

Charles Moore
February 20, 2024

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Education

1986 Ph.D., Mathematics, University of California, Los Angeles

Administrative Experience

2013–Present Chair, Department of Mathematics and Statistics, Washington State University.

During my tenure as chair, the department:

- Created a Ph.D. in Statistics and a Graduate Certificate in College Mathematics Teaching.
- Played a major role in the creation of the B.S. in Data Analytics (in-person and online) and the statistical education and consulting center.
- Increased recruiting efforts, especially focusing on recruitment of students from systemically excluded groups and instituted visiting weekends for prospective graduate students.
- Increased connections with alumni and donors through the creation of a department newsletter, organization of alumni events throughout the U.S., use of social media, and individual meetings.
- Increased its research visibility by organizing and hosting major conferences.
- Created a department external alumni advisory board.
- Hired ten tenure-track and twenty career-track faculty.
- Further developed its actuarial science program to include more courses and better preparation for professional exams.
- Revised foundational courses to increase student success and lower C-/D/F/W rates.
- Created and funded, mostly through donor support, student “transformational experiences”: undergraduate research, travel to research and professional conferences, opportunities to organize department events, dissertation fellowships, and visits to workplaces.
- Worked together to create a collaborative and supportive environment and fostered a sense of community and inclusiveness through a variety of activities, including social events, and the creation of student organizations and a department diversity committee.
- Created bylaws and updated tenure and promotion documents.

I have mentored 31 faculty members through the tenure and promotion or promotion process.

I led department efforts to create a self-study and led the department through an academic program review

2000–2013 Associate Department Head, Mathematics Department, Kansas State University

Served in place of the Department Head in his absence.

Responsible for resolving student issues.

Led a team of faculty who worked with architects to redesign and remodel the Math-Physics library.

Developed an exit interview process for departing students and faculty.

Created and led workshops for mathematics courses designed to improve skills and build cohorts; these were especially targeted to students from traditionally underrepresented groups.

Created department's actuarial science program.

2012–2013, 2005–2006 Graduate Program Director, Mathematics, Kansas State University

Advised students, kept the handbook up-to-date, instituted curriculum updates, oversaw the admissions process and Graduate Teaching Assistant hiring. Served as Chair of the department's Graduate Committee.

Increased recruitment efforts, especially of students from underrepresented groups, through mailings, participation in graduate fairs at professional meetings and meetings of societies supporting underrepresented groups. Instituted a visiting weekend for prospective students.

Initiated the process to have the department recognized as a Graduate Program Group with the Math Alliance.

2009 Interim Department Head, Mathematics Department, Kansas State University

Served as Department Head while the Head was on sabbatical. Managed 30 faculty, 6 staff, and about 50 Graduate Teaching Assistants.

Academic Appointments

2013–Present	Professor of Mathematics, Washington State University
1990–2013	Professor, Associate and Assistant Professor, Kansas State University
Fall 2011, 2004–2005, 1997–1998	Visiting Scholar, National University of Ireland, Galway
1986–1990	Visiting Assistant Professor, Washington University in St. Louis National Science Foundation Postdoctoral Fellow in Mathematics
1986	Instructor, University of California, Los Angeles

University Service at Washington State University

College of Arts and Sciences Undergraduate Advisory Committee 2013–2017. Committee responsible for issues of recruitment, retention, student opportunities, and progression through undergraduate majors.

College of Arts and Sciences Assessment Committee 2013–2016. Committee continually refines assessment processes in response to university needs and the needs of the university's accreditors.

Graduate School Presented and led discussion on graduate student recruiting, Graduate Recruitment Summit, Sept. 2019.

Undergraduate Research Poster Competition Judge, 2014, 2015 and 2016.

Freshman Scholars Progression 2015–2018. Afternoon-long meetings to inform students of summer opportunities, undergraduate research, internships, and extracurricular activities.

Louis Stokes Alliances for Minority Participation Created and delivered workshop on "How to succeed in Math Classes" to incoming LSAMP students each August 2018–2023. Participation in Fall Research Banquet, 2015–2019, 2021. Participate annually in LSAMP research fair.

OER working group University committee to facilitate faculty use of open educational resources, 2018–2020.

Global Campus Academic Council Advises on all issues regarding online courses and degrees, 2020 – 2023

Faculty Senate Member, 2021–present

Faculty Senate Budget Committee Member 2022 –present

Student Organizations Created Association of Women in Mathematics student chapter. Created and serve as faculty advisor to the American Mathematical Society student chapter.

Professional Service and Outreach

Simons Laufer Mathematical Sciences Institute (An internationally respected research center in Berkeley)

Committee of Academic Sponsors representative, 2010–2012 (KSU), 2013–present (WSU).

