RESUME

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EDUCATION

PHD in Mathematics (Probability), University of Michigan, Ann Arbor, 1984.

MS in Mathematics, University of Michigan, Ann Arbor, 1979.

BS Honors in Mathematics, High Distinction, University of Michigan, Ann Arbor, 1977.

EMPLOYMENT

University Distinguished Professor of Statistics & Probability, Michigan State University, 2017 to present.

Visiting Professor, Department of Mathematics, University of Washington, Seattle, 2014–2015.

Professor of Statistics & Probability, Michigan State University, 2006–2017.

Chairperson, Department of Statistics & Probability, Michigan State University, 2006–2009.

Chair of Applied Mathematics, University of Otago, Dunedin, New Zealand, 2005–2006.

Graduate Faculty in Hydrologic Sciences, University of Nevada, Reno, 1999–2005.

Professor of Physics, University of Nevada, Reno, 2004–2005.

Professor of Mathematics and Statistics, University of Nevada, Reno, 2002–2004.

Associate Professor of Mathematics, University of Nevada, Reno, 1995–2002.

Assistant Professor of Mathematics, University of Nevada, Reno, 1993–1995.

Visiting Associate Professor, Statistics and Probability, Michigan State University, 1992–1993.

Associate Professor of Mathematics, Albion College, 1991–1993.

Assistant Professor of Mathematics, Albion College, 1985–1991.

Senior Systems Analyst, Vector Research, Inc., Ann Arbor, MI 1984–1985.

Graduate Teaching Assistant, University of Michigan, Ann Arbor, 1983–1984.

Graduate Teaching Assistant, University of Michigan, Dearborn, 1982.

Systems Analyst (Operations Research), Vector Research, Inc., Ann Arbor, MI 1979–1981.

Graduate Teaching Assistant, University of Michigan, Ann Arbor 1977–1979.

Systems Programmer (CAD-CAM), Vega Servo-Control, Inc., Troy, MI 1977.

Computer Programmer, University of Michigan, Department of Journalism, 1976-1977.

PUBLICATIONS

See http://www.stt.msu.edu/users/mcubed/mmmpubl.html for downloads

An Integrated Sensitivity-Uncertainty Quantification Framework for Stochastic Phase-Field Modeling of Material Damage, *International Journal for Numerical Methods in Engineering*, to appear (with Eduardo A. Barros de Moraes and Mohsen Zayernouri, Department of Mechanical Engineering, Michigan State University).

A Unified Petrov-Galerkin Spectral Method and Fast Solver for Distributed-Order Partial Differential Equations, Communications on Applied Mathematics and Computation, to appear (with Mohsen Zayernouri, Mehdi Samiee, and Ehsan Kharazmi, Department of Computational Mathematics, Science and Engineering, Michigan State University).

Anna Lischke, Guofei Pang, Mamikon Gulian, Fangying Song, Christian Glusa, Xiaoning Zheng, Zhiping Mao, Wei Cai, Mark M. Meerschaert, Mark Ainsworth, and George Em Karniadakis, What Is the Fractional Laplacian? *Journal of Computational Physics*, Vol. 404 (2020), Article 109009 (66 pp.).

A. Lischke, J.F. Kelly, and M.M. Meerschaert, Mass-conserving tempered fractional diffusion in a bounded interval, *Fractional Calculus and Applied Analysis*, Vol. 22 (2019), No. 6, pp. 1561–1595, DOI: 10.1515/fca-2019-0081.

Stochastic Models for Fractional Calculus, Second Edition (2019) De Gruyter Studies in Mathematics 43, ISBN 978-3-11-056024-4 (with Alla Sikorskii, Department of Psychiatry, Michigan State University).

The fractional d'Alembert's formulas, *Journal of Functional Analysis*, Vol. 277 (2019), Issue 12, p. 108279 (with Cheng-Gang Li, Department of Mathematics, Southwest Jiaotong University; Miao Li, Department of Mathematics, Sichuan University; and Sergey Piskarev, Science Research Computer Center, Lomonosov Moscow State University).

Relaxation patterns and semi-Markov dynamics, *Stochastic Processes and Their Applications*, Vol. 129 (2019), pp. 2850–2879 (with Bruno Toaldo, Department of Statistical Sciences, Sapienza - University of Rome).

Semi-fractional diffusion equations, Fractional calculus and Applied Analysis, Vol. 22 (2019), No. 2, pp. 326–357 (with Svenja Lage and Peter Kern, Mathematical Institute, Heinrich-Heine-University Düsseldorf, Germany).

Space-Time Duality and Fractional Hyperdiffusion, *Physical Review E*, Vol. 99 (2019), 022122 (10 pp.), DOI: 10.1103/PhysRevE.99.022122. (with James F. Kelly, US Naval Research Laboratory, Washington DC).

A Unified Spectral Method for FPDEs with Two-sided Derivatives; part I: A Fast Solver, *Journal Of Computational Physics*, Vol. 385 (2019), pp. 225–243. (with Mohsen Zayernouri and Mehdi Samiee, Department of Computational Mathematics, Science and Engineering, Michigan State University).

A Unified Spectral Method for FPDEs with Two-sided Derivatives; Part II: Stability and Error Analysis, Journal Of Computational Physics, Vol. 385 (2019), pp. 244–261 (with Mohsen Zayernouri and Mehdi Samiee, Department of Computational Mathematics, Science and Engineering, Michigan State University).

Continuous time random walks and space-time fractional differential equations, *Handbook of Fractional Calculus with Applications*, Volume 1: Basic Theory, Chapter 16, 2019 (with Hans-Peter Scheffler, Fachbereich Mathematik, Universität Siegen, Germany).

Inverse subordinators and time fractional equations, *Handbook of Fractional Calculus with Applications*, Volume 1: Basic Theory, Chapter 17, 2019 (with Erkan Nane, Department of Mathematics and Statistics, Auburn University: and P. Vellaisamy, Department of Mathematics, Indian Institute of Technology Bombay).

Particle tracking, *Handbook of Fractional Calculus with Applications*, Volume 3: Numerical Methods, Chapter 10, 2019 (with Yong Zhang, Department of Geological Sciences, University of Alabama).

The fractional advection-dispersion equation for contaminant transport, *Handbook of Fractional Calculus with Applications*, Volume 5: Applications in Physics, Part B, Chapter 6, 2019 (with James F. Kelly, Department of Statistics and Probability, Michigan State University).

Parameter estimation for ARTFIMA time series, *Journal of Statistical Planning and Inference*, Vol. 200 (2019), pp. 129–145 (with A. Ian McLeod, Department of Statistical and Actuarial Sciences, University of Western Ontario; and Farzad Sabzikar, Department of Statistics, Iowa State University).

Boundary conditions for two-sided fractional diffusion, *Journal of Computational Physics*, Vol. 376 (2019), pp. 1089–1107 (with James F. Kelly, Department of Statistics and Probability, Michigan State University; and Harish Sankaranarayanan, Department of Statistics and Probability, Michigan State University).

Space-time fractional Dirichlet problems, *Mathematische Nachrichten*, Vol. 291 (2018), pp. :2516–2535. (with Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, New Zealand; and Tomasz Luks, Institut für Mathematik, Universität Paderborn, Germany).

Anomalous Diffusion with Ballistic Scaling: A New Fractional Derivative, *Journal of Computational and Applied Mathematics*, Vol. 339 (2018), pp. 161–178. Special Issue on: "Modern fractional dynamic systems and applications" (with James F. Kelly, Department of Statistics and Probability, Michigan State University; and Cheng-Gang Li, Department of Mathematics, Southwest Jiaotong University, Chengdu, China).

Reprint of: Boundary Conditions for Fractional Diffusion, Journal of Computational and Applied Mathematics, Vol. 339 (2018), pp. 414–430. Special issue on "Modern fractional dynamic systems and applications" (with Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, New Zealand; Mihály Kovács, Department of Mathematics, Chalmers University of Technology, Sweden; and Harish Sankaranarayanan, Department of Statistics and Probability, Michigan State University).

Asymptotic behavior of semistable Lévy exponents and applications to fractal path properties, *Journal of Theoretical Probability*, Vol. 31 (2018), No. 1, pp. 598–617 (with Peter Kern, Mathematisches Institut, Heinrich-Heine-Universität Düsseldorf, Germany; and Yimin Xiao, Department of Statistics and Probability, Michigan State University).

Boundary Conditions for Fractional Diffusion, *Journal of Computational and Applied Mathematics*, Vol. 336 (2018), pp. 408–424 (with Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, New Zealand; Mihály Kovács, Department of Mathematics, Chalmers University of Technology, Sweden; and Harish Sankaranarayanan, Department of Statistics and Probability, Michigan State University).

Domain and range symmetries of operator fractional Brownian fields, *Stochastic Processes and their Applications*, Vol. 128 (2018), No. 1, pp. 39–78 (with Gustavo Didier, Mathematics Department, Tulane University; and Vladas Pipiras, Department of Statistics and Operations Research, University of North Carolina at Chapel Hill).

Space-time duality for the fractional advection dispersion equation, Water Resources Research, Vol. 53 (2017), No. 4, pp. 3464–3475 (with James F. Kelly, Department of Statistics and Probability, Michigan State University).

FracFit: A Robust Parameter Estimation Tool for Fractional Calculus Models, Water Resources Research, Vol. 53 (2017), No. 3, pp. 1763–2576 (with James F. Kelly, Department of Statistics and Probability, Michigan State University; Diogo Bolster, Department of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame; Jennifer D. Drummond, Integrative Freshwater Ecology Group, Centre for Advanced Studies of Blanes (CEAB-CSIC), Blanes, Girona, Spain; and Aaron I. Packman, Department of Civil and Environmental Engineering, Northwestern University).

Applications of Inverse Tempered Stable Subordinators, Computers and Mathematics with Applications, Vol. 73 (2017), No. 6, pp. 892–905. Special Issue on Time-fractional PDEs (with Mahmoud S. Alrawashdeh, Department of Mathematics and Statistics, Jordan University of Science and Technology; James F. Kelly, Department of Statistics and Probability, Michigan State University; and Hans-Peter Scheffler, Fachbereich Mathematik, Universität Siegen, Germany)

Exponents of operator self-similar random fields, *Journal of Mathematical Analysis and Applications*, Vol. 448 (2017), No. 2, pp. 1450–1466 (with Gustavo Didier, Mathematics Department, Tulane University; and Vladas Pipiras, Department of Statistics and Operations Research, University of North Carolina at Chapel Hill).

Tempered fractional stable motion, *Journal of Theoretical Probability*, Vol. 29 (2016), No. 2, pp. 681–706 (with Farzad Sabzikar, Department of Statistics and Probability, Michigan State University).

Backward fractional advection dispersion model for contaminant source prediction, *Water Resources Research*, Vol. 52 (2016), No. 4, pp. 2462–2473, doi:10.1002/2015WR018515 (with Yong Zhang, Department of Geological Sciences, University of Alabama; and Roseanna M. Neupauer, Department of Civil, Environmental, and Architectural Engineering, University of Colorado).

Anisotropic fractional diffusion tensor imaging, *Journal of Vibration and Control*, Vol. 22 (2016), No. 9, pp. 2211–2221. Special Issue on Challenges in Fractional Dynamics and Control Theory. (with Richard L. Magin and Allen Q. Ye, Department of Bioengineering, University of Illinois at Chicago).

Reflected stable subordinators and their governing equations, *Transactions of the American Mathematical Society*, Vol. 368 (2016), No. 1, pp. 227–248 (with Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, NZ; Mihály Kovács, Department of Mathematics and Statistics,

University of Otago, Dunedin, NZ; René L. Schilling; and Peter Straka, Department of Applied Mathematics, University of New South Wales, Australia).

