz.2011.05.887 (2011)
16. G. Aliev, H. Palacios, B. Bhushan, K. Gasiorowski, D. Gokhman, V. Shadlinski, V. Bragin, J. Leszek, *Oxidative stress induced mitochondrial DNA overproliferation and deletion, cellular hypoperfusion and brain hypometabolism in the context of cerebrovascular and Alzheimer disease*, Psychogeriatrics Polska **8**(1):23–30 (2011)
17. M. Obrenovich, K. Gasiorowski, H. Palacios, D. Gokhman, V. Shadlinski, V. Bragin, J. Leszek, G. Aliev, *Selective loss of GRK2 regulation and its consequences: cerebrovascular complications and Alzheimer disease*, Psychogeriatrics Polska **8**(3–4):81–98 (2011)
18. H. Palacios, B. Yendluri, K. Parvathaneni, V. Shadlinski, M. Obrenovich, J. Leszek, D. Gokhman, K. Gasiorowski, V. Bragin, G. Aliev, *Mitochondrion-specific antioxidants as drug treatments for Alzheimer disease*, CNS & Neurological Disorders — Drug Targets **10**(2):149–162 (2011)

Refereed Conference Proceedings:

1. H. Longbotham, W. Richardson, D. Gokhman, *Design of optimal linear operators for the Haar basis*, Proceedings of the International Conference “Wavelets and Applications” Toulouse, France — June 1992, eds: Y. Meyer, S. Roques, Editions Frontieres, Gif-sur-Yvette, pp. 593–597 (1993)
2. W. Richardson, H. Longbotham, D. Gokhman, *Multiscale Wavelet Analysis of Mammograms*, Proceedings of the International Conference “Wavelets and Applications” Toulouse, France — June 1992, eds: Y. Meyer, S. Roques, Editions Frontieres, Gif-sur-Yvette, pp. 599–608 (1993)

Book Chapters:

3. G. Aliev, H. Palacios, M. Obrenovich, D. Gokhman, K. Gasiorowski, J. Leszek, V. Bragin, *Oxidative stress induced vascular hypoperfusion, mitochondrial failure are missing links for the development Alzheimer disease*, Vascular Dementia: Risk Factors, Diagnosis and Treatment, ed: S. Jacobsen, Nova Science Publishers, Chapter II: 49–78 (2011)
4. G. Aliev, H. Palacios, D. Gokhman, K. Gasiorowski, V. Bragin, J. Leszek, M. Obrenovich, *GRK2 overexpression is a primary hallmark of vascular hypoperfusion and mitochondrial lesions during early Alzheimer disease: new target for drug treatment?*, Vascular Dementia: Risk Factors, Diagnosis and Treatment, ed: S. Jacobsen, Nova Science Publishers, Chapter III: 79–104 (2011)
5. G. Aliev, H. Palacios, B. Betts, M. Obrenovich, K. Gasiorowski, D. Gokhman, J. Leszek, V. Bragin, *Mitochondrion selective antioxidants as drug treatments for Alzheimer disease*, Vascular Dementia: Risk Factors, Diagnosis and Treatment, ed: S. Jacobsen, Nova Science Publishers, Chapter IV: 105–128 (2011)

Research Reports:

1. D. Gokhman, *Comparability classes and the sign of a differential polynomial of a large function in a Hardy field*, UC Berkeley (1984). Results from this report appeared (with acknowledgment) in M. Rosenlicht, *Growth properties of functions in Hardy fields*, Transactions AMS, **299**:261–272 (1987)
2. E. Kostlan, D. Gokhman, *An efficient algorithm for calculating $\Gamma(\alpha, x)$* , UC Berkeley (1986)
3. D. Gokhman, *Signal-to-noise measurements*, Guzik Technical Enterprises (1986)
4. D. Gokhman, *RLL Encoding*, Guzik Technical Enterprises (1987)
5. D. Gokhman, *Complex Hardy field generated by Airy’s integral*, University of California at Berkeley (1987)
6. D. Gokhman, *Computation of the velocity field due to vortex filaments in a fluid passage*, Fluid & Power Research Institute (1991)

Software development

Scientific computing:

1. *CDIG* — Complex Double Precision Incomplete Gamma Function without a Gamma Calculator, (1986) [with E. Kostlan], 129 lines.
2. *LIBPS* — FORTRAN Postscript graphics library, (Fluid & Power Research Institute, San Francisco, 1990), 105 lines.
3. *Spline.py* — Cubic and quintic parametric Hermite polynomial splines in Python (2000).