Committee on Summer Graduate Programs - reviews all proposals for summer programs held at the Institute and off-site, creates policies for summer programs. 2015–present. Chair 2019–present.

American Institute of Mathematics Applied for inclusion in the Institute’s four-day workshop “Finding and Keeping Graduate Students”, July 2012. Served as KSU team leader.

TPSE Transforming Post-Secondary Mathematics

Invited to Western Regional Meeting on Graduate Education, USC, Los Angeles, Sept. 14-15, 2019.

Participant in several on-line meetings, workshops, and discussions.

Math Alliance (Organization dedicated to supporting students from historically excluded groups in the mathematical sciences)

Graduate Mentor since 2012. Mentor students from other institutions on the process of preparing for and applying to graduate school.

Participant in annual *Field of Dreams* conference, annually 2012–2023.

Panelist, Summer Programs for Undergraduates, 2012 *Field of Dreams* conference.

Panel moderator, *Academic Careers in the Mathematical Sciences*, 2014 *Field of Dreams* conference.

Pacific Math Alliance (Regional section of the national organization)

Executive Board member 2022 - present

Served on the committee to create bylaws for the Pacific Alliance.

Participant in organizational meetings and discussions, and student events.

Co-organized and presented a webinar “Demystifying the Graduate Application Process”, attended by over 100 students, October 2020. Presented revised version at a workshop in May, 2023.

Society for Advancement of Chicanos/Hispanics and Native Americans in Science

SACNAS national conference attendee, annually 2014–2018.

Reviewer, student travel scholarship applications, 2016, 2017, 2018 national conferences.

Reviewer, undergraduate student talk abstracts, 2016, 2017, 2018 national conferences.

Reviewer, graduate student talk abstracts, 2016, 2017 national conferences.

Reviewer, session proposals, 2017, 2019 national conferences.

Judge, student poster session, 2015, 2016, 2017 and 2018 national conferences.

Faculty participant, *Conversations with Scientists* event, 2014, 2015, 2016, 2017, 2018, 2022, and 2023.

American Mathematical Society

Department Chairs and Leaders Workshop Committee, 2023 - 2025. One of a committee of three who plan, organize, and lead the day-long workshop at the annual meeting.

Workshop for Department Chairs and Leaders, annually 2013-2022.

Student poster judge at national meeting, 2015, 2016, 2017, 2018, 2019, 2020, 2023.

External program review

Mathematics graduate program at an R1 university in Texas, 2010.

Mathematics and statistics department at a Master's granting institution in Michigan, 2021.

Mathematics and statistics department at an R1 university in Nevada, 2023.

Mathematics and statistics department at a campus of the University of Massachusetts, 2023.

Grant proposal review NSF review panels, 2009, annually 2012–2024; Kansas EPSCoR, 1999; Louisiana EPSCoR, 1999; Simons Foundation, 2011, 2012.

Refereeing Refereed one or more articles for over two dozen journals, and several books.

Park City Mathematics Institute Invited participant, *Equity in Mathematics*, July 1-7, 2018. Workshop on ways to increase participation in Mathematics by underrepresented groups.

The Charles A. Dana Center Participant in sequence of weekly workshops and discussions *Math Leaders for Racial Justice*, June - July, 2022.

Mathematical Association of America

National meeting student poster judge 2014, 2015, 2016.

Great Talks series. Student presentations judge 2014, 2015, 2016, 2017, 2018, 2019.

Committee on the Faculty and Departments, 2022–2025

American Association of University Professors

Executive board member of KSU's chapter, 2008–2013.

Delegate for Kansas at national annual convention in Washington D.C., annually 2006–2011.

University Service at Kansas State University

Graduate Council Member, 2009–2013. Graduate Council's Committee on Planning: Member, 2009–2011; Chair 2009–2010. The Council reviewed all graduate curriculum changes, updated and revised bylaws and policies of the Graduate School, and approved Graduate Faculty.

College of Arts and Sciences Course and Curriculum Committee Member, 2001–2004; Chair, 2003–2004. Committee reviewed all curriculum and program changes in the College.

College of Arts and Sciences Committee on Planning Member, 2010–2013; Secretary, 2011-2012; Chair, 2012–2013. Committee prioritized hiring requests from the College's departments, developed strategic plans for the College, and served as the Dean's advisory committee.

Faculty Senate Member, 2011–2013.

Faculty Senate Committee on Faculty Salary and Fringe Benefits Member, 2010–2013. Chair 2012–2013. Examined faculty salaries and compared to peer institutions to make recommendations to the Provost. Led the effort to create a faculty climate survey that was distributed university-wide.

University Parking Council Member, 2010–2013; Chair, 2012–2013. Set rates for parking permits, made some budgetary decisions, updated parking regulations as needed.