Modeling mixed retention and early arrivals in multi-dimensional heterogeneous media using an explicit Lagrangian scheme, *Water Resources Research*, Vol. 51 (2015), pp. 6311–6337, doi:10.1002/2015WR016902 (with Yong Zhang, Department of Geological Sciences, University of Alabama; Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, NZ; and Eric M. LaBolle, University of California, Davis).

Stochastic solutions for fractional wave equations, *Nonlinear Dynamics*, Vol. 80 (2015), No. 4, pp. 1685–1695, Special issue on Fractional Dynamics and Its Applications (with René L. Schilling, Institute of Mathematical Stochastics, Technical University of Dresden, Germany; and Alla Sikorskii, Department of Statistics and Probability, Michigan State University).

Tempered fractional calculus, *Journal of Computational Physics*, Vol. 293 (2015), pp. 14–28, Special Issue on Fractional Partial Differential Equations. Winner of the Riemann-Liouville Award for the Best Theory Paper at the International Symposium on Fractional Differentiation and Its Applications, Catania, Sicily, Italy, June 2014 (with Farzad Sabzikar; and Jinghua Chen, School of Sciences, Jimei University, Xiamen, China).

Fractional diffusion on bounded domains, Fractional Calculus and Applied Analysis, Vol. 18 (2015), No. 2, pp. 342–360 (with Ozlem Defterli, Department of Mathematics and Computer Science, Cankaya University, Turkey; Marta D'Elia, Computer Science Research Institute, Sandia National Laboratories; Qiang Du, Department of Applied Physics and Applied Mathematics, Columbia University; Max Gunzburger, Department of Scientific Computing, Florida State University; and Rich Lehoucq, Computer Science Research Institute, Sandia National Laboratories).

Predicting flow and transport in highly heterogeneous alluvial aquifers, Geophysical Research Letters, Vol. 41, No. 21, pp. 7560–7565, 10.1002/2014GL061800. (with Mine Dogan, Department of Geology and Geophysics, University of Wyoming; Remke L. Van Dam, Science and Engineering Faculty, Queensland University of Technology, Brisbane, Australia; Gaisheng Liu, James J. Butler, Jr., and Geoffrey C. Bohling, Kansas Geological Survey, University of Kansas; David A. Benson, Hydrologic Science and Engineering, Colorado School of Mines; and David W. Hyndman, Department of Geological Sciences, Michigan State University).

Correlation Structure of Time-Changed Lévy Processes, Communications in Applied and Industrial Mathematics, Vol. 6 (2014), No. 1, p. e-483 (22 pp.), DOI: 10.1685/journal.caim.483, Special Issue in Honor of Francesco Mainardi. (with Nikolai N. Leonenko, Cardiff School of Mathematics, Cardiff University, United Kingdom; René L. Schilling; and Alla Sikorskii).

Tempered fractional time series model for turbulence in geophysical flows, *Journal of Statistical Mechanics: Theory and Experiment*, Vol. 2014, p. P09023 (13 pp.), Special Issue on Fractional Dynamics: Theory and Applications, doi:10.1088/1742-5468/2014/09/P09023 (with Farzad Sabzikar; Mantha S. Phanikumar, Department of Civil and Environmental Engineering, Michigan State University; and Aklilu Zeleke, Lyman Briggs College and Department of Statistics and Probability, Michigan State University).

Attenuated fractional wave equations with anisotropy, *Journal of Vibration and Acoustics*, Vol. 36 (2014), No. 5, 051004 (5 pp.) Special Issue on Fractional Calculus in Vibration and Acoustics, doi:10.1115/1.4025940 (with Robert J. McGough, Department of Electrical and Computer Engineering, Michigan State University).

Semi-Markov approach to continuous time random walk limit processes, *The Annals of Probability*, Vol. 42 (2014), No. 4, pp. 1699–1723. (with Peter Straka).

Stochastic integration for tempered fractional Brownian motion, Stochastic Processes and Their Applications, Vol. 124 (2014), No. 7, pp. 2363–2387 (with Farzad Sabzikar).

Parameter estimation for operator scaling random fields, *Journal of Multivariate Analysis*, Vol. 123 (2014), pp. 172–183 (with Chae Young Lim, Department of Statistics and Probability, Michigan State University; and Hans-Peter Scheffler, Fachbereich Mathematik, Universität Siegen, 57068 Siegen, Germany).

Extreme value theory with operator norming, *Extremes*, Vol. 16 (2013), No. 4, pp. 407–428 (with Hans-Peter Scheffler; and Stilian Stoey, Department of Statistics, University of Michigan).

Fractional order generalization of anomalous diffusion as a multidimensional extension of the transmission line equation, *IEEE Journal on Emerging and Selected Topics in Circuits and Systems*, Vol. 3 (2013), No. 3, pp. 432–441, DOI: 0.1109/JETCAS.2013.2265795. Special Issue on Fractional-Order Circuits and Systems, Guest Editors: A. Elwakil, B. Maundy, L. Fortuna, and G. Chen (with Johnson J. GadElkarim, Department of Electrical and Computer Engineering and Department of Psychiatry, University of Illinois at Chicago; Richard M. Magin; Silvia Capuani, Department of Physics, Sapienza University of Rome; Marco Palombo, Department of Physics, Sapienza University of Rome; Anand Kumar, Department of Psychiatry, University of Illinois at Chicago; and Alex D. Leow, Department of Bioengineering, University of Illinois at Chicago).

Hydraulic Conductivity Fields: Gaussian or Not? Water Resources Research, Vol. 49 (2013), pp. 4730–4737, doi:10.1002/wrcr.20376 (with Mine Dogan; Remke L. Van Dam; David W. Hyndman; and David Benson).

A novel numerical method for the time variable fractional order mobile-immobile advection-dispersion model, Computers and Mathematics with Applications, Vol. 66 (2013), No. 5, pp. 693–701. Special Issue on Fractional Differentiation and its Applications I. Guest editors: Dumitru Baleanu, Wen Chen and J.A. Tenreiro Machado (with F. Liu, Mathematical Sciences, Queensland University of Technology, Brisbane, Australia; R.J. McGough; P. Zhuang and Q. Liu, School of Mathematical Sciences, Xiamen University, Xiamen, China).

Correlation structure of fractional Pearson diffusions, Computers and Mathematics with Applications, Vol. 66 (2013), No. 5, pp. 737–745. Invited contribution to the Special Issue on Fractional Differentiation and its Applications I. Guest editors: Dumitru Baleanu, Wen Chen and J.A. Tenreiro Machado (with Nikolai N. Leonenko, Cardiff School of Mathematics, Cardiff University; and Alla Sikorskii).

Tempered Fractional Brownian Motion, Statistics and Probability Letters, Vol. 83 (2013), No. 10, pp. 2269–2275. (with Farzad Sabzikar).

Fractional Pearson diffusions, Journal of Mathematical Analysis and Applications, Vol. 403 (2013), No. 2, pp. 532–546 (with Nikolai N. Leonenko; and Alla Sikorskii).

Inverse stable subordinators, *Mathematical Modeling of Natural Phenomena*, Vol. 8 (2013), No. 2, pp. 1–16. Invited contribution to the special issue on Random Walks and Anomalous Diffusion. Guest editors Alexander Nepomnyashchy and Vladimir Volpert (with Peter Straka).

Mixing-driven equilibrium reactions in multidimensional fractional advection dispersion systems, *Physica A:* Statistical Mechanics and its Applications, Vol. 392 (2013), No. 10, pp. 2513–2525 (with Diogo Bolster, Environmental Fluid Dynamics Laboratories, Dept. of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame; David A. Benson; and Boris Baeumer).

Tauberian theorems for matrix regular variation, *Transactions of the American Mathematical Society*, Vol. 365 (2013), No. 4, pp. 2207–2221 (with Hans-Peter Scheffler).

Forecasting for periodic ARMA models, *Journal of Time Series Analysis*, Vol. 34 (2013), No. 2, pp. 187–193 (with Paul L. Anderson, Department of Mathematics and Computer Science, Albion College, Albion MI 49224; and Kai Zhang, Department of Statistics and Probability, Michigan State University, East Lansing MI 48823).

Fractal dimensions for continuous time random walk limits, *Statistics and Probability Letters*, Vol. 83 (2013), No. 4, pp. 1083–1093 (with Erkan Nane, Department of Mathematics and Statistics, Auburn University; and Yimin Xiao, Department of Statistics and Probability, Michigan State University).

A fractal Richards' equation to capture the non-Boltzmann scaling of water transport in unsaturated media, *Advances in Water Resources*, Vol. 52 (2013), pp. 292–295. (with HongGuang Sun, College of Hydrology and Water Resources, Hohai University, Nanjing 210098, China; Yong Zhang, Division of Hydrologic Sciences, Desert Research Institute, Las Vegas; Jianting Zhu, Division of Hydrologic Sciences, Desert Research Institute, Las Vegas; and Wen Chen, College of Hydrology and Water Resources, Hohai University, Nanjing 210098, China).

Fractional calculus in hydrologic modeling: A numerical perspective, *Advances in Water Research*, Vol. 51 (2013), pp. 479–497 (with David A. Benson; and Jordan Revielle, Hydrological Science and Engineering, Colorado School of Mines).

Mathematical Modeling (2013) 4th Ed., Elsevier/Academic Press, San Diego, ISBN 978-0-12-386912-8.

Numerical methods for solving the multi-term time-fractional wave-diffusion equations, Fractional Calculus and Applied Analysis, Vol. 16 (2013), No. 1, pp. 9-25, DOI: 10.2478/s13540-013-0002-2 (with Fawang Liu, Mathematical Sciences, Queensland University of Technology, Brisbane, Australia; Robert J. McGough, Department of Electrical and Computer Engineering, Michigan State University; Pinghui Zhuang, School of Mathematical Sciences, Xiamen University, China; and Qingxia Liu, School of Mathematical Sciences, Xiamen University, China).

Fractional wave equations with attenuation, Fractional Calculus and Applied Analysis, Vol. 16 (2013), No. 1, pp. 262-272, DOI: 10.2478/s13540-013-0016-9 (with Peter Straka; Yuzhen Zhou, Department of Statistics and Probability, Michigan State University; and Robert J. McGough).

Tempered fractional Cauchy problems on bounded domains, *Proceedings of the American Mathematical Society*, Vol. 141 (2013), No. 2, pp. 699–710. (with Erkan Nane; and P. Vellaisamy, Department of Mathematics, Indian Institute of Technology Bombay, Mumbai, India).

Fernique-type inequalities and moduli of continuity for anisotropic Gaussian random fields, *Transactions of the American Mathematical Society*, Vol. 365 (2013), No. 2, pp. 1081–1107. (with Wensheng Wang, School of Finance and Statistics, East China Normal University, and Department of Mathematics, Hangzhou Normal University; and Yimin Xiao).

The fundamental solutions for multi-term modified power law wave equations in a finite domain, *Electronic Journal of Mathematical Analysis and Applications*, Vol. 1, (2013), No. 7, pp. 1–12. (with H. Jiang, Department of Mathematics, Qinghai Normal University, China; F. Liu; R. J. McGough; and Q. Liu).

Fractional dynamics at multiple times, *Journal of Statistical Physics*, Vol. 149 (2012), pp. 878-886 (with Peter Straka).

Fractional governing equations for coupled random walks, Computers and Mathematics with Applications, Vol. 64 (2012), pp. 3021–3036. Special Issue on Advances in Fractional Differential Equations III (with Agnieszka Jurlewicz, Hugo Steinhaus Center, Institute of Mathematics and Computer Science, Wrocław University of Technology, Wrocław, Poland; Peter Kern, Mathematical Institute, Heinrich-Heine-Universität Düsseldorf, 40225 Düsseldorf, Germany; and Hans-Peter Scheffler).