Computational fluid dynamics:

1. *BWD* — Calculation of the Effect of Pulsations at the Steam-Water Interface inside a Spherical Suppression Vessel (1981), [with A. Gokhman], 542 lines, used by EDS Nuclear, San Francisco.
2. *COMP* — Compensation of Vortex Method Calculations by Boundary Effects of a Water Passage, (Fluid & Power Research Institute, San Francisco, 1991) [with A. Gokhman] 1379 lines.
3. *FLOG* — Axisymmetric Flow in a Water Passage, (Fluid & Power Research Institute, San Francisco, 1991) [with A. Gokhman] 5201 lines.
4. *SING* — Method of Singularities for Internal Axisymmetric Flow, (Fluid & Power Research Institute, San Francisco, 1996) [with A. Gokhman].

Magnetic media analysis:

1. *T4* — An Engineering Program for the Read Write Analyzer, (Guzik Technical Enterprises, Sunnyvale, 1986) [with G. Manheim et al.] huge engineering code used by several major disk drive manufacturers (Seagate, Maxtor, etc.)
2. *SATEST* — Surface Analysis of Magnetic Media, (Guzik Technical Enterprises, Sunnyvale, 1986) [with G. Manheim et al.] huge production code used by several major disk drive manufacturers (Seagate, Maxtor, etc.), supplanted by DISK/DSTD and HEAD/HSTD (see below).
3. *MAKEGEN* — A Multi-dimensional Make File Generator with Preprocessing, (Guzik Technical Enterprises, Sunnyvale, 1986), 1564 lines, maintenance code for T4, DISK, DSTD, HEAD, HSTD, WEAR.
4. *WEAR* — Wear Analysis, (Guzik Technical Enterprises, Sunnyvale, 1986) [with G. Manheim et al.], code used by WME Systems, Westlake Village, California and Redlake Corporation, Morgan Hill, California.
5. *MCHECK* — Memory check for the TI processor on power-up, (Guzik Technical Enterprises, Sunnyvale, 1987), 73 lines, assembler code used in an experimental version of the Read Write Analyzer.
6. *DISK, DSTD* — Disk Certification and Standards, (Guzik Technical Enterprises, Sunnyvale, 1987) [with G. Manheim et al.] huge production code used by several major disk drive manufacturers (Seagate, Maxtor, etc.).
7. *HEAD, HSTD* — Head Certification and Standards, (Guzik Technical Enterprises, Sunnyvale, 1987) [with G. Manheim et al.] huge production code used by several major disk drive manufacturers (Seagate, Maxtor, etc.).
8. *PTR* — Recursive Run-limited Length Pattern Encoding/Decoding, (Guzik Technical Enterprises, San Jose, 1989), 1578 lines, code later incorporated into T4 and DISK.

Internet programming:

1. *Agent* — an internet Perl proxy for the Privacy Browser (ultimateprivacy.com, 2001) [with E. Kostlan and K. Steinberg]

Hardware and software manuals:

Seven manuals (30–180 pp.) used by major disk drive manufacturers [with G. Manheim] (1986–1987).

Presentations

Invited talks:

1991: Dynamical Systems Seminar, University of Texas at Austin
1992: Mathematics Colloquium, Rice University, Houston, Texas
2000: Differential Equations seminar, University of Michigan, Ann Arbor
2003: Mathematics Colloquium, Florida State University, Tallahassee, Florida
2004: Trinity University, San Antonio, Texas
2007: San Diego State University, California
2007: Trinity University, San Antonio, Texas

Contributed talks:

1993: Midwest Differential Equations Conference, Columbia, Missouri
1994: Midwest Differential Equations Conference, Norman, Oklahoma
1995: AMS/MAA Joint Meeting, San Francisco, California
1996: Texas Partial Differential Equations Conference, San Marcos, Texas
1996: International Congress on Computational and Applied Mathematics, Leuven, Belgium
1997: SIAM 45th Anniversary Meeting, Stanford University, California
1998: International Congress on Computational and Applied Mathematics, Leuven, Belgium
1999: South Texas Mathematics Consortium Meeting, McAllen, Texas
1999: Texas Partial Differential Equations Conference, San Marcos, Texas
2000: South Texas Mathematics Consortium Meeting, San Antonio, Texas
2001: CAIMS Meeting, Victoria, British Columbia
2003: South Texas Mathematics Consortium Meeting, Kingsville, Texas
2004: South Texas Mathematics Consortium Meeting, Laredo, Texas
2004: Texas Partial Differential Equations Conference, College Station, Texas
2006: First International Conference of Hybrid Systems and Applications, Lafayette, Louisiana