Ad hoc Committees Includes committees on modifying degree requirements to accommodate students with disabilities, and a University committee to study evening exams.

KSU Diversity Lecture Series Hosted Professor Rodrigo Bañuelos of Purdue University, 2008.

KSU Graduate School Panel member, *Graduate School Application Process*, 2011.

KSU Research Forum Served as a judge of graduate student presentations, 2011, 2012, 2013.

Office of National Scholarships Conducted practice interviews for Rhodes and Marshall scholarship candidates.

Kansas State University Junior Day Presenter and *ad hoc* advisor, 2006.

Safe Zone Ally Program to create allies and advocates for marginalized groups.

Service to the Kansas State University Mathematics department

Graduate Program

Graduate Director 2005–2006 and 2012–2013.

Graduate Program Advisory Committee Member, 2001–2013; Chair, 2005–2006 and 2012–2013. The committee handles all aspects of the department's Master's and Ph.D. programs.

Recruited students at KSU's table at the Math Alliance's *Field of Dreams* conference, 2012.

Graduate Fair at AMS/MAA Joint Mathematics Meeting, 2013.

Organized and conducted the first graduate recruitment weekend for the department, 2013. Successfully applied to the Graduate School for funding for the event.

Developed brochure and posters for the program.

Completed all reports on the Master's and Ph.D. programs for the Kansas Board of Regents, 2006–2013.

Teaching Advisor to 17 Graduate Teaching Assistants. Temporary Academic Advisor to dozens of graduate students.

Academic Excellence Workshops Director, 2000–2006. Developed program to increase the success of students, particularly from traditionally underrepresented groups, in College Algebra, Trigonometry, and Calculus I and II, by using group projects to foster the formation of cohorts. Supervised course instructors, monitored instructional materials. Communicated with administrators, students, and faculty advisors to increase the visibility of the program throughout campus.

Actuarial Science Program Founder and Director, 1998–2013. Developed and taught the courses, advised math majors interested in Actuarial Science.

Chatelain Lecture series Developed a lecture series that focused on mathematicians from underrepresented groups, including women; this was institutionalized as the Chatelain Lecture series.

S. Thomas Parker Mathematics Competition Committee member (one of three), 1998–2013. Developed and ran a mathematics competition for KSU students.

Advising Advised 5-10 undergraduate mathematics majors per semester, 1992–2013.

Personnel Advisory Committee Member six years. Member and Chair three years. Committee elected by peers to evaluate the annual performance of each faculty member.

Faculty Search Committees Twelve times. Served as committee chair for six of those.

Long Range Planning Committee 1998–2003 (Chair, 2002–2003). 2003–2008 (Chair, 2007–2008). Committee to project future department needs and revise strategy accordingly.

Alumni Newsletter Committee 1993–2013; One of three-person committee. Wrote and composed annual 8–12 page newsletter mailed to approximately 2000 alumni and other donors.

Library Committee Member, 1994–2013; Chair, 2008–2013. Liaison between Mathematics Department and the Kansas State University library system.

Qualifying Exam Committees Analysis (19 times), Differential Equations (2 times).

Basic (entrance) Exam Committees Served eight times

Staff hiring committee Served six times on a committee formed to fill an office vacancy.

Math-Engineering Liaison Committee 2009–2013. Served as co-chair. Committee discussed and revised the mathematics curriculum pertaining to engineering students.

Ad-hoc committee for the Math-Physics library Co-chair, Spring 2012. Joint committee that developed and implemented a proposal to renovate and reconfigure the Math-Physics library.

Analysis Seminar Organizer, weekly seminar in Analysis and related areas, 1991–2013.

Research Experience for Undergraduates (REU) NSF supported. Co-director, 2011, Mentor: 2006, 2007, 2010, 2011, 2012.

Course coordination Differential Equations (Math 240) 15 semesters; Calculus I (Math 220), two semesters; Trigonometry (Math 150) three semesters; Matrix Theory (Math 551) five semesters.

Faculty Mentoring Postdocs: X. Q. Chang, M. Liu, R. Berndt. Assistant Professors: M. Korten, V. Naibo, M. Roitman, D. Ryabogin.

Exit Interviews Developed an exit interview for graduate students; conducted all interviews. Developed an exit interview for departing faculty and postdocs; conducted all interviews.

Plains Academy Co-op Partnership Mentor, 2002. Program brought professors from two- and four-year colleges to KSU to develop ways to implement technology in the classroom.

K-12 outreach

Math Circle Initiated mathematics enrichment program at WSU for area school children.

Poster competition Judged Pullman-area elementary school competition, 2014, 2015, 2016.

GROW Program *Girls Researching Our World* program in STEM for middle school girls, held at KSU. Developed and taught mathematics unit, annually 2007–2012.