Linking fluvial bed sediment transport across scales, *Geophysical Research Letters*, Vol. 39 (2012), L20404 (6 pp.), doi:10.1029/2012GL053476. (with Aaron I. Packman, Department of Civil and Environmental Engineering, Northwestern University; and Yong Zhang, Division of Hydrologic Sciences, Desert Research Institute, Las Vegas, Nevada).

Stochastic solution to a time-fractional attenuated wave equation, *Nonlinear Dynamics*, Vol. 70 (2012), No. 2, pp. 1273–1281. Invited contribution to the special issue on Nonlinear Fractional Differential equations and their applications, to celebrate Professor Ravi P. Agarwal's 65th birthday (with Peter Straka; Yuzhen Zhou; and Robert J. McGough).

Product rule for vector fractional derivatives, *Fractional Calculus and Applied Analysis*, Vol. 15 (2012), No. 3, pp. 463–478 (with Diogo Bolster, Department of Civil Engineering and Geological Sciences, University of Notre Dame; and Alla Sikorskii).

Clustered continuous time random walks: Diffusion and relaxation consequences, *Proceedings of the Royal Society A: Mathematical, Physical & Engineering Sciences*, Vol. 468 (2012), No. 2142, pp. 1615–1628, doi:10.1098/rspa.2011.0697 (with Karina Weron, Institute of Physics, Wrocław University of Technology, Poland; Aleksander Stanislavsky, Institute of Radio Astronomy, Kharkov, Ukraine; Agnieszka Jurlewicz, Institute of Mathematics and Computer Science, Wrocław University of Technology, Poland; and Hans-Peter Scheffler, Fachbereich Mathematik, Universität Siegen, 57068 Siegen, Germany).

Space-time fractional diffusion on bounded domains, Journal of Mathematical Analysis and Applications, Vol. 393 (2012), No. 2, pp. 479–488, doi:10.1016/j.jmaa.2012.04.032 (with Zhen-Qing Chen, Department of Mathematics, University of Washington; and Erkan Nane, Department of Mathematics and Statistics, Auburn University).

Parameter estimation for exponentially tempered power law distributions, *Communications in Statistics - Theory and Methods*, Vol. 41 (2012), No. 10, pp. 1839–1856 (with Parthanil Roy, Theoretical Statistics and Mathematics Unit, Indian Statistical Institute, Kolkata, India; and Qin Shao, Department of Mathematics and Statistics, University of Toledo).

Fractional Calculus, Anomalous Diffusion, and Probability, *Fractional Dynamics*, R. Metzler and J. Klafter, Eds., World Scientific, Singapore, pp. 265–284, 2012.

Stochastic Models for Fractional Calculus (2012) De Gruyter Studies in Mathematics 43, ISBN 978-3-11-025869-1 (with Alla Sikorskii, Department of Statistics and Probability, Michigan State University).

Cluster continuous time random walks, *Studia Mathematica*, Vol. 205 (2011), No. 1, pp. 13–30 (with Agnieszka Jurlewicz; and Hans-Peter Scheffler).

The fractional Poisson process and the inverse stable subordinator, *Electronic Journal of Probability*, Vol. 16 (2011), Paper no. 59, pp. 1600–1620 (with Erkan Nane; and P. Vellaisamy).

Gaussian setting time for solute transport in fluvial systems, *Water Resources Research*, Vol. 47 (2011), W08601 (6 pp.), doi:10.1029/2010WR010102 (with Yong Zhang, Division of Hydrologic Sciences, Desert Research Institute, Las Vegas, Nevada).

Tempered stable laws as random walk limits, *Statistics and Probability Letters*, Vol. 81 (2011), No. 8, pp. 989–997 (with Arijit Chakrabarty, Department of Mathematics, Indian Institute of Science, Bengaluru 560012, INDIA).

Distributed-order fractional Cauchy problems on bounded domains, *Journal of Mathematical Analysis and Applications*, Vol. 379 (2011), pp. 216–228 (with Erkan Nane; and P. Vellaisamy).

Asymptotic results for Fourier-PARMA time series, *Journal of Time Series Analysis*, Vol. 32 (2011), No. 2, pp. 157–174 (with Yonas Gebeyehu Tesfaye, Hydrologist, GEI Consultants, Inc., Rancho Cordova, California; and Paul L. Anderson, Department of Mathematics, Albion College, Michigan).

Extremal behavior of a coupled continuous time random walk, *Physica A: Statistical Mechanics and Its Applications*, Vol. 390 (2011), pp. 505–511 (with Rina Schumer, Division of Hydrologic Sciences, Desert Research Institute, Reno, NV 89512; and Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, New Zealand).

Fractional normal inverse Gaussian diffusion, *Statistics and Probability Letters*, Vol. 81 (2011), pp. 146–152 (with A. Kumar and P. Vellaisamy, Department of Mathematics, Indian Institute of Technology Bombay, Mumbai, India).

Modeling and simulation with operator scaling, *Stochastic Processes and Their Applications*, Vol. 120 (2010) pp. 2390–2411 (with Serge Cohen, Université Paul Sabatier, Laboratoire de Statistique et de Probabilités, Toulouse, France; and Jan Rosiński, Department of Mathematics, University of Tennessee, Knoxville).

Stochastic models for relativistic diffusion, *Physical Review E*, Vol. 82 (2010), p. 011132, DOI: 10.1103/Phys-RevE.82.011132 (with Boris Baeumer; and Mark Naber, Department of Mathematics, Monroe County Community College, Michigan).

Particle size dependence of the probability distribution functions of travel distances of gravel particles in bedload transport, *Journal of Geophysical Research*, Vol. 115 (2010), p. F00A14, doi:10.1029/2009JF001276 (with K. M. Hill, St. Anthony Falls Laboratory, Department of Civil Engineering, University of Minnesota; and L. DellAngelo, Barr Engineering, Minneapolis, Minnesota, USA).

Normal and anomalous dispersion of gravel tracer particles in rivers, *Journal of Geophysical Research*, Vol. 115 (2010), p. F00A12, doi:10.1029/2008JF001222 (with Efi Foufoula-Georgiou and Vamsi Ganti, St. Anthony Falls Laboratory and National Center for Earth-surface Dynamics, Department of Civil Engineering,

University of Minnesota; Enrica Viparelli, and Gary Parker, Ven Te Chow Hydrosystems Laboratory, Departments of Civil and Environmental Engineering and Geology, University of Illinois).

Confidence interval estimation under the presence of non-Gaussian random errors: Applications to uncertainty analysis of chemical processes and simulation, *Computers & Chemical Engineering*, Vol. 34 (2010), pp. 298–305, doi:10.1016/j.compchemeng.2009.11.004 (with V. R. Vásquez and W. B. Whiting, Department of Chemical Engineering, University of Nevada, Reno).

Tempered stable Lévy motion and transient super-diffusion, *Journal of Computational and Applied Mathematics*, Vol. 233 (2010), pp. 2438–2448, 10.1016/j.cam.2009.10.027. (with Boris Baeumer).

Particle tracking for fractional diffusion with two time scales, *Computers and Mathematics with Applications*, Vol. 59 (2010), No. 3, pp. 1078–1086, doi:10.1016/j.camwa.2009.05.009. Invited Paper for the Special Issue on Advances in Fractional Differential Equations, (with Yong Zhang, Desert Research Institute, Las Vegas, Nevada; and Boris Baeumer).

Space-time duality for fractional diffusion, *Journal of Applied Probability*, Vol. 46 (2009), pp. 1100–1115 (with Erkan Nane, Department of Mathematics and Statistics, Auburn University; and Boris Baeumer, Department of Mathematics & Statistics, University of Otago, Dunedin, New Zealand).

A bivariate infinitely divisible distribution with exponential and Mittag-Leffler marginals, *Statistics and Probability Letters*, Vol. 79 (2009), pp. 1596–1601 (with Tomasz J. Kozubowski, Department of Mathematics and Statistics, University of Nevada, Reno).

Fractional advection-dispersion equations for modeling transport at the Earth surface, *Journal of Geophysical Research*, Vol. 114 (2009), p. F00A07, doi:10.1029/2008JF001246 (with Rina Schumer, Desert Research Institute, Reno, Nevada; and Boris Baeumer, Department of Mathematics & Statistics, University of Otago, Dunedin, New Zealand).

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Fractional calculus and turbulence, ARO Fluid Dynamics Program Review, Research Triangle Park, North Carolina, August 2018 (with B. Baeumer, Maths & Stats, University of Otago, New Zealand; D. Benson,

Geological Engineering, Colorado School of Mines; J. Kelly, Statistics and Probability, Michigan State University; M. Kovács, Chalmers U. Technology, Sweden; T. Luks, Mathematics, Uni. Paderborn, Germany; M.S. Phanikumar, Civil & Environmental Engineering, Michigan State U; F. Sabzikar, Department of Statistics, Iowa State University; M. Samiee, Comput. Math. Sci. Eng., Michigan State U; H.-P. Scheffler, Math, Universität Siegen, Germany; R. Schumer, Hydrology, Desert Research Institute, Reno, Nevada; A. Sikorskii, Statistics and Probability, Michigan State U; C. Tadjeran, happily retired; S. W. Wheatcraft, Geological Sciences, U. Nevada, Reno; M. Zayernouri, Comput. Math. Sci. Eng., Michigan State U; A. Zeleke, Lyman Briggs College, Michigan State U; and Y. Zhang, Department of Geological Sciences, U. Alabama).

Boundary Conditions for Two-Sided Fractional Diffusion, ICERM Workshop on Fractional PDEs: Theory, Algorithms and Applications, Providence, Rhode Island, June 2018 (with James F. Kelly* and Harish Sankaranarayanan, Department of Statistics and Probability, Michigan State University).

Organizing Committee, ICERM Workshop on Fractional PDEs: Theory, Algorithms and Applications, Brown University, Providence, Rhode Island, 19–22 June 2018.

A continuous power law wave equation for biomedical ultrasound, Acoustical Society of America, Minneapolis, Minnesota, May 2018 (with James F. Kelly*, Department of Statistics and Probability, Michigan State University; and Robert J. McGough, Department of Electrical and Computer Engineering, Michigan State University).

What Is the Fractional Laplacian? Minisymposium MS41 Fractional Partial Differential Equations: Theory, Numerics, and Applications. International Conference On Spectral and High Order Methods (ICOSAHOM), London UK, July 2018 (with Anna Lischke*, Guofei Pang, Mamikon Gulian, Fangying Song, Xiaoning Zheng, Zhiping Mao, Mark Ainsworth, and George Em Karniadakis, Division of Applied Mathematics, Brown University; Christian Glusa, Center for Computing Research, Sandia National Laboratory; and Wei Cai, Department of Mathematics, Southern Methodist University, Dallas, TX).

Multifractal Modeling of Turbulent Mixing, Michigan State University College of Engineering Graduate Research Symposium, March 2018 (with Mehdi Samiee* and Mohsen Zayernouri, Department of Computational Mathematics, Science, and Engineering, Michigan State University).

Phase-Field Model Uncertainty Quantification for Structural Failure due to Fatigue, Michigan State University College of Engineering Graduate Research Symposium, March 2018 (with Eduardo A. Barros de Moraes* and Mohsen Zayernouri, Department of Computational Mathematics, Science, and Engineering, Michigan State University).

Uncertainty Quantification of a Damage and Fatigue Phase Field Model, 13th World Congress in Computational Mechanics, New York, 22–27 July 2018 (with Eduardo A. Barros de Moraes* and Mohsen Zayernouri, Department of Computational Mathematics, Science, and Engineering, Michigan State University).

Space-time duality for nonlocal diffusion, MANNA 2017 (Modeling, Analysis, and Numerics for Nonlocal Applications) workshop, Santa Fe, New Mexico, 11–15 December 2017 (with James F. Kelly*, Department of Statistics and Probability, Michigan State University).