Professional service

Referee for journals: Nonlinear Studies, Electronic Journal of Differential Equations, Physics Essays, Journal of Computational and Applied Mathematics, International Journal of Mathematics and Mathematical Sciences, College Mathematics Journal, Cubo Matematica Educacional, Microscopy Research and Technique.

Reviewer for: Mathematical Reviews (Ann Arbor, Michigan), Gordon and Breach Science Publishers (New York, New York), Harper Collins Publishers (Glenview, Illinois), Prentice Hall (Upper Saddle River, New Jersey),

External reviewer: Mathematics Research Experience for Undergraduates and Teachers (REUT, NSF) at San Diego State University, 2007

Conference co-organizer and web master:

South Texas Mathematics Consortium 8th Annual Meeting, San Antonio, Texas, February 12, 2000
Texas PDE Annual Meeting, San Antonio, Texas, February 2, 2002
First International Conference of Hybrid Systems and Applications, Lafayette, Louisiana, 2006 (co-organized a session)

Web publishing: 1999: Edwin H. Connell, *Elements of Abstract and Linear Algebra*, University of Miami, Coral Gables (<http://www.math.miami.edu/~ec/book>)

Forum moderator: 2002–2004: Abstract and Linear Algebra Forum (<http://www.math.miami.edu/forum/algebra/>)

Editor: “Science:Math:Publications:Online Texts” and “Science:Math:Publications:Online Texts:Collections” at the Open directory

Scientific translations: Two books (Springer-Verlag, New York; Hemisphere Publishing Corporation, New York) and several articles (Russian to English).

Teaching

Master's Thesis Committees:

1. Redouan Rouzky, *A new combination of non-linear techniques for biomedical signal processing*, Division of Engineering, 1993.
2. Myriam Batista, *Vessel Detection and enhancement techniques applied to magnetic resonance angiograms*, Division of Engineering, 1994.
3. Joseph Andrew Rea, *Mathematical morphology and fuzzy theory*, Division of Engineering, 1994.
4. Monica Martinez, *Liapunov functions and pseudo-symmetry for n-dimensional competitive Lotka-Volterra systems*, Division of Mathematics and Statistics, 1996.
5. Julie A. Pace, *A bridge between the Bendixon-Dulac criterion in R^2 and Liapunov functions in R^n* , Division of Mathematics and Statistics, 1997.
6. Matthew Westerhoff, *A bridge between the Bendixon-Dulac criterion in R^2* , Department of Mathematics, 2006.
7. Sean Beatty, *Image denoising using PDE filters and variational methods*, Department of Mathematics, 2006.
8. Ellen Patterson, *Teaching strategies in the tutoring environment*, Department of Mathematics, 2010.

Undergraduate Honors Thesis Supervision:

1. Sharon Babiak, *Transient resonance in a forced Lotka-Volterra predator prey model*, Department of Mathematics, (with M. L. Zeeman, 2002).

Undergraduate Honors Thesis Committees:

1. Monica Martinez, *Stereographic projection and circle inversions*, Mathematics, 1993.
2. M. Drew LaMar, *Geometric visualization in population dynamics*, Mathematics, 1997.
3. Brenton Callaway, *Dynamics of the generalized Lyness recursion*, Mathematics, 1998.
4. Mary Anne Kiel, *Ovarian cysts and the birth control pill in IVF*, Mathematics, 1999.
5. Eleanora Figueroa, *Sample fabrication for optical studies of photon localization*, Physics, 2009.
6. Cassidy Martin, *The Fibonacci numbers: perspectives from society, history, psychology, art, and mathematics*, Mathematics, 2009.

Mentoring: Six students in the Office of Naval Research Scholars Program (1994–2001), two students in the Women and Minority Undergraduate Research Program (1994), two students in the NSF CSEMS Program (2004), students in the Undergraduate Mathematics & Biology scholars program (2006–2011).