KSU Engineering and Science Summer Institute Lecturer, 1996. High school program.

Funding

- 1987–1988** NSF Research Grant, PI, \$6,000.
- 1988-1991** NSF Postdoctoral Fellowship in Mathematics, PI, \$74,100.
- 1990** American Mathematical Society – travel to the International Congress of Mathematicians, Kyoto, Japan, \$2,000.
- 1992-1994** NSF Research Grant, PI, \$36,739.
- 1994** American Mathematical Society – travel to the International Congress of Mathematicians, Zürich, Switzerland, \$2,000.
- 1994** Kansas State University Faculty Development Award – travel, \$2,000.
- 1994-1997** NSF Research Grant, PI, \$37,061.
- 1998** American Mathematical Society - travel, International Congress of Mathematicians, Berlin, \$2,000.
- 2002** Kansas State University Faculty Development Award – travel, \$1,866.
- 2003** Mathematical Sciences Research Institute for the Prairie Analysis Seminar, 2003, Co-PI, \$1,000.
- 2003** NSF grant for the Prairie Analysis Seminar, Co-PI, \$6,000.
- 2004** MSRI grant for the 2004–2006 Prairie Analysis Seminar, Co-PI, \$4,000.
- 2004** NSF grant for the 2004 Prairie Analysis Seminar, Co-PI, \$7,428.
- 2005** NSF grant for the 2005–2006 Prairie Analysis Seminar, Co-PI, \$9,580.
- 2005** Kansas State University ADVANCE Departmental Initiative award – to develop a lecture series focusing on mathematicians from underrepresented groups, Co-PI, \$10,000.
- 2006** Kansas State University Faculty Development Travel Award, PI, \$400.
- 2006** Kansas State University ADVANCE Departmental Initiative award – to develop a lecture series that focused on graduate students, postdoctoral researchers, and junior faculty from underrepresented groups, Co-PI, \$10,000.
- 2007** NSF grant for the 2007 Prairie Analysis Seminar, Co-PI, \$15,034.
- 2008** NSF grant for the 2008 Prairie Analysis Seminar, Co-PI, \$15,400.
- 2009** NSF grant for the 2009–2011 Prairie Analysis Seminar, Co-PI, \$32,664.
- 2011** Kansas State University Academic Excellence grant – recruitment and travel of graduate students, PI, \$5,790.
- 2011** Kansas State University Faculty Development Award – travel, \$2,000.
- 2013** Kansas State University Graduate School – doctoral recruiting, PI, \$5,425.
- 2013** Central States Actuarial Forum Board – purchase of actuarial materials for the KSU mathematics library, PI, \$750.
- 2015** NSF grant for the 2015–2017 Prairie Analysis Seminar, Co-PI, \$33,320.
- 2019** NSF grant for Data Science and Image Analysis Conference of the Pacific Northwest, Co-PI, \$20,520.

Teaching Experience

Have taught all levels of mathematics from foundational through graduate level seminars, including numerous reading courses, and a GRE preparation workshop.

Served a year as a Community Teaching Fellow (funded by CETA) teaching mathematics enrichment to fifth graders in an economically disadvantaged neighborhood. As a graduate student, taught in a summer program for incoming freshman from historically underrepresented groups.

Co-leader, KSU student trip to Ireland, August 1999.

Student Advising

Ph.D. major advisor

Sarah Cook *Good-Lambda inequalities for wavelets*, 1998.

Donald Adongo *A local extrapolation method for hyperbolic conservation laws: The ENO and Goodman-Leveque underlying schemes and sufficient conditions for TVD property*, 2008. (co-directed with Marianne Korten)

Mukta Bhandari *Inequalities associated to Riesz potentials and non-doubling measures with applications*, 2010.

Peter Nguyen *On variable Lebesgue Spaces*, 2011.

Santosh Ghimire *The law of the iterated logarithm for tail sums*, 2012.

Xiaojing Zhang *A law of the iterated logarithm for general lacunary series*, 2012.

Henry Reily *A modified Chang-Wilson-Wolff inequality via the Bellman function*, 2019.

Adebowale Sijuwade *Fractional Integral Operators*, 2021.

Tariq Alsmadi *Generalizations of Fatou's theorem and its converse*, 2023.