Time-Series Analysis of Intermittent Velocity Fluctuations in Turbulent Boundary Layers, 70th Annual Meeting of the American Physical Society Division of Fluid Dynamics, Denver, Colorado, 19–21 November 2017 (with Mohsen Zayernouri*, Department of Computational Mathematics, Science, and Engineering, Michigan State University; Mehdi Samiee, Department of Mechanical Engineering, Michigan State University; and Joseph Klewicki, Department of Mechanical Engineering, University of New Hampshire).

Multifractal Modeling of Turbulent Mixing, 70th Annual Meeting of the American Physical Society Division of Fluid Dynamics, Denver, Colorado, 19–21 November 2017 (with Mehdi Samiee*, Department of Mechanical Engineering, Michigan State University; and Mohsen Zayernouri, Department of Computational Mathematics, Science, and Engineering, Michigan State University).

Space-Time Duality and Anomalous Diffusion, Minisymposium on Data-Driven Fractional Modeling, Simulation and Prediction, SIAM Conference on Computational Science and Engineering (CSE17), 27 February – 3 March 2017, Atlanta, Georgia (with James F. Kelly*, Department of Statistics and Probability, Michigan State University).

FracFit: A Robust Parameter Estimation Tool for Anomalous Transport Problems, American Geophysical Union Annual Meeting, San Francisco, December 2016 (with James F. Kelly*, Department of Statistics and Probability, Michigan State University; Diogo Bolster, Department of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame; Jennifer Drummond and Aaron I. Packman, Department of Civil and Environmental Engineering, Northwestern University).

Main organizer, Workshop on Future Directions in Fractional Calculus Research and Applications, Michigan State University, 17 – 21 October 2016.

Space-Time Duality and Medical Ultrasound, Workshop on Future Directions in Fractional Calculus Research and Applications, Michigan State University, 21 October 2016. Winner of the Bruce J. West award for best paper at this conference. (with James F. Kelly*, Department of Statistics and Probability, Michigan State University)

Scientific Committee, Third Mexican Workshop on Fractional Calculus (TMWFC), Unidad Profesional Interdisciplinaria de Ingeniera, Campus Zacatecas of the National Polytechnic Institute, Zacatecas, México, September 11–16, 2016.

Steering Committee, International Conference on Fractional Differentiation and its Applications, Novi Sad, Serbia, July 18–20, 2016.

Backward Fractional Diffusion Equation, Minisymposium MS133: Fractional Partial Differential Equations: Modeling, Simulation, Application, and Analysis, 2016 SIAM Annual Meeting, Boston, 15 July 2016 (with Yong Zhang, Department of Geological Sciences, University of Alabama; and Roseanna M. Neupauer, Department of Civil, Environmental, and Architectural Engineering, University of Colorado).

Scientific Program Committee, 2016 International Workshop on Applied Probability, Toronto, Ontario, Canada, June 20–23, 2016.

Climate data: Long range dependent or nonstationary? Dependence, Stability, and Extremes Workshop, The Fields Institute, Toronto, Ontario, Canada, 6 May 2016 (with Paul L. Anderson, Department of Mathematics and Computer Science, Albion College; Metin Eroglu, Department of Statistics and Probability, Michigan State University; Joshua French, Department of Mathematical and Statistical Sciences, University of Colorado, Denver; Piotr Kokoszka, Department of Statistics, Colorado State University; and Stilian Stoev, Department of Statistics, University of Michigan).

Fourier Transform Methods for Heavy Tailed Climate Data, Dependence, Stability, and Extremes Workshop, The Fields Institute, Toronto, Ontario, Canada, 6 May 2016 (with Metin Eroglu*, Department of Statistics and Probability, Michigan State University).

Simulating the MADE plume through high resolution characterization, Chapman Conference: The MADE Challenge for Groundwater Transport in Highly Heterogeneous Aquifers: Insights from 30 Years of Modeling and Characterization at the Field Scale and Promising Future Directions, Valencia, Spain, October 2015 (with Mine Dogan*, Department of Environmental Engineering and Earth Science, Clemson University; David W. Hyndman, Department of Geological Sciences, Michigan State University; Remke L. Van Dam, Department of Geological Sciences, Michigan State University and Queensland University of Technology, Brisbane, Australia; James J. Butler Jr., Kansas Geological Survey; and David A. Benson, Hydrologic Science and Engineering, Colorado School of Mines).

Reflected stable Lévy motions and their governing equations, Center for Applied Mathematics Colloquium, Cornell University, 25 September 2015 (with Boris Baeumer, Maths & Stats, University of Otago, New Zealand; David Benson, Geological Engineering, Colorado School of Mines; Mihály Kovács, Maths & Stats, University of Otago, New Zealand; Hans-Peter Scheffler, Math, Uni Siegen, Germany; René L. Schilling, Institute of Math. Stoch., TU Dresden; Rina Schumer, Hydrology, Desert Research Institute, Reno, Nevada; Alla Sikorskii, Statistics and Probability, Michigan State; Peter Straka, Applied Mathematics, U New South Wales; Charles Tadjeran, Mathematics, U Nevada; Stephen W. Wheatcraft, Geological Sciences, U Nevada).

Tail fitting of Pareto-type tails truncated at intermediate levels, 9th International Conference on Extreme Value Analysis (EVA), University of Michigan, Ann Arbor, USA, June 15-19, 2015 (with Jan Beirlant*,

Department of Mathematics and Leuven Statistics Research Center, KU Leuven; M.I. Fraga Alves and M.I. Gomes, Department of Statistics and Operations Research, University of Lisbon).

Can the Advection-Diffusion Equation explain complex tracer transport behavior? NovCare 2015 International Conference on Novel Methods for Subsurface Characterization and Monitoring: From Theory to Practice, University of Kansas, May 19-21, 2015 (with Mine Dogan*, Department of Geological Sciences, Michigan State University; David A. Benson, Hydrologic Science and Engineering, Colorado School of Mines; Remke L. Van Dam, Department of Geological Sciences, Michigan State University; James J. Butler Jr., Kansas Geological Survey; and David W. Hyndman, Department of Geological Sciences, Michigan State University).

Organizer, Special Session on Random Fields and Long Range Dependence at the Central Spring Sectional Meeting of the American Mathematical Society, Michigan State University, March 13–15, 2015 (with Yimin Xiao, Department of Statistics and Probability, Michigan State University).

Organizer, Special Session on Fractional Calculus and Nonlocal Operators at the Central Spring Sectional Meeting of the American mathematical Society, Michigan State University, March 13–15, 2015 (with Russell Schwab, Department of Mathematics, Michigan State University).

Random field models for hydraulic conductivity in ground water flow, Special Session on Random Fields and Long Range Dependence, AMS Regional Meeting, Michigan State University, 15 March 2015 (with Boris Baeumer, Maths & Stats, U Otago, Dunedin, New Zealand; David A. Benson, Geology & Geo Eng, Colorado School of Mines; Hermine Bierme, MAP5 Universite Rene Descartes, Paris; Geoffrey Bohling, Kansas Geological Survey, Lawrence, Kansas; Mine Dogan, Geology and Geophysics, University of Wyoming; David Hyndman, Geological Sciences, Michigan State University; Tomasz J. Kozubowski, Math and Stat, Univ. of Nevada, Reno; Chae Young Lim, Statistics and Probability, Michigan State U; Silong Lu, Tetra Tech, Inc., Atlanta, GA; Fred J. Molz, Environmental Eng & Science, Clemson University; Farzad Sabzikar, Statistics and Probability, Michigan State U; Hans-Peter Scheffler, Mathematics, Uni Siegen, Germany; Remke Van Dam, Institute for Future Environments, QUT).

Fractional diffusion on bounded domains, Special Session on Fractional Calculus and Nonlocal Operators, AMS Regional Meeting, Michigan State University, 14 March 2015 (with Boris Baeumer, Maths & Stats, University of Otago, New Zealand; Jinghua Chen, School of Sciences, Jimei University, China; Zhen-Qing Chen, Mathematics, University of Washington; Ozlem Defterli, Math and Computer Sci, Cankaya U, Turkey; Marta D'Elia, Computer Sci Research Inst, Sandia National Labs; Qiang Du, Applied Physics & Applied Math, Columbia University; Max Gunzburger, Scientific Computing, Florida State U; Mihaly Kovacs, Maths & Stats, University of Otago, New Zealand; Rich Lehoucq, Comp Sci Research Inst, Sandia National Labs; Tomasz Luks, Mathématique, Ecole Centrale de Marseille; Farzad Sabzikar, Statistics and Probability, Michigan State; Rene L. Schilling, Institute of Math. Stoch., TU Dresden; Alla Sikorskii, Statistics and Probability, Michigan State; Peter Straka, Applied Mathematics, U New South Wales).

Correlation structure of time-changed Lévy processes, Special Session on Fractional Calculus and Nonlocal Operators, AMS Regional Meeting, Michigan State University, 14 March 2015 (with Alla Sikorskii*, Statistics and Probability, Michigan State University; Nikolai N. Leonenko, Cardiff University; and René L. Schilling, Technische Universität Dresden).

Stochastic Integration for Tempered Fractional Brownian Motion, Special Session on Random Fields and Long Range Dependence, AMS Regional Meeting, Michigan State University, 15 March 2015 (with Farzad Sabzikar*, Statistics and Probability, Michigan State University).

Fractional Calculus, Anomalous Diffusion, and Probability, Colloquium Talk, Department of Mathematics, Oregon State University, February 16, 2015 (with Paul Anderson, Math and Computer Science, Albion College; Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, NZ; David Benson, Geological Engineering, Colorado School of Mines; Mine Dogan, Geological Sciences, Michigan State University; David Hyndman, Geological Sciences, Michigan State University; Peter Kern, Department of Mathematics, Heinrich-Heine-University, Duesseldorf, Germany; James Kelly, Naval Postgraduate School; M. Kovács, Department of Mathematics & Statistics, University of Otago, New Zealand; Robert McGough,

Electrical Engineering, Michigan State; Erkan Nane, Math and Stat, Auburn University; Hans-Peter Scheffler, Department of Mathematics, University of Siegen, Germany; Rina Schumer, Hydrology, Desert Research Institute, Reno, Nevada; Remke Van Dam, Geological Sciences, Michigan State U.; Stephen W. Wheatcraft, Geological Sciences, U. Nevada, Reno; Yimin Xiao, Statistics and Probability, Michigan State University; and Yong Zhang, Department of Geological Sciences, University of Alabama).

Fractional Pearson Diffusions, Mathematical Finance, Probability, and Partial Differential Equations Seminar, Rutgers University, February 6, 2015 (with Alla Sikorskii*, Department of Statistics and Probability, Michigan State University; and Nikolai N. Leonenko, School of Mathematics, Cardiff University, UK).

Semi-Markov approach to continuous time random walk limit processes, Invited Talk, Joint Mathematics Meetings, San Antonio, TX, January 13, 2015 (with Peter Straka, School of Mathematics and Statistics, University of New South Wales, Australia).

Stochastic solutions for fractional wave equations. Joint Mathematics Meetings, San Antonio, TX, January 13–15, 2015 (with Alla Sikorskii*, Department of Statistics and Probability, Michigan State University; and René L. Schilling, Technische Universität Dresden).

Quantifying the value of different data sets and modeling schemes for flow and transport simulations. American Geophysical Union Annual Meeting, San Francisco, December 2014 (with Mine Dogan, Department of Geology and Geophysics, University of Wyoming; Remke L. Van Dam, Science and Engineering Faculty, Queensland University of Technology, Brisbane, Australia; James J. Butler, Jr., Kansas Geological Survey, University of Kansas; David A. Benson, Hydrologic Science and Engineering, Colorado School of Mines; and David W. Hyndman*, Department of Geological Sciences, Michigan State University).