Master's Advanced Examinations: Complex Analysis (1995, 1996, 1997, 2003, 2004), Abstract Algebra (1996, 2004, 2007), Topology (1996)

Curriculum development:

2000: Assisted Karen Rhea at the University of Michigan in developing a new core mathematics course.
2007: Assisted David Senseman in developing a new calculus course for biology majors.
2010: Helped re-structure the Calculus sequence.

Applied and Industrial Mathematics program:

2015–2018 Graduate admissions committee member
2017–present Internship coordinator

Course coordination:

2018–2019 Calculus II coordinator (with Sandy Norman)

Miscellaneous teaching highlights:

1. In 1995 took three undergraduate students to the Annual Meeting of SIAM, Charlotte, NC.
2. In Fall 2000 taught Calculus II at the University of Michigan with reform methodology. We used the Harvard consortium text and emphasized applications, numerical and graphical approaches, group work, etc.
3. Taught many independent studies courses with topics widely ranging from numerical methods for differential equations, to category theory, commutative algebra, and analysis on manifolds.
4. Encouraged students to use computer technology in their classwork by various means, including scheduling some of the classes in a computer laboratory, introducing students to mathematical software and using it as an instructional tool in the lab and during office hours, making abstract algebra software available for execution over the Internet, arranging for all students in several classes to have unix accounts for remote access to the software, and distributing free mathematical graphing software.
5. Use tablet PC technology.

List of organized courses taught and student survey results:

Semester	Course (UTSA)		# of students		Overall eval. (out of 7)		
			Census	Resp.	Mean	S.D.	Med.
Fall 1991	MAT 3263	Engineering Analysis II	28	18	4.9	1.09	5
	MAT 4213	Real Analysis I	36		not surveyed		
Spring 1992	MAT 3223	Complex Variables	36	13	5.4	1.16	6
	MAT 4223	Real Analysis II	17	15	5.4	0.99	6
Fall 1992	MAT 4213	Real Analysis I	33	22	4.9	1.34	5
	MAT 5223	Complex Variable I	15	10	4.7	1.42	5
Spring 1993	MAT 2213.1	Calculus III	39	37	5.4	1.11	6
	MAT 2213.2	Calculus III	36	8	5.6	1.19	6
	MAT 2213.3	Calculus III	33	12	5.7	1.07	6
	MAT 4223	Real Analysis II	18	4	4.6	1.14	5
Fall 1993	MAT 2213.1	Calculus III	51	36	6.1	0.80	6
	MAT 2213.2	Calculus III	21		not surveyed		
	MAT 3253.1	Engineering Analysis I	41	30	6.2	0.72	6
Spring 1994	MAT 2213.3	Calculus III	42	21	6.7	0.46	7
	MAT 2213.5	Calculus III	26	11	6.5	0.52	7
	MAT 3223	Complex Variables	18	15	6.5	0.76	7
Fall 1994	MAT 3243	Calculus for App.	23	23	6.7	0.63	7
	MAT 5223	Complex Variable I	10	8	6.4	0.74	7
Spring 1995	MAT 1214.2-5	Calculus I	118		not surveyed		
	MAT 5233	Complex Variable II *	8		not surveyed		
Fall 1995	MAT 3243	Calculus for App.	30	20	6.2	1.09	7
	MAT 3613	Differential Equations	20	13	6.7	0.48	7
	MAT 5173	Algebra I	21	14	6.0	0.96	6
Spring 1996	MAT 1214.1	Calculus I	35	18	6.2	0.85	6
	MAT 1214.3	Calculus I	38	14	6.1	1.10	7
	MAT 5313	Algebra II	8	6	6.8	0.41	7
Fall 1996	MAT 3243	Calculus for App.	38		not surveyed		
	MAT 5223	Complex Variable I	18		not surveyed		
	MAT 5243	General Topology I	13		not surveyed		
Spring 1997	MAT 5233	Complex Variable II	10	9	6.3	0.71	6
	MAT 5253	General Topology II	6	5	6.4	0.55	6
Fall 1997	MAT 2213.002	Calculus III	52	25	6.2	1.12	7
	MAT 3243.001	Calculus for App.	25	20	6.5	0.61	7
	MAT 4273.001	Topology	17	11	6.3	0.47	6
Spring 1998	MAT 1214.901	Calculus I **	17	11	6.4	1.03	7
	MAT 3213.001	Found. of Analysis	32	19	6.5	0.77	7
	MAT 3223.001	Complex Var.	16	11	6.6	0.67	7
Fall 1998	MAT 3243.001	Calculus for App. **	28	20	6.0	0.89	6
	MAT 4213.001	Real Analysis I	18	15	5.9	1.10	6
	MAT 5223.001	Complex Var. I	13	8	6.6	0.73	7
Spring 1999	MAT 2233.001	Linear Algebra	48	25	6.3	1.00	7
	MAT 2233.901	Linear Algebra **	17	11	6.8	0.40	7
	MAT 5233.001	Complex Var. II	5	3	7	0.00	7
Fall 1999	MAT 1223.901	Calculus II **	16	8	6.8	0.71	7
	MAT 2233.001	Linear Algebra	39	26	6.6	0.58	7
	MAT 3243.001	Calculus for App. **	21	13	6.4	1.19	7
Spring 2000	MAT 1214.901	Calculus I **	27	15	6.4	0.63	6
	MAT 3223.001	Complex Var. **	18	9	6.7	0.71	7