Ph.D. committee Have served on the Ph.D. committee for 29 students: B. Schroeder - 1992, M. Lloyd - 1993, J. Ahn - 1993, H. Sayyer - 1994, Weigang Li (McGill University) - 1994, P. Mitchell - 1995, Christopher Sesler (Economics) - 1996, Yu-Hua Wang - 1998, E. Canning - 1999, M. Mosbo - 1999, R. Alexeev - 2000, Abhijit Shevade (Chemical Engineering) - 2000, S. Kim - 2004, Shekhar Gosavi (Mechanical Engineering) - 2006, N. Randriampiry - 2006, Weidong Chen - 2007, Mahsana Ahsan (Physics) - 2008, Todd Peterson (Electrical Engineering) - 2009, Mohamed Ishak Mohamed Ismail - 2009, Mohamed Toema (Mechanical Engineering) - 2010, Shawn Westmoreland - 2010, Kubrom Teka - 2012, Sharad Silwal - 2012, Kennard Callender (Nuclear Engineering) - 2012, Shruti Shrestha (Physics) - 2013, Zheng Hao - 2014, Wendee Skulpakdee - 2016, R. Roopkumar (University of Madras) - 2017, Yunfeng Hu - 2018.

Master's thesis major advisor

Yu-Hua Wang *The recurring idea of recurrence*, 1994.

Qifeng Yu *A modern discussion of Bachelier's Brownian motion model of stock markets*, 1995.

Michele Snell *An exposition and comparison of various integral forms*, 1996.

Chris Shane *An exploration of Hausdorff dimension*, 2001.

Ben Van Dyke *The derivative and various generalizations*, 2002.

Eric Foley *Sounds and vibrations*, 2018.

Master's thesis committee Have served on the committee for 22 students: H. Amro - 1992, S. Patel - 1993, R. Dissanayake - 1993, Santosh Kaveti - 2002, Karen McGaughey - 1993, Scott Johnston - 1995, Liya Wu - 1997, Brad Shank - 2002, Murthy Karri - 2003, Diptansu Das (physics) - 2004, Manoj Pathak - 2004, Yuhan Jia - 2006, Ting Wang - 2006, Chris Elston - 2006, Lacey Huebel - 2007, Kyle Kincaid - 2008, Akriti Dixit - 2008, Yegor Sorokin - 2009, Santosh Ghimire (statistics) - 2011, Michael Reb - 2013, BeiYu Lin - 2015, Altansuren Tumurbaater - 2017

Master's by examination Have served on the examining committee for 10 students.

Senior thesis advising Dennis Wright *Mathematical bases for common investment rules*, 1997.

Advisor, McNair Scholars projects

Brandon Grosshardt *Cryptanalysis: Investigating the cyclic nature of block-matrix ciphers*, Summer 1999. Brandon was awarded a Goldwater scholarship, in part for this work.

Perla Salazar *Similarity solutions to a degenerate parabolic equation used in image restoration*, Summer 2010.

Mentor, summer REU

2006 Served as mentor to undergraduates Eyuel Abebe and Jameson Graber. Graber was awarded a Goldwater scholarship, in part, for this work.

2007 Mentor to undergraduates Eric Bunch and Jason Bogess.

2010 Mentor to undergraduates Regina Ciszewski, Jason Gregory and Jasmine West.

2011 Mentor to undergraduates Emily Jennings, Daniel Muñoz, and Ashley Toth. Daniel Muñoz was also a participant in the KSU Student Undergraduate Research Opportunity Program.

2012 Served as mentor to undergraduates Michael Agre, Khoi Le, and Jasmine Turner. Khoi Le was also a participant in the KSU Student Undergraduate Research Opportunity Program.

Developing Scholars Program Worked with Perla Salazar on a project, Spring 2010.

Faculty Advisor

Founding and current faculty advisor of American Mathematical Society graduate student chapter at WSU.

Worked with interested students to form a student chapter of the Association of Women in Mathematics at WSU.

Conferences and Special Sessions Organized and Co-organized

Organization includes selection of speakers, writing proposals for external support, helping participants with travel arrangements, creating the conference schedule, and arranging food and drink.

Conference on Probability and Harmonic Analysis, March 1992, Kansas State University.

Special Session – Harmonic Analysis and Probability, March 1994, A.M.S.#891, Manhattan, KS.

Karl Stromberg Memorial Conference, Feb. 1997, Manhattan, Kansas.

First Prairie Analysis Seminar, Oct. 2001, Manhattan, KS.

Second Prairie Analysis Seminar, Oct. 2002, Lawrence, KS.

Third Prairie Analysis Seminar, Oct. 2003, Manhattan, KS.

Special session – Differential equations, Oct. 2004, A.M.S. #1000, Albuquerque, NM.

Fourth Prairie Analysis Seminar, Nov. 2004, Lawrence, KS.

Fifth Prairie Analysis Seminar, Oct. 2005, Manhattan, Kansas.

Special Session – Singular Integrals, Geometric Analysis, and Free Boundary Problems, April 2006, A.M.S. #1015, Miami, FL.

Sixth Prairie Analysis Seminar, Oct. 2006, Lawrence, KS.

Seventh Prairie Analysis Seminar, Nov. 2007, Manhattan, KS.