Tempered Fractional Calculus, Probability Seminar, Department of Mathematics, University of Washington, Seattle, November 2014 (with Farzad Sabzikar, Department of Statistics and Probability, Michigan State University; Inmaculada B. Aban, Department of Biostatistics, University of Alabama in Birmingham; Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, NZ; Jinghua Chen, School of Sciences, Jimei University, Xiamen, China; Peter Kern, Department of Mathematics, University of Duesseldorf, Germany; Anna K. Panorska, Department of Mathematics and Statistics, University of Nevada, Reno; Mantha S. Phanikumar, Department of Civil & Environmental Engineering, Michigan State University; Parthanil Roy, Indian Statistical Institute, Kolkata, India; Hans-Peter Scheffler, Department of Mathematics, University of Toledo; Alla Sikorskii, Department of Statistics and Probability, Michigan State University; Aklilu Zeleke, Lyman Briggs School and Department of Statistics and Probability, Michigan State University; and Yong Zhang, Department of Geological Sciences, University of Alabama).

Stochastic solutions for fractional wave equations, AMS Fall Western Sectional Meeting, San Francisco, CA, October 25–26, 2014 (with René L. Schilling, Institute of Mathematical Stochastics, Technical University of Dresden, Germany; and Alla Sikorskii*, Department of Statistics and Probability, Michigan State University).

Organizing Committee, Second Mexican Workshop on Fractional Calculus, University of Guanajuato, Mexico, 6–9 October 2014.

Fractional diffusion on bounded domains, Scientific Computing Seminar, Brown University, 26 September 2014 (with Ozlem Defterli, Department of Mathematics and Computer Science, Cankaya University, Turkey; Marta D'Elia, Computer Science Research Institute, Sandia National Laboratories; Qiang Du, Department of Applied Physics and Applied Mathematics, Columbia University; Max Gunzburger, Department of Scientific Computing, Florida State University; and Rich Lehoucq, Computer Science Research Institute, Sandia National Laboratories).

Program Committee, 6th IFAC Symposium on Fractional Differentiation and Its Applications, Catania, Italy, June 2014.

Organizer, Invited Session on Modeling, Numerical Methods, and Analysis of Fractional Differential Equations and Related Nonlocal Problems, 6th IFAC Symposium on Fractional Differentiation and Its Applications, Catania, Italy, June 2014.

Tempered Fractional Calculus, Semi-Plenary Talk, 6th IFAC Symposium on Fractional Differentiation and Its Applications, Catania, Italy, June 2014. Winner of the Riemann-Liouville Award for the Best Theory Paper at this conference.

Fractional diffusion on bounded domains, Special Session on Modeling, Numerical Methods, and Analysis of Fractional Differential Equations and Related Nonlocal Problems, 6th IFAC Symposium on Fractional Differentiation and Its Applications, Catania, Italy, June 2014.

Stochastic solutions for fractional wave equations, 6th IFAC Symposium on Fractional Differentiation and Its Applications, Catania, Italy, June 2014 (with René L. Schilling, Institute of Mathematical Stochastics, Technical University of Dresden, Germany; and Alla Sikorskii*, Department of Statistics and Probability, Michigan State University).

A new anisotropic model for fractional diffusion tensor imaging, 6th IFAC Symposium on Fractional Differentiation and Its Applications, Catania, Italy, June 2014 (with Andrzej Hanyga, ul. Bitwy Warszawskiej 1920r. 14/52, 02-366 Warszawa, Poland; and R. L. Magin, Dept of Bioengineering, University of Illinois at Chicago).

Lagrangian Approximation of Fractional Diffusion Equations, Special Session on Modeling, Numerical Methods, and Analysis of Fractional Differential Equations and Related Nonlocal Problems, 6th IFAC Symposium on Fractional Differentiation and Its Applications, Catania, Italy, June 2014 (with Yong Zhang*, Desert Research Institute, Las Vegas, Nevada; and Boris Baeumer, Department of Mathematics & Statistics, University of Otago, New Zealand).

Finite dimensional distributions for continuous time random walks, Probability Seminar, University of Siegen, Germany, June 2014.

Tempered fractional stable motion, Joint Annual Meeting of the American Mathematical Society and the Mathematical Association of America, Baltimore, Maryland, January 2014 (with Farzad Sabzikar*, Department of Statistics and Probability, Michigan State University).

3D Flow and Transport Simulations at the MADE site, American Geophysical Union Annual Meeting, San Francisco, December 2013 (with Mine Dogan*, Department of Geological Sciences, Michigan State University; David A. Benson, Hydrologic Science and Engineering, Colorado School of Mines; Remke L. Van Dam, Department of Geological Sciences, Michigan State University; James J. Butler Jr., Kansas Geological Survey; and David W. Hyndman, Department of Geological Sciences, Michigan State University).

Covariance structure of continuous time random walk limit processes, Workshop on Fractional Calculus, Probability and Non-local Operators: Applications and Recent Developments. Bilbao, Spain, November 2013 (with Alla Sikorskii*, Department of Statistics and Probability, Michigan State University; and Nikolai N. Leonenko, Cardiff School of Mathematics, Cardiff University).

Stochastic solutions for fractional wave equations, Invited talk, Workshop on Fractional Calculus, Probability and Non-local Operators: Applications and Recent Developments. Bilbao, Spain, November 2013.

Scientific Committee, Workshop on Fractional Calculus, Probability and Non-local Operators: Applications and Recent Developments. On the occasion of the 70th birthday of Francesco Mainardi. Bilbao, Spain, November 2013.

An Anisotropic Fractional Order Model of Anomalous Diffusion, International Society for Magnetic Resonance in Medicine Workshop on Diffusion as a Probe of Neural Tissue Microstructure, Podstrana, Croatia, 14–18 October 2013 (with Richard L. Magin*, Department of Bioengineering, University of Illinois at Chicago; Johnson J. GadElkarim, Department of Electrical and Computer Engineering, University of Illinois at Chicago; Alex D. Leow and Shaolin Yang, Department of Psychiatry, University of Illinois at Chicago; and Andrzej Hanyga, Warsaw, Poland).

Correlation structure of fractional Pearson diffusions, Invited talk, Interdisciplinary Conference Series: Applied Mathematics, Modeling, and Computer Science (AMMCS-2013) Waterloo, Ontario, Canada, August 26–30, 2013 (with Alla Sikorskii* and Nikolai N. Leonenko).

CTRW Model for Fractional Wave Equations, Invited talk, Interdisciplinary Conference Series: Applied Mathematics, Modeling, and Computer Science (AMMCS-2013) Waterloo, Ontario, Canada, August 26-30, 2013 (with Alla Sikorskii, Department of Statistics and Probability, Michigan State University).

Parameter estimation for operator scaling random fields, Joint Statistical Meeting, Montreal, Canada, August 3–8, 2013 (with Chae Young Lim*, Department of Statistics and Probability, Michigan State University; and Hans-Peter Scheffler, Department of Mathematics, University of Siegen, Germany).

Scientific Committee, 7th International Conference on Lévy Processes, Wrocław, Poland, July 15–19, 2013.

Reflected spectrally negative stable processes and fractional Cauchy problems, plenary talk, 7th International Conference on Lévy Processes, Wrocław, Poland, July 15–19, 2013 (with Boris Baeumer, Department of Mathematics & Statistics, University of Otago, New Zealand; M. Kovács; René Schilling, Institute for Stochastic Mathematics, Technical University of Dresden, Germany; and Peter Straka, Department of Applied Mathematics, University of New South Wales, Australia).

Tempered Fractional Calculus, keynote address, First International Symposium on Fractional Partial Differential Equations: Theory, Numerics, and Applications, Newport, Rhode Island, June 2013 (with Farzad Sabzikar, Department of Statistics and Probability, Michigan State University; Boris Baeumer, Department of Mathematics & Statistics, University of Otago, New Zealand; Anna K. Panorska, , Department of Mathematics and Statistics, University of Nevada, Reno; Parthanil Roy, Indian Statistical Institute, Kolkata; Hans-Peter Scheffler, Department of Mathematics, University of Siegen, Germany; Qin Shao, Department of Mathematics, University of Toledo; Alla Sikorskii, Department of Statistics and Probability, Michigan State University; and Yong Zhang).

Correlation structure of fractional Pearson diffusions, Invited talk, First International Symposium on Fractional Partial Differential Equations: Theory, Numerics, and Applications, Newport, Rhode Island, June 2013 (with Alla Sikorskii*, Department of Statistics and Probability, Michigan State University; and Nikolai N. Leonenko, Cardiff School of Mathematics, Cardiff University).

Scientific Committee, First International Symposium on Fractional Partial Differential Equations: Theory, Numerics, and Applications, Newport, Rhode Island, June 2013.

TEST-RWHet-v1.0: A software suite for tempered stable preasymptotic pollutant transport in multi-dimensional natural media, MODFLOW and More 2013, Integrated Ground Water Modeling Center, Colorado School of Mines, Golden, Colorado, June 2013 (with Yong Zhang*, Division of Hydrologic Sciences, Desert Research Institute, Las Vegas NV; Boris Baeumer; Rina Schumer, Department of Hydrological Sciences, Desert Research Institute, Reno, Nevada; and Eric M. LaBolle, Land, Air, and Water Resources, University of California, Davis).

Fractional Calculus, Anomalous Diffusion, and Probability, Department Colloquium, Department of Mathematics, Washington State University, May 2013.

Fractional Calculus, Heavy Tails, and Anomalous Diffusion, Department Colloquium, Department of Mathematics and Statistics, Old Dominion University, March 2013.

Stable Laws and Fractional Diffusion, Department Colloquium, Department of Mathematics and Statistics, University of Nevada, Reno, March 2013.

Fractional Calculus, Heavy Tails, and Anomalous Diffusion, Department Colloquium, Department of Mathematical Sciences, Clemson University, March 2013.

Fractional Pearson Diffusion, Joint Annual Meeting of the American Mathematical Society and the Mathematical Association of America, San Diego, California, January 2013 (with Alla Sikorskii*, Department of Statistics and Probability, Michigan State University; and Nikolai N. Leonenko, Cardiff School of Mathematics, Cardiff University).

Tempered fractional Brownian motion, Joint Annual Meeting of the American Mathematical Society and the Mathematical Association of America, San Diego, California, January 2013 (with Farzad Sabzikar*, Department of Statistics and Probability, Michigan State University).

Fractional Calculus Models for Anomalous Diffusion, Department of Mathematics, Tulane University, December 2012 (with David Benson, Department of Geological Engineering, Colorado School of Mines; Hermine Biermé, Université René Descartes, Paris, France; Serge Cohen, Université Paul Sabatier, Laboratoire de Statistique et de Probabilités, Toulouse, France; Mine Dogan, Department of Geological Sciences, Michigan State University; David Hyndman, Department of Geological Sciences, Michigan State University; Jan Rosiński, Department of Mathematics, University of Tennessee, Knoxville; Hans-Peter Scheffler; Rina Schumer; Alla Sikorskii; Remke L. Van Dam, Department of Geological Sciences, Michigan State University; and Stephen W. Wheatcraft, Geological Sciences, University of Nevada, Reno).

Linking fluvial bed sediment transport across scales, Annual Meeting of the American Geophysical Union, San Francisco, December 2012 (with Aaron Packman*, Department of Civil and Environmental Engineering, Northwestern University; and Yong Zhang).

Forecasting for periodic ARMA models, 2012 National Bureau of Economic Research – National Science Foundation Time Series Conference, Texas A & M University, October 2012 (with Kai Zhang*, Department of Statistics and Probability, Michigan State University; and Paul L. Anderson, Department of Mathematics and Computer Science, Albion College, Albion MI 49224).