Semester	Course (University of Michigan)		# of students		Overall eval. (out of 5)		
			Census	Resp.	Mean	S.D.	Med.
Fall 2000	Math 116.006	Calculus II	29	17	4.1	0.49	4
	Math 116.011	Calculus II	27	22	4.9	0.30	5
Winter 2001	Math 450.002	Advanced Math for Eng.	27	17	4.6	0.61	5

Semester	Course (UTSA — IDEA)		# of students	Teacher excellence (adj.; out of 5)
Fall 2001	MAT 1093.002	Precalculus (Honors)	19	4.4
	MAT 1214.002	Calculus I	28	5.0
	MAT 3243.001	Calculus for App.	25	5.0
Spring 2002	MAT 1214.001	Calculus I (Honors)	12	4.3
	MAT 2233.001	Linear Algebra	27	4.9
	MAT 3223.001	Complex Variables	22	4.4
Fall 2002	MAT 1214.002	Calculus I	30	4.1
	MAT 2233.001	Linear Algebra	27	4.9
	MAT 5223.001	Complex Variable I	10	4.7
Spring 2003	MAT 1223.002	Calculus II	34	4.5
	MAT 5233.001	Complex Variable II	8	4.5
Fall 2003	MAT 1214.005	Calculus I (honors)	25	4.8
	MAT 3243.001	Calculus for Applications	27	4.7
	MAT 5173.001	Algebra I	24	4.8
Spring 2004	MAT 1223.001	Calculus II (honors) **	24	5.0
	MAT 5313.001	Algebra II	11	4.1
Fall 2004	MAT 2213.002	Calculus III (honors)	18	4.3
	MAT 3243.001	Calculus for Applications	37	4.3
	MAT 4253.001	Number Theory	18	4.7
Spring 2005	MAT 2213.003	Calculus III	35	4.4
	MAT 3223.001	Complex Variables	15	5.0
	MAT 3233.001	Modern Algebra	34	4.2
Fall 2005	MAT 1214.004	Calculus I (honors)	24	4.5
	MAT 3243.001	Calculus for App.	32	4.3
Spring 2006	MAT 1214.009	Biocalculus (honors)	27	4.7
	MAT 1223.005	Calculus II (honors)	27	4.5
Fall 2006	MAT 3623.001	Differential equations II	20	4.4
Spring 2007	MAT 2213.003	Calculus III	56	4.3
Fall 2007	MAT 3243.001	Calculus for Applications	33	4.2
Spring 2008	MAT 2213.005	Calculus III	29	4.6
	MAT 4233.001	Modern Abstract Algebra	24	4.0
Fall 2008	MAT 1194.002	Calculus for the Biosciences	41	3.8
	MAT 3243.001	Calculus for Applications	33	4.4
Spring 2009	MAT 3223.001	Complex Variables	19	4.7
	MAT 4233.001	Modern Abstract Algebra	30	4.2
Fall 2009	MAT 1194.001	Calculus for the Biosciences	46	4.3
	MAT 3243.001	Calculus for Applications	41	4.1
Spring 2010	MAT 1194.001	Calculus for the Biosciences	29	4.2
	MAT 4233.001	Modern Abstract Algebra	25	4.5
Fall 2010	MAT 1224.008	Calculus II	106	3.83
	MAT 3233.001	Modern Algebra	29	3.92
	MAT 6973.001	Special Problems: Category Theory	4	5
Spring 2011	MAT 4233.001	Modern Abstract Algebra	30	4.33
	MAT 5233.001	General Topology II	6	4.5
Summer 2011	MAT 6973.01S	Special Problems: Introduction to Algebraic Geometry	3	5