Eighth Prairie Analysis Seminar, Nov. 2008, Lawrence, KS.

Ninth Prairie Analysis Seminar, Oct. 2009, Manhattan, KS.

Tenth Prairie Analysis Seminar, Oct. 2010, Lawrence, KS.
 Eleventh Prairie Analysis Seminar, Oct. 2011, Manhattan, KS
 Twelfth Prairie Analysis Seminar, Sept. 2013, Manhattan, KS.
 Thirteenth Prairie Analysis Seminar, Sept. 2015, Manhattan, KS.
 Fourteenth Prairie Analysis Seminar, Sept. 2016, Lawrence, KS.
 International Conference on Fourier Analysis and Wavelets, co-Convener. Ramanujan Institute for Advanced Study in Mathematics, March 2017, Chennai, India.
 American Mathematical Society Western Regional Meeting, April 2017, A.M.S. #1128, Pullman, WA. Also co-organized special session – Partial Differential Equations and Applications.
 Fifteenth Prairie Analysis Seminar, Sept. 2017, Manhattan, KS.
 Sixteenth Prairie Analysis Seminar, Nov. 2019, Manhattan, KS.
 Data Science and Image Analysis Conference of the Pacific Northwest, Feb. 2020, Pullman, WA.

Publications

Articles

1. *Some applications of Cauchy integrals on curves*, Ph.D. dissertation, UCLA, 1986.
2. *The corona theorem for domains whose boundary lies in a smooth curve*, Proc. Amer. Math. Soc. 100 (1987), 266-270.
3. *An analogue for harmonic functions of Kolmogorov's law of the iterated logarithm*, with Bañuelos, R., and Klemes, I., Duke J. Math. 57 (1988), 37-68.
4. *Some results in analysis related to the law of the iterated logarithm*, with Bañuelos, R., Proceedings of the Special Year in Modern Analysis at the University of Illinois, Berkson, E., Peck, N.T. and Uhl, J., Editors, Cambridge University Press, (1989), 47-80.
5. *Sharp estimates for the non-tangential maximal function and the Lusin area function on Lipschitz domains*, with Bañuelos, R., Trans. Amer. Math. Soc. 312 (1989), 641-662.
6. *Laws of the iterated logarithm, sharp good- λ inequalities and L^p -estimates for caloric and harmonic functions*, with Bañuelos, R., Indiana Univ. Math. J. 38 (1989), 315-344.
7. *The lower bound in the law of the iterated logarithm for harmonic functions*, with Bañuelos, R., and Klemes, I. Duke Math. J. 60 (1990), 1-27.
8. *Mean growth of Bloch functions and Makarov's law of the iterated logarithm*, with Bañuelos, R., Proc. Amer. Math. Soc. 112 (1991), 851-854.
9. *Distribution function inequalities for the density of the area integral*, with Bañuelos, R., Ann. Inst. Fourier 41 (1991), 137-171.
10. *Some inequalities for the density of the area integral*, Partial Differential Equations with minimal smoothness and applications, IMA vol. in Math. and its Appl., Springer-Verlag, 1992, pp. 189-198.
11. *Certain lacunary cosine series are recurrent*, with Grubb, D.J., Studia Math. 108(1) (1994), 21-23.
12. *The equivalence of two conditions for weight functions for martingales*, with Chang, X.-Q., Statistics and Probability Letters 23 (1995), 129-133.
13. *Recurrence for real lacunary series*, Interaction between Functional Analysis, Harmonic Analysis, and Probability, Lecture Notes in Pure and Appl. Math. 175, Marcel Dekker, 1996, pp. 365-374.
14. *Estimates for the density of the area integral*, Potential Theory-ICPT 94, Walter de Gruyter & Co., Berlin-New York, 1996, 423-432.