The Inverse Stable Subordinator, Invited talk, International Conference on Nonlocal Operators: Analysis, Probability, Geometry and Applications, Center for Interdisciplinary Research, University of Bielefeld, Germany, July 2012 (with Boris Baeumer; David Benson, Geology and Geological Engineering, Colorado School of Mines; Zhen-Qing Chen, Department of Mathematics, University of Washington; James Kelly, Naval Postgraduate School, Monterey, California; Robert McGough, Electrical and Computer Engineering, Michigan State University; Erkan Nane, Department of Mathematics and Statistics, Auburn University; Peter Kern, Department of Mathematics, Heinrich Heine University, Duesseldorf, Germany; Hans-Peter Scheffler, Department of Mathematics, University of Siegen, Germany; René Schilling, Institute of Mathematics and Stochastics, Technical University of Dresden, Germany; Rina Schumer, Water Resources, Desert Research Institute, Reno NV; Alla Sikorskii; Peter Straka, Department of Statistics and Probability, Michigan State University; Yimin Xiao, Department of Statistics and Probability, Michigan State University).

Fractional Calculus Models for Anomalous Diffusion, Invited talk, SAMSI summer program on Nonlocal Continuum Models for Diffusion, Mechanics, and Other Applications, Research Triangle Park, North Carolina, June 2012 (with Alla Sikorskii).

Semi-Markov solutions to time-fractional diffusion equations, SAMSI summer program on Nonlocal Continuum Models for Diffusion, Mechanics, and Other Applications, Research Triangle Park, North Carolina, June 2012 (with Peter Straka*).

Stochastic model for medical ultrasound, 7th International Workshop on Applied Probability, Jerusalem, Israel, June 2012 (with Boris Baeumer; David Benson; James Kelly; Robert McGough; Erkan Nane; Peter Kern; Hans-Peter Scheffler; Rina Schumer; Alla Sikorskii; Peter Straka; Yimin Xiao; and Yuzhen Zhou).

Fractional calculus in medical imaging and hydrology, Organizer, 4th International Conference on Porous Media, Purdue University, May 14-16, 2012 (with Richard Magin, Department of Bioengineering, University of Illinois at Chicago).

Fractional calculus models for medical ultrasound, 4th International Conference on Porous Media, Purdue University, May 14-16, 2012 (with Boris Baeumer; David Benson; James Kelly; Robert McGough; Erkan Nane; Peter Kern; Hans-Peter Scheffler; Rina Schumer; Alla Sikorskii; Peter Straka; Yimin Xiao; and Yuzhen Zhou).

The continuum renewal property of fractional diffusion, 5th IFAC Symposium on Fractional Differentiation and Its Applications, Nanjing, China, May 2012 (with Peter Straka* and Hans-Peter Scheffler).

Analytical solutions of a class of multi-term time-space fractional wave equations in a finite domain, 5th IFAC Symposium on Fractional Differentiation and Its Applications, Nanjing, China, May 2012 (with Fawang Liu*, Mathematical Sciences, Queensland University of Technology, Australia; Robert J. McGough; and Hui Jiang, Department of Mathematical Sciences, Qinghai Normal University, Xining, China).

Numerical analysis of the time variable fractional order mobile-immobile advection-dispersion model, 5th IFAC Symposium on Fractional Differentiation and Its Applications, Nanjing, China, May 2012 (with Hongmei Zhang*, School of Mathematical and Computer Sciences, Fuzhou University, China; Fawang Liu; and Mantha S. Phanikumar, Civil and Environmental Engineering, Michigan State University).

Numerical methods for solving the multi-term time-fractional wave-diffusion equations, 5th IFAC Symposium on Fractional Differentiation and Its Applications, Nanjing, China, May 2012 (with Fawang Liu*; Robert J. McGough; PingHui Zhuang and QingXia Liu, School of Mathematical Sciences, Xiamen University, China).

Program Committee Co-Chair, 5th IFAC Symposium on Fractional Differentiation and Its Applications, Nanjing, China, May 2012.

Stable Laws, Fractional Calculus, and Medical Ultrasound, invited talk, International Conference on Long-Range Dependence, Self-Similarity and Heavy Tails, in Honor of Professor Murad S. Taqqu, Research Triangle Park, North Carolina, USA, April 2012 (with Peter Straka; Yuzhen Zhou; Robert McGough; Boris Baeumer; David Benson; James Kelly; Erkan Nane; Peter Kern, Department of Mathematics, Heinrich Heine University, Duesseldorf, Germany; Hans-Peter Scheffler; Rina Schumer; Alla Sikorskii; and Yimin Xiao).

Finite-Dimensional Distributions of Continuous Time Random Walk Limit Processes, International Conference on Long-Range Dependence, Self-Similarity and Heavy Tails, in Honor of Professor Murad S. Taqqu, Research Triangle Park, North Carolina, USA, April 2012 (with Peter Straka*).

Tempered fractional Brownian motion, International Conference on Long-Range Dependence, Self-Similarity and Heavy Tails, in Honor of Professor Murad S. Taqqu, Research Triangle Park, North Carolina, USA, April 2012 (with Farzad Sabzikar*, Department of Statistics and Probability, Michigan State University).

Statistical Modeling of Hydraulic Conductivity Fields, Annual Meeting of the American Geophysical Union, San Francisco, December 2011 (with Boris Baeumer; David A. Benson; Geoffrey Bohling, Kansas Geological Survey, Lawrence, Kansas; Mine Dogan, Department of Geological Sciences, Michigan State University; David Hyndman, Department of Geological Sciences, Michigan State University; Tomasz J. Kozubowski, Dept. of Mathematics and Statistics, Univ. of Nevada, Reno; Silong Lu, Tetra Tech, Inc., Atlanta, GA; Fred J. Molz, Dept. of Environmental Engineering & Science, Clemson University; and Hans-Peter Scheffler, Department of Mathematics, University of Siegen, Germany).

Conditional Fractal Simulation of Hydraulic Conductivity at the MADE Site, Annual Meeting of the American Geophysical Union, San Francisco, December 2011 (with James J. Butler, Kansas Geological Survey, Lawrence, Kansas; Geoffrey Bohling; Mine Dogan*; and David Hyndman).

Reaction-diffusion for the fractional mobile-immobile model, Annual Meeting of the American Geophysical Union, San Francisco, December 2011 (with Boris Baeumer*; David A. Benson; and Mihály Kovács, Mathematics & Statistics, University of Otago, Dunedin, New Zealand).

The Effect of Imperfect Mixing on the Rates (and Governing Equations) of Chemical Reactions, Invited talk, Annual Meeting of the American Geophysical Union, San Francisco, December 2011 (with Boris Baeumer; David A. Benson*; and Diogo Bolster, Civil Engineering and Geological Sciences, University of Notre Dame).

Fractional Diffusion, Radiology Seminar, University of Illinois at Chicago, November 2011 (with Boris Baeumer; Warren Barrash, Department of Geosciences, Boise State University; David A. Benson; Paramita Chakraborty, Mathematics, California State University, Bakersfield; Bill X. Hu, Department of Geological Sciences, Florida State University; Changming He, Delaware Geological Survey, University of Delaware, Newark; Luanjing Guo, Department of Geological Sciences, Florida State University; David Hyndman; James F. Kelly; Peter Kern; Mihály Kovács; Eric M. LaBolle; Xinya Li, Department of Geological Sciences, Florida State University; Chae Young Lim, Department of Statistics and Probability, Michigan State University; Robert J. McGough; Hans-Peter Scheffler; Rina Schumer; Alla Sikorskii; Charles Tadjeran, Sierra Nevada Corporation; Stephen W. Wheatcraft, Geological Sciences, University of Nevada, Reno; Yimin Xiao; and Yong Zhang).

Fractional Diffusion, Environmental Fluid Dynamics (EFD) Seminar, University of Notre Dame, November 2011 (with Boris Baeumer; Warren Barrash; David A. Benson; Paramita Chakraborty; Bill X. Hu; Changming He; Luanjing Guo; David Hyndman; James F. Kelly; Peter Kern; Mihly Kovcs; Eric M. LaBolle; Xinya

Li,; Robert J. McGough; Hans-Peter Scheffler; Rina Schumer; Alla Sikorskii; Charles Tadjeran; Stephen W. Wheatcraft; Yimin Xiao; Yong Zhang).

Fractional Calculus and Probability, Student Seminar, Department of Statistics and Probability, Michigan State University, November, 2011.

Comparison of 2D Conditional and Unconditional Fractal Simulations of Highly Heterogeneous Hydraulic Conductivity Fields, 2011 Geological Society of Amarica Annual Meeting in, Minneapolis, October 2011 (with Mine Dogan*, David W. Hyndman, and Remke L. van Dam, Department of Geological Sciences, Michigan State University; David A. Benson, Department of Geology and Geological Engineering, Colorado School of Mine; James J. Butler, Jr. and Geoffrey C. Bohling, Kansas Geological Survey, University of Kansas).

Fractal stochastic K field generation based on direct-push and GPR data, NovCare 2011: Conference on Novel methods for Subsurface Characterization and Monitoring, Cape Cod, Massachusetts, May 2011 (with Mine Dogan*; David W. Hyndman; Remke L. van Dam; James J. Butler, Jr.; Geoffrey C. Bohling; and Gaisheng Liu, Kansas Geological Survey, University of Kansas).

Fourier-PARMA times series models, Department Colloquium, University of Toledo, March 2011 (with Paul L. Anderson*, Department of Mathematics, Albion College, Michigan; and Yonas Gebeyehu Tesfaye, Hydrologist, GEI Consultants, Inc., Rancho Cordova, California).

Fractional diffusion in geologic systems, 2010 American Geophysical Union Fall Meeting, December 2010 (with Rina Schumer*, Division of Hydrologic Sciences, Desert Research Institute, Reno, NV 89512; and David A. Benson).

Space-time duality for fractional diffusion, Invited talk, Advances in Anomalous Diffusion, INFORMS 2010, Austin TX, November 2010 (with Boris Baeumer; Paramita Chakraborty; James Kelly; Peter Kern; Chae Young Lim; Robert McGough; Erkan Nane; and Hans-Peter Scheffler).

Relativistic Diffusion and Continuous Time Random Walks, Department of Mathematics & Statistics Colloquium, University of Otago, New Zealand (with Boris Baeumer*, Department of Mathematics & Statistics, University of Otago, Dunedin, New Zealand; and Mark Naber, Department of Mathematics, Monroe County Community College, Monroe, MI).

Space-time duality for fractional diffusion, Invited talk, 6th International Conference on Levy Processes, Dresden, July 2010 (with Boris Baeumer; Paramita Chakraborty; James Kelly; Peter Kern; Chae Young Lim; Robert McGough; Erkan Nane; Hans-Peter Scheffler; Yimin Xiao; and Yong Zhang).

Fractional Cauchy problems on bounded domains, Invited Talk, International Indian Statistical Association Conference, January 2010, Visakhapatnam, India (with Boris Baeumer, Department of Mathematics & Statistics, University of Otago, Dunedin, New Zealand; Peter Kern, Department of Mathematics, Heinrich-Heine-University, Düsseldorf, Germany; Erkan Nane, Department of Mathematics and Statistics, Auburn University; Hans-Peter Scheffler, Department of Mathematics, University of Siegen, Germany; Yimin Xiao, Department of Statistics and Probability, Michigan State University; and P. Vellaisamy, Department of Mathematics, India Institute of Technology, Bombay, India).

A-Collapsibility of Distribution Dependence and Quantile Regression Coefficients, International Indian Statistical Association Conference, January 2010, Visakhapatnam, India (with P. Vellaisamy).

Fractional Cauchy problems on bounded domains, Departmental Colloquium, Department of Mathematics, India Institute of Technology, Bombay, India, January 2010 (with Boris Baeumer; Peter Kern; Erkan Nane; Hans-Peter Scheffler; Yimin Xiao; and P. Vellaisamy).