Semester	Course (UTSA)		# of students	Teacher excellence (adj.; out of 5)
Fall 2011	MAT 1193.005	Calculus for the Biosciences	18	3.58
	MAT 3233.001	Modern Algebra	28	3.4
	MAT 5243.001	General Topology I	4	4
Spring 2012	MAT 3013.002	Foundations of Mathematics	36	3.67
	MAT 6973.001	Special Problems: Modern Algebraic Geometry I	6	5
Fall 2012	MAT 1193.006	Calculus for the Biosciences	46	3.38
	MAT 1193.007	Calculus for the Biosciences	38	3.91
	MAT 3013.001	Foundations of Mathematics	39	4.11
Spring 2013	MAT 4233.001	Modern Abstract Algebra	41	4.17
	MAT 5263.001	Algebraic Topology	9	4
Fall 2013	CS 3333.001	Mathematical Foundations of Computer Science	49	3.78
	MAT 5173.001	Algebra I	9	5
Spring 2014	CS 3333.001	Mathematical Foundations of Computer Science	62	3.97
	MAT 5313.001	Algebra II	3	not surveyed
Fall 2014	CS 3333.001	Mathematical Foundations of Computer Science	64	4.33
	MAT 1193.002	Calculus for the Biosciences	38	3.12
	MAT 1193.003	Calculus for the Biosciences	35	3.95
	MAT 2214.003	Calculus III	32	4.42
Spring 2015	MAT 3233.001	Modern Algebra	8	4.2
	MAT 4233.001	Modern Abstract Algebra	20	4.25
Fall 2015	MAT 1214.015	Calculus I	32	3.67
	MAT 3013.002	Foundations of Mathematics	30	4.58
	MAT 4233.001	Modern Abstract Algebra	20	4
Spring 2016	CS 3333.002	Mathematical Foundations of Computer Science	52	3.76
	MAT 2233.002	Linear Algebra	28	4.06
	MAT 3623.001	Differential Equations II	10	4
Fall 2016	MAT 2233.002	Linear Algebra	40	4.23
	MAT 4213.001	Real Analysis I	26	4.22
	MAT 5653.001	Differential Equations I	12	4.25
Spring 2017	MAT 3213.002	Foundations of Analysis	28	4
	MAT 4233.001	Modern Abstract Algebra	21	4.18
Fall 2017	AIM 5113.001	Introduction to Industrial Mathematics	7	4.75
	MAT 4233.001	Modern Abstract Algebra	32	4.1
Spring 2018	MAT 3213.001	Foundations of Analysis	30	4.25
	MAT 4233.001	Modern Abstract Algebra	28	4.07
Fall 2018	MAT 1193.006	Calculus for the Biosciences	42	3.38
	AIM 5113.001	Introduction to Industrial Mathematics	5	4.5
Spring 2019	MAT 2233.001	Linear Algebra	36	4.46
	MAT 4213.002	Real Analysis I	18	4.83
	MAT 4233.001	Modern Abstract Algebra	33	4.39
Fall 2019	AIM 5113.001	Introduction to Industrial Mathematics	5	
	MAT 4233.001	Modern Abstract Algebra	19	

* first time that this course made at UTSA.

** some of the lectures held in a computer classroom

Academic service

University service:

1996: Ronald E. McNair Student Development Program Advisory Committee.
1997: Strategic initiative infrastructure information technology planning group.
1997: Strategic initiative library planning group.
2002: Grievance panel pool.
2004: Honors Scholarships Committee.
2006: Member of the Graduate Council.
2006: Graduate Membership Committee.
2006: Strategic Initiative Accountability Group.
2006: James W. Wagener Presidential Scholarship Committee.
2006: Associate Deans' Council.
2006: Graduating Seniors Survey Revision Committee.
2007: Assessment Committee.
2007: Enrollment Management Committee.
2015–2017: Senator, Faculty Senate.