15. *A variant of Hörmander's condition for singular integrals*, with Grubb, D.J., *Colloq. Math.* 73 (2) (1997), 165-172.
16. *Existence, uniqueness and regularity of the free boundary in the Hele-Shaw problem with a degenerate phase*, with Blank, I. and Korten, M., in *Harmonic Analysis, Partial Differential Equations and Related Topics*, Contemporary Mathematics series of the AMS, volume 428, 2007, 33-42.
17. *The Hele-Shaw problem as a "Mesa" limit of Stefan problems: Existence, uniqueness, and regularity of the free boundary*, with Blank, I. and Korten, M., *Trans. Amer. Math. Soc.* 361, no. 3 (2009), 1241-1268.
18. *Regularity for the two-phase Stefan problem*, with Korten, M., *Communications in Pure and Applied Analysis* 7, no.3 (2008), 591-600.
19. *Fourier series and the δ^2 process*, with Abebe, E. and Graber, J., *The Journal of Computational and Applied Mathematics* 224, no. 1 (2009), 146-151.
20. *The Cauchy problem for the two phase Stefan problem*, with Korten, M., *Communications in Applied Analysis* 11, no.1 (2007), 43-52.
21. *Fourier series and the Lubkin W-transform*, with Bogess, J., and Bunch, E., *Numer. Algor.* 47 (2008), 133-142.
22. *Random walks*, Ramanujan Mathematical Society Mathematics Newsletter 17, no. 3 (2007), 78-84.
23. *Acceleration of Fourier series*, *J. Analysis* 17 (2009), 41-60.
24. *Uniqueness for solutions of the two-phase Stefan problem with signed measures as data*, with Korten, M., *Communications in Applied Analysis* 15 (2011), no. 1, 89-100.
25. *A law of the iterated logarithm for general lacunary series*, with Zhang, X., *Colloq. Math.* 126 (2012), 95-103.
26. *Fourier series acceleration and Hardy-Littlewood series*, with Ciszewski, R., Gregory, J., and West, J., *J. Appl. Math. Inform.* 31 (2013), 263-276.
27. *The δ -squared process and Fourier series of functions with multiple jumps*, with Jennings, E., Muñoz, D., and Toth, A., *Inter. J. Pure and Appl. Math.* 88, No. 4 (2013), 483-497.
28. *A lower bound in the tail law of the iterated logarithm for lacunary trigonometric series*, with Ghimire, S., *Proc. Amer. Math. Soc.* 142 (2014), 3207-3216.
29. *A lower bound in the law of the iterated logarithm for general lacunary series*, with Zhang, X., *Studia Math.* 222 (3) (2014), 207- 228.
30. *Subgaussian estimates in probability and harmonic analysis*, *J. Analysis* 6, Issue 2 (2018), 175-190.

Books

1. Probabilistic behavior of harmonic functions, with Bañuelos, R., Birkhäuser Verlag, Basel, 1999.
2. Editor (with E. Gavosto, M. Korten, and R. Torres) *Harmonic analysis, partial differential equations, and related topics*, AMS Contemporary Mathematics series #428, 2007.

Other publications

Contributor, *Comprehensive Dictionary of Mathematics*, CRC Press, Boca Raton, Florida, 2001. Wrote over 150 definitions of mathematics terminology comprising over 35 pages of text.

Reviewer, *Mathematical Reviews*. Over 120 reviews of mathematics literature.

Preliminary Wavelet Analysis of Genomic Sequences, with Jianchang Ning and J. Clare Nelson, csb, pp. 509, IEEE Computer Society Bioinformatics Conference. (CSB'03), 2003

Equity in Mathematics Education: Five Mathematicians Reflect on the 2018 PCMI Workshop, with S. Bryant, C. Eubanks-Turner, S. Reznikoff, and J. Yu, *Mathematical Association of America Focus Magazine*, December 2018/ January 2019.

Invited Addresses

- 1986** May: California Institute of Technology, hour colloquium.
November: University of California, Los Angeles, hour seminar.
- 1987** May: University of Illinois, Champaign-Urbana, hour colloquium
- 1988** February: Brown University, hour colloquium.
February: Oklahoma State University, hour colloquium.
March: University of Rochester, hour colloquium.
March: University of Arkansas, hour colloquium.
October: Special session on potential theory on non-smooth domains, A.M.S. meeting #845, Lawrence, KS, 20 minute talk.
November: Southern Illinois University, Edwardsville, hour colloquium.
- 1989** January: Kansas State University, hour colloquium.
May: Wildcat Function Theory conference. University of Kentucky, hour lecture.
June: Purdue University, hour colloquium.
- 1990** February: University of California, Riverside, hour colloquium.
February: Oklahoma State University, hour colloquium
March: Special session on harmonic analysis and probability theory, 20 minute talk, A.M.S. meeting #855, Manhattan, Kansas
March: Workshop on partial differential equations with minimal smoothness and applications, University of Chicago, hour lecture.
September: International Conference on Potential Theory, Nagoya, Japan, 30 minute lecture.
- 1991** July: Purdue University, hour colloquium.
August: International Conference on Potential Theory, Amersfoort, Netherlands, 30 minute lecture.
- 1992** October: Technology in the Mathematics Curriculum, Kansas City, KS, 30 minute workshop.
- 1993** January: University of Missouri, Kansas City, hour colloquium.
October: Northern Illinois University, hour colloquium
- 1994** January: University of Missouri, Kansas City, hour colloquium.
March: Special Session on Harmonic Analysis and Probability, A.M.S. meeting #891, Manhattan, Kansas, 20 minute talk.
May: McGill University, Montréal, Canada, hour colloquium.
June: Conference on the Interaction between Functional Analysis, Harmonic Analysis, and Probability, University of Missouri, 30 minute lecture.
August: International Conference on Potential Theory, Kouty, Czech Republic, 30 minute lecture.
August: International Congress of Mathematicians Zürich, Switzerland, 20 minute talk
- 1995** February: University of Missouri, Kansas City, hour colloquium.
March: Special Session on Probability and Harmonic Analysis, A.M.S. meeting #900, Chicago, 20 minute talk.
- 1996** February: University of Missouri, Kansas City, hour colloquium.
June: Purdue University, hour colloquium.
- 1997** February: University of Missouri, Kansas City, hour colloquium.
October: University College, Galway, hour colloquium.
- 1998** January: University College, Cork, hour colloquium.
February: Trinity College–University College, Dublin joint seminar, hour colloquium.