Examining the Influence of Heterogeneous Porosity Fields on Conservative Solute Transport, American Geophysical Union Meeting, San Francisco, December 2009 (with Bill X. Hu, Department of Geological Sciences, Florida State University; Warren Barrash, CGISS, Department of Geosciences, Boise State University; David W. Hyndman, Department of Geological Sciences, Michigan State University; Changming He, Delaware Geological Survey, University of Delaware; Xinya Li, Department of Geological Sciences, Florida State University; and Luanjing Guo, Department of Geological Sciences, Florida State University).

Signature of non-locality in depositional systems: Implications for modeling and interpretation of stratigraphic records, American Geophysical Union Meeting, San Francisco, December 2009 (with Vamsi Ganti*, Kyle Straub, and Efi Foufoula-Georgiou, St. Anthony Falls Laboratory and National Center for Earth-surface Dynamics, Department of Civil Engineering, University of Minnesota).

Fractional calculus models for the earth surface: Success to date, challenges, and opportunities, Stochastic Transport and Emergent Scaling in Earth-surface Processes II. Tahoe Center for Environmental Research, Incline Village, Nevada, November 2009 (with Boris Baeumer; L. DellAngelo, Barr Engineering, Minneapolis, Minnesota, USA; Efi Foufoula-Georgiou; Vamsi Ganti; K. M. Hill, St. Anthony Falls Laboratory, Department of Civil Engineering, University of Minnesota; Gary Parker, Ven Te Chow Hydrosystems Laboratory, Departments of Civil and Environmental Engineering and Geology, University of Illinois; Rina Schumer; and Enrica Viparelli, Ven Te Chow Hydrosystems Laboratory, Departments of Civil and Environmental Engineering and Geology, University of Illinois).

Continuous time random walks, fractional calculus, and applications, Department of Mathematics Colloquium, Tufts University, October 2009 (with I. B. Aban, Department of Biostatistics, University of Alabama at Birmingham; Paul Anderson, Department of Mathematics and Computer Science, Albion College, Boris Baeumer; Peter Becker-Kern, Mathematics, University of Dortmund, Germany; David A. Benson; Paramita Chakraborty, Department of Mathematics, California State University, Bakersfield; James Kelly, Department of Electrical and Computer Engineering, Michigan State University; Mihály Kovács, Mathematics & Statistics, University of Otago, Dunedin, New Zealand; Chae Young Lim, Department of Statistics and Probability, Michigan State University; Robert McGough, Department of Electrical and Computer Engineering, Michigan State University; Erkan Nane; Anna K. Panorska, Department of Mathematics and Statistics, University of Nevada, Reno; Parthanil Roy, Department of Statistics and Probability, Michigan State University; Enrico Scalas, Department of Advanced Sciences and Technologies, East Piedmont University, Alessandria, Italy; Hans-Peter Scheffler; Rina Schumer; Qin Shao, Department of Mathematics, University of Toledo, Ohio; P. Vellaisamy, Department of Mathematics, Indian Institute of Technology, Bombay, India; Stephen W. Wheatcraft, Geological Sciences, University of Nevada, Reno; Yimin Xiao; and Yong Zhang, Desert Research Institute, Las Vegas Nevada).

Space-time duality for fractional diffusion, Department of Statistics and Probability Colloquium, Michigan State University, September 2009 (with Boris Baeumer; Peter Becker-Kern; Paramita Chakraborty; James Kelly; Mihály Kovács; V. Mandrekar, Department of Statistics and Probability, Michigan State University; Robert McGough; Erkan Nane; Parthanil Roy; Enrico Scalas; Hans-Peter Scheffler; Rina Schumer; Qin Shao; and Yimin Xiao).

Tempered stable models for anomalous diffusion, Department of Mathematics Colloquium, University of Tennessee, September 2009 (with I. B. Aban, Department of Biostatistics, University of Alabama at Birmingham; Boris Baeumer; Peter Becker-Kern; David A. Benson; James Kelly; Mihály Kovács; Robert McGough; Erkan Nane; Anna K. Panorska; Parthanil Roy; Hans-Peter Scheffler; Rina Schumer; Qin Shao; P. Vellaisamy; and Yong Zhang).

The Fractal Calculus Project, Department of Mathematics Junior Colloquium, University of Tennessee, September 2009 (with Paul Anderson; Boris Baeumer; Peter Becker-Kern; David A. Benson; James Kelly; Mihály Kovács; Robert McGough; Erkan Nane; Enrico Scalas; Hans-Peter Scheffler; Rina Schumer; Stephen W. Wheatcraft; and Yimin Xiao).

Local Whittle Estimator for Anisotropic Random Fields, Joint Statistical Meetings of the American Statistical Association, the International Biometric Society, the Institute of Mathematical Statistics, the Statistical Society of Canada, the International Chinese Statistical Association, and the International Indian Statistical Association, Washington DC, August 2009 (with Hongwen Guo, Educational Testing Service, Princeton, New Jersey; and Chae Young Lim*).

Organizing Committee, 2009 Inverse Problems Symposium, May-June, 2009, Michigan State University.

Parameter estimation for fractional transport, 2009 Inverse Problems Symposium, June, 2009, Michigan State University (with Paramita Chakraborty; and Chae Young Lim*).

Backward probabilities for contaminants undergoing fractional dispersion, 2009 Inverse Problems Symposium, June, 2009, Michigan State University (with Yong Zhang* and Boris Baeumer).

Stochastic Approach to Fractional Diffusion, Minisymposium on front propagation in systems with anomalous diffusion, SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 2009 (with Boris Baeumer; Mihály Kovács; Peter Becker-Kern; David A. Benson; Eric M. LaBolle; Enrico Scalas; Hans-Peter Scheffler; Rina Schumer; Charles Tadjeran; Stephen W. Wheatcraft; Yimin Xiao; and Yong Zhang).

Fractional Conservation of Mass, American Geophysical Union Meeting, San Francisco, December 2008 (with Stephen W. Wheatcraft*).

Simulation of Transport and Reaction Using Random Walks: Reactions Without Concentrations and the Automatic Simulation of Drastically Different Thermodynamic- Versus Diffusion-Limited Reaction Rates, American Geophysical Union Meeting, San Francisco, December 2008 (with David A. Benson*).

Finite difference methods for anomalous diffusion, American Geophysical Union Meeting, San Francisco, December 2008 (with Charles Tadjeran).

Normal and anomalous dispersion of tracers in gravel-bed rivers, American Geophysical Union Meeting, San Francisco, December 2008 (with Efi Foufoula-Georgiou and Vamsi Ganti*; and Gary Parker, Ven Te Chow Hydrosystems Laboratory, Departments of Civil and Environmental Engineering and Geology, University of Illinois).

Tempered fractional model for transient anomalous diffusion, Invited Talk, American Geophysical Union Meeting, San Francisco, December 2008 (with Yong Zhang and Boris Baeumer).

Time-Domain Three-Dimensional Greens Functions for Power Law Media, Acoustical Society of America Annual Meeting, Miami FL, November 2008 (with James Kelly* and Robert McGough).

Fractional space-time pseudo-differential operators and applications, invited talk, Fractional Flows Workshop, University of Warwick, England, September 2008 (with Boris Baeumer; Peter Becker-Kern; David A. Benson; James Kelly; Mihály Kovács; Eric M. LaBolle, Department of Land, Air, and Water Resources, University of California, Davis; Robert McGough; Erkan Nane; Enrico Scalas; Hans-Peter Scheffler; Rina Schumer; P. Vellaisamy, Mathematics, Indian Inst. Tech. Bombay; and Yong Zhang, Desert Research Institute, Las Vegas, Nevada).

Particle tracking for anomalous diffusion, invited talk, XXI Marian Smoluchowski Symposium on Statistical Physics, Zakopane, Poland, September 2008 (with Boris Baeumer; Peter Becker-Kern; David A. Benson; James Kelly; Mihály Kovács; Eric M. LaBolle; Robert McGough; Enrico Scalas; Hans-Peter Scheffler; Rina Schumer; Stephen W. Wheatcraft; Yimin Xiao; and Yong Zhang).

Normal and anomalous advection diffusion of gravel tracer particles in rivers, St. Anthony Falls Laboratory, University of Minnesota, May 2008 (with Vamsi Ganti and Efi Foufoula-Georgiou; Enrica Viparelli, Ven Te Chow Hydrosystems Laboratory, University of Illinois; and Gary Parker*).

The fractal calculus project, College of Science and Engineering Colloquium, Saginaw Valley State University, Michigan, April 2008 (with Paul Anderson; Boris Baeumer; Peter Becker-Kern; David A. Benson; James Kelly; Mihály Kovács; Robert McGough; Erkan Nane; Enrico Scalas; Hans-Peter Scheffler; Rina Schumer; and Yimin Xiao).

Fractional calculus, heavy tails, and applications, Mathematics Colloquium, University of Toledo, November 2007.

The fractal calculus project, Mathematics and Computer Science Colloquium, Albion College, Michigan, November 2007.

Tail Parameter Estimation, Stochastic Transport and Emergent Scaling in Earth-surface Processes. Tahoe Center for Environmental Research, Incline Village, Nevada, November 2007.

Scaling limits and governing equations, Stochastic Transport and Emergent Scaling in Earth-surface Processes. Tahoe Center for Environmental Research, Incline Village, Nevada, November 2007.

Stochastic model for mobile-immobile flow and transport, Annual Meeting of the Geological Society of America, Denver, October 2007. (with Boris Baeumer; David A. Benson; Rina Schumer; and Yong Zhang).

Fractional Diffusion, Department of Aerospace and Mechanical Engineering, Notre Dame University, South Bend, Indiana, October 2007.

Triangular array limits for continuous time random walks, Department Colloquium, Statistics and Probability, Michigan State University, August 2007 (with Hans-Peter Scheffler).

Triangular array limits for continuous time random walks, 5th International Conference on Lévy Processes, Copenhagen, Denmark, August 2007 (with Hans-Peter Scheffler).

Fractional diffusion: A new paradigm, Inverse Problems Symposium 2007, Michigan State University, June 2007.

Fractional Calculus and Brownian time, Probability Seminar, University of Illinois at Urbana-Champaign, March 2007 (with Inmaculada B. Aban; Paul L. Anderson; Boris Baeumer; David A. Benson; Erkan Nane; Anna K. Panorska; Hans-Peter Scheffler; Rina Schumer; Stephen W. Wheatcraft; and Yimin Xiao).

Fractional calculus, heavy tails. and applications, Statistics Seminar, University of Michigan, December 2006 (with Inmaculada Aban; Paul Anderson; Boris Baeumer; Peter Becker-Kern; David A. Benson; Laimonis Kavalieris, Department of Mathematics & Statistics, University of Otago, Dunedin, NZ; Eric M. LaBolle; Jeff Mortensen, Department of Mathematics and Statistics, University of Nevada, Reno; Anna K. Panorska; Enrico Scalas; Hans-Peter Scheffler; Rina Schumer; Yonas Gebeyehu Tesfaye; Aldo V. Vecchia, Water Resources Division, U.S. Geological Survey, Bismarck, North Dakota; Stephen W. Wheatcraft; Yimin Xiao; and Yong Zhang).

Lagrangian characterization of contaminant transport through multidimensional heterogeneous media with limited heterogeneity information. MODFLOW and MORE 2006: Managing Ground-Water Systems, Colorado School of Mines, May 2006 (with Zhang Yong*; David A. Benson; and Hans-Peter Scheffler;).

Heavy Tails: Data, Models, and Applications, Michigan State University, April 2006 (with Inmaculada B. Aban; Paul L. Anderson; Boris Baeumer; Peter Becker-Kern; David A. Benson; Jeff Mortensen; Anna K. Panorska; Enrico Scalas; Hans-Peter Scheffler; Rina Schumer; Yonas Gebeyehu Tesfaye; Aldo V. Vecchia; Stephen W. Wheatcraft; and Yimin Xiao).