College service:

1999: College of Sciences and Engineering Faculty Review and Advisory Committee
2002–2004: College of Sciences and Engineering Curriculum and Scheduling Committee
2003–2004: College of Sciences Budget Committee
2004: College of Sciences Affirmative Action Advocate on several searches
2006: College of Sciences Intellectual Property Advisory Committee
2006: Several search committees for the College of Sciences Undergraduate Advising Center
2007: Strategic Initiative Executive Committee and the Enrollment Management Subcommittee (chair)
2013–2015: Computer Science search committee (2 searches)
2015–2016: College Faculty Review Advisory Committee

Division/Department service:

1991–present: Member of numerous department committees including Graduate Studies, Graduate Screening, Teaching Assistantships, Ph.D., Comprehensive Examination, Graduate Catalog, Classroom Technology, Faculty Review Advisory.
Chair: Library Committee (1995–1997), Colloquium (1995–1996), Computer Resources (1996–1999, 2004–2006), Calculus (2006)
2001–2006: Secretary of Department Faculty Forum.
2004–2006: Master's in Applied & Industrial Mathematics Recruitment/Publicity Committee (co-chair: publicity)
2004: Hiring Committee (co-chair: junior faculty search)
2005–2006: Supervisor of Teaching Assistants, Tutors, and Graders.
2006: Bylaws Committee.
2006–2008: Calculus Committee (chair)
2008–2011: Supervisor of Teaching Assistants
2013–2014: Applied Mathematics Search Committee
2014: Master's Exam Committee (chair, twice)
2014–2015: AIM Admissions Committee
2014: Non Tenure Track Faculty Annual Performance Evaluation Committee
2017–2018: Tenure/Tenure Track Faculty Annual Performance Evaluation Committee

Mathematics Seminars and Colloquia:

1993: With Alvaro Arias established the Analysis Seminar series (later the Mathematics Seminar) with weekly one hour lectures by mathematicians and other scientists from San Antonio and around the world.
1993–1996: With others organized Mathematics Seminars and Colloquia by over 80 speakers. Publicized these talks with printed and electronic announcements to faculty, scientists and students in the San Antonio area.
1998–2000: With others organized the Applied Mathematics Seminar series.

Division/Department World Wide Web Pages:

1994–2000: Created and maintained the Mathematics/Statistics World Wide Web pages, including seminar announcements; the faculty and teaching assistant directory; course announcements, rotation, and catalogue; the Graduate Program Brochure; lecture notes and papers by our visitors; local software archives; and links to a vast number of mathematical resources on the Internet. In October, 2001 the site's visitors came from 5,810 unique resolved subdomains with 12,781 average daily hits and 125 Mb average daily transfers.

2001–2006: Co-webmaster for the Department of Applied Mathematics.

2006–2013: Set up an initial website for the Department of Mathematics. Helped with the design of version 2. Maintained and updated the site.

Computing:

1996–2006: Coordinator of computer resources for the Division of Mathematics and Statistics, later the Department of Applied Mathematics.

1997: Decision package/proposed strategic initiative, *Computer technology for teaching and student research in mathematics, statistics and physics* (selected as #1 priority by the College of Science and Engineering).

1998–1999: Y2K coordinator for the Division of Mathematics and Statistics. Inventory, risk assessment, and remediation of all computers, printers, embedded logic devices, and software in the Division. Contingency planning.

1999: Coordinated the Mathematics & Statistics research computer lab proposal as part of a Texas Telecommunications Infrastructure Fund (TIF) Board grant. Principal investigator on a National Science Foundation "Course, Curriculum, and Laboratory Improvement" (CCLI) proposal for a Mathematics & Statistics teaching computer lab.

2002: Started a high performance computer lab for upper division undergraduates and graduate students.

2008–2013: One of two department liaisons to Information Technology.

Other UTSA service:

2006–2011: Undergraduate Mathematics & Biology Scholars Program Executive Committee

2007: The Faculty Representative for the Barry M. Goldwater Scholarship and Excellence in Education Program.

Community service

1992: Judged a Science Fair, Encino Park Elementary School.

1993–2000: Texas 1-800 MATH and Science hotline.

1993–2000: Test administrator for regional MATHCOUNTS — a national competition for junior high school students.

1996: Sponsored a visit of my Calculus I lecture by the D'Hanis High School calculus class.

1997, 1999: Faculty volunteer for the "Expanding your horizons in math and science" conference.

2001–2002: Webmaster for the "Expanding your horizons in math and science" conference.

2007: Science Fair Scientific Review Committee.

2007: Business Education Advisory Council for the Ford Partnership for Advanced Studies.