- March: University College, Galway, hour colloquium.
 August: International Congress of Mathematicians, Berlin, 20 minute talk.
- 1999** February: University of Missouri, Kansas City, hour colloquium.
 March: MAA conference, Kansas State University, 20 minute talk.
- 2000** January: University of Missouri, Kansas City, hour colloquium.
 February: Emporia State University, hour colloquium.
 June: Conference on Stochastic and Harmonic Analysis, Chicago, 40 minute lecture.
- 2001** February: University of Missouri, Kansas City, hour colloquium.
- 2002** March: University of Missouri, Kansas City, hour colloquium.
 August: International Congress of Mathematicians, Beijing, 20 minute talk.
- 2003** February: University of Missouri, Kansas City, hour colloquium.
- 2004** February: University of Missouri, Kansas City, hour colloquium.
 June: ShowMe meeting, University of Missouri, Columbia, 45 minute lecture.
 October: Special Session on Differential Equations, A.M.S. meeting #1000, Albuquerque,
 20 minute talk.
 December: National University of Ireland, Galway, hour colloquium.
- 2005** March: CUNY meeting on analysis and geometry, New York, hour lecture.
 October: Special Session on Geometry of Differential Equations, A.M.S. meeting #1011,
 Lincoln, 20 minute talk.
 November: Emporia State University, hour colloquium.
- 2006** February: University of Missouri, Kansas City, hour colloquium.
 April: Special Session on Singular Integrals, Geometric Analysis, and Free Boundary
 Problems, A.M.S. meeting #1015, Miami, 20 minute talk.
 August: Third International Conference on Applied Mathematics, Plovdiv, Bulgaria,
 30 minute lecture.
 October: Regional Workshop, University of Nebraska, Lincoln, plenary lecture (45 minutes)
- 2007** January: University of Missouri, Kansas City, hour colloquium.
- 2008** February: University of Missouri, Kansas City, hour colloquium.
- 2009** February: University of Missouri, Kansas City, hour colloquium.
- 2010** February: University of Missouri, Kansas City, hour colloquium.
 March: Special Session on Function Theory, Harmonic Analysis, and Partial Differential
 Equations, A.M.S. meeting #1057, Lexington, KY, 20 minute talk.
- 2011** March: University of Missouri, Kansas City, hour colloquium.
 October: International Conference on Scientific Computing, Santa Margherita di Pula,
 Italy, 30 minute lecture.
- 2013** May: Washington State University, hour colloquium.
- 2014** February: Eastern Oregon University, half hour talk.
- 2017** March: International Conference on Fourier Analysis and Wavelets, Chennai, India,
 plenary hour lecture.
 May: Eastern Oregon University, panel member on discussion about graduate programs.
- 2018** March: University of Idaho, hour colloquium
 April: Mathematical Association of America, regional meeting, Seattle, WA, 20 minute talk.

Professional Recognition and Honors

Developing Scholars Program Award for Quality in Mentoring, KSU, 2011
Outstanding Graduate Faculty Teaching Award, KSU Mathematics Department, 2010
Outstanding Graduate Faculty Teaching Award, KSU Mathematics Department, 2008
Hopper Travel Award from the American Association of University Professors, 2006
Outstanding Graduate Faculty Teaching Award, KSU Mathematics Department, 2002
William L. Stamey Undergraduate Teaching Award, College of Arts and Sciences, KSU, 1995
Outstanding Graduate Faculty Teaching Award, KSU Mathematics Department, 1993
National Science Foundation Postdoctoral Fellowship in Mathematics, 1986–1990
Magna Cum Laude graduate of Washington University, St. Louis
Phi Beta Kappa

Professional Societies

American Mathematical Society
Mathematical Association of America
Society for Industrial and Applied Mathematics
National Association of Mathematicians
Society for Advancement of Chicanos/Hispanics and Native Americans in Science
American Association of University Professors

Miscellaneous

Have passed three of the professional examinations of the Society of Actuaries.