Fractional Calculus Models in Finance, International Symposium on Fractional Calculus, Dunedin, New Zealand, January 2006 (with Peter Becker-Kern; Hans-Peter Scheffler; Enrico Scalas; Rudolf Gorenflo, First Mathematical Institute, Free University of Berlin, Germany; and Francesco Mainardi, Department of Physics, Bologna University, Italy).

Continuous Time Random Walk Limits with Finite Mean Waiting Times, International Symposium on Fractional Calculus, Dunedin, New Zealand, January 2006 (with Boris Baeumer*).

A Fractional Diffusion Model for Dispersal of Airborne Seeds and Operator Splitting, International Symposium on Fractional Calculus, Dunedin, New Zealand, January 2006 (with Boris Baeumer and Mihaly Kovács*, Department of Mathematics and Statistics, University of Otago, Dunedin, New Zealand).

From Fractals to Fractional Vector Calculus: Measurement in the Correct Metric, International Symposium on Fractional Calculus, Dunedin, New Zealand, January 2006 (with Stephen W. Wheatcraft*; and Jeff Mortensen).

Vector Fractional Calculus, Australian and New Zealand Industrial and Applied Mathematics Division of the Australian Mathematics Society (ANZIAM) Speaker, New Zealand Mathematics Colloquium, December 2005, Palmerston North, New Zealand.

From Fractals to Fractional Vector Calculus: Measurement in the Correct Metric, invited talk, special session on One Hundred Years of Dispersion Research: Past Accomplishments, Current Research, and Future Directions, American Geophysical Union Meeting, San Francisco, December 2005 (with Stephen W. Wheatcraft*; and Jeff Mortensen).

On the Predictability of Solute Transport in Fractured Media, American Geophysical Union Meeting, San Francisco, December 2005 (with David M. Reeves*, Division of Hydrologic Sciences, Desert Research Institute, Reno, Nevada; and David A. Benson).

Lagrangian framework of super-Fickian dispersion, American Geophysical Union Meeting, San Francisco, December 2005 (with David A. Benson*; Zhang Yong; and Hans-Peter Scheffler).

Random-walk solutions of fractional advection-dispersion equations, American Geophysical Union Meeting, San Francisco, December 2005 (with David A. Benson; Zhang Yong*; and Hans-Peter Scheffler).

Concentration profiles versus breakthrough curves: Differences in fractional dispersion equations, American Geophysical Union Meeting, San Francisco, December 2005 (with Boris Baeumer*).

Coupled continuous time random walks in finance, Econophysics Colloquium, Canberra, Australia, November 2005 (with Enrico Scalas).

Predictions of Solute Transport in Fractured Media Using Operator-Stable Densities and Fracture Network Statistics, Geological Society of America Annual Meeting, Salt lake City, Utah, October 2005. (with Matt Reeves*, Desert Research Institute, Reno, Nevada; and David A. Benson).

Fractional Laplace model for hydraulic conductivity, Geophysics Seminar, University of Otago, August 2005 (with Fred J. Molz, Department of Environmental Engineering & Science, Clemson University, Clemson, SC; and Tomasz J. Kozubowski, Department of Mathematics and Statistics, University of Nevada, Reno).

Truncated Pareto distribution: Parameter estimation and applications, New Zealand Statistical Association Annual Meeting, Dunedin, New Zealand, July 2005 (with Inmaculada B. Aban; and Anna K. Panorska).

Fractional Laplace Motion, conference on Stochastic Processes and Applications, Santa Barbara, June 2005 (T.J. Kozubowski*; M.M. Meerschaert; K. Podgorski)

Anomalous diffusion in porous media flow, Physics seminar, University of Otago, April 2005.

Parameter estimation for heavy tail data, Statistics seminar, University of Otago, April 2005.

A random walk to fractal calculus, plenary talk, Australian and New Zealand Industrial and Applied Mathematics Division of the Australian Mathematics Society 2005 Conference, Napier, New Zealand, February 2005 (with Boris Baeumer*; Peter Becker-Kern; David A. Benson, Greg Pohll, and Rina Schumer, Desert Research Institute, Reno, Nevada; Irene Farnham, Stoller Navarro Joint Venture, Las Vegas, Nevada; Satoko Kurita, Jeff Mortensen, Hans-Peter Scheffler, and Charles Tadjeran).

Fractional radial flow equation, numerical solution, and application, Australian and New Zealand Industrial and Applied Mathematics Division of the Australian Mathematics Society 2005 Conference, Napier, New Zealand, February 2005 (with Boris Baeumer; Peter Becker-Kern; David A. Benson, Greg Pohll, and Rina Schumer, Desert Research Institute, Reno, Nevada; Irene Farnham, Stoller Navarro Joint Venture, Las Vegas, Nevada; Satoko Kurita, Jeff Mortensen, Hans-Peter Scheffler, and Charles Tadjeran).

Stochastic Model for Ultraslow Diffusions, Fourth Symposium on Lévy Processes, Manchester, United Kingdom, January 2005 (M.M. Meerschaert and H.P. Scheffler*)

18 Years Later: Revisiting a Groundwater Model of the Cambric Site at NTS, American Geophysical Union Meeting, San Francisco, December 2004 (with Ellen J. Considine*, Graduate Program in Hydrologic Sciences, University Of Nevada, Reno; and S.W. Wheatcraft, Department of Geological Sciences, University of Nevada, Reno).

Modeling Bacteria Transport Using Fractional Derivatives, American Geophysical Union Meeting, San Francisco, December 2004 (with Satoko Kurita*, Department of Mathematics and Statistics, University Of Nevada, Reno; and B. Baeumer).

Parsimonious PARMA Models and Their Application to Modeling of Riverflows, American Geophysical Union Meeting, San Francisco, December 2004 (with Yonas Gebeyehu Tesfaye*; and Paul L. Anderson).

The Fractal Calculus Project, Mathematics seminar, University of Otago, August 2004.

Operator–Stable Motion, a Matrix-Order Governing Equation, and the Anomalous Spreading of Dissolved Solutes Through Fractured Rock, Society for Industrial and Applied Mathematics annual meeting, Portland Oregon, July 2004 (with D.A. Benson* and D.M. Reeves, Desert Research Institute, Reno NV).

Solving fractional initial value problems with forcing functions, Society for Industrial and Applied Mathematics annual meeting, Portland Oregon, July 2004 (with Satoko Kurita* and B. Baeumer).

Speculative option valuation and the fractional diffusion equation, Workshop on Fractional differentiation and its applications, International Federation of Automatic Control, Bordeaux, France, July 2004 (with Enrico Scalas*, Department of Advanced Sciences and Technologies, East Piedmont University, Alessandria, Italy; Rudolf Gorenflo, First Mathematical Institute, Free University of Berlin, Germany; and Francesco Mainardi, Department of Physics, Bologna University, Italy).

A numerical algorithm for super-diffusive initial-boundary value problems, Workshop on Fractional differentiation and its applications, International Federation of Automatic Control, Bordeaux, France, July 2004 (with C. Tadjeran*).

Properties of scaling limits of random walks with waiting times, Workshop on Fractional differentiation and its applications, International Federation of Automatic Control, Bordeaux, France, July 2004 (with B. Baeumer*).

Identification of PARMA Models and Their Application to the Modeling of River flows, American Geophysical Union Meeting, May 2004 (with Yonas Gebeyehu Tesfaye*).

Heavy tails, fractional derivatives and fractals, Statistics Colloquium, Case Western Reserve University, April 2004.

The Fractal Calculus Project, Mathematics Colloquium, Louisiana State University, Baton Rouge, March 2004.

Why Use Stochastic Fractal Models for Heterogeneous Log(conductivity) and What Might Cause Such Structure?, Second International Symposium on the Dynamics of Fluids in Fractured Rock, Lawrence Berkeley Laboratory, February 2004 (with Fred Molz*, Department of Environmental Engineering & Science, Clemson University; and T. J. Kozubowski, Department of Mathematics, University of Nevada, Reno).

The Fractal Calculus Project, MAA Student Lecture, Joint Annual Meeting of the Mathematical Association of America and the American Mathematical Society, Phoenix, January 2004.

Limit Theorems and Their Relation to Solute Transport in Simulated Fractured Media, American Geophysical Union Meeting, San Francisco, December 2003 (with D.M. Reeves* and D.A. Benson).

Numerical solutions for fractal radial flow problems, American Geophysical Union Meeting, San Francisco, December 2003 (with C. Tadjeran*; D.A. Benson; and S.W. Wheatcraft).

Operator Fractional Motion: Permeability Fields with Anisotropic Long Range Dependence and the Effect on Plume Growth, American Geophysical Union Meeting, San Francisco, December 2003 (with D.A. Benson*; and B. Baeumer).

The Sample Covariance Matrix for multivariate heavy tailed random variables: Limit Theorems and statistical applications, 12th International Workshop on Matrices and Statistics IWMS-2003 Dortmund, Germany, August 2003 (with H. P. Scheffler*).

Anomalous diffusion with space-time coupling in fracture flow, Hydrofractals '03 conference, Ascona, Switzerland, August 2003 (with D.A. Benson; and S.W. Wheatcraft).

Fractional Radial Flow and Its Application to Field Data, Hydrofractals '03 conference, Ascona, Switzerland, August 2003 (with C. Tadjeran*; and D.A. Benson).

Fractal Hydraulic Conductivity Fields via Operator Fractional Motion: Long Range Dependence that Varies with Direction, Hydrofractals '03 conference, Ascona, Switzerland, August 2003 (with D.A. Benson*).

Fractional Divergence and Conservation of Mass in Fractal Porous Media, Hydrofractals '03 conference, Ascona, Switzerland, August 2003 (with S.W. Wheatcraft*).

Stochastic Process Models for Subsurface Hydrology, invited talk, National Science Foundation Meeting on Applications of Modern Tools of Mathematics and Physics to Subsurface Hydrology, Purdue University, August 2003.

The fractal calculus project, Desert Research Institute, Reno and Las Vegas NV, June 2003.

Continuous time random walk models for anomalous diffusions, International Conference on Fractal Geometry and Stochastics III, Friedrichroda, Germany, March 2003 (with H. P. Scheffler* and P. Becker-Kern).

Hausdorff Dimension of the Sample Paths of Operator Lévy Motions, International Conference on Fractal Geometry and Stochastics III, Friedrichroda, Germany, March 2003 (with H. P. Scheffler and P. Becker-Kern*).

Conference on Evolution Equations, Control Theory, and Applications to Engineering Problems, Maracaibo, Venezuela, January 2003.

Immobile particles, fractal time, and the case of the missing mass, American Geophysical Union Meeting, San Francisco, December 2002 (with D. A. Benson* and R. Schumer).

Advection and Dispersion in Space and Time, American Geophysical Union Meeting, San Francisco, December 2002 (with B. Baeumer* and D. A. Benson).

Fractional Derivatives and Coupled Space-Time Diffusion, American Geophysical Union Meeting, San Francisco, December 2002 (with D. A. Benson, H. P. Scheffler and P. Becker-Kern).

River flow time series with heavy tails, Invited paper session: Time Series, Heavy Tails, and Applications, American Mathematical Society Meeting, Salt Lake City UT, October 2002 (with P. L. Anderson).

Heavy tailed renewal reward processes with dependent infinite mean waiting times, European Meeting of Statisticians, Prague, August 2002 (with H. P. Scheffler* and P. Becker-Kern).

Total solute transport vs. mobile solute transport, Western Pacific Geophysics Meeting, Wellington, New Zealand, July 2002 (with R. Schumer* and D. A. Benson).

Fitting operator stable models to data from finance and hydrology, Invited paper session: Inference for heavy-tailed data, International Conference on Current Advances and Trends in Nonparametric Statistics, Crete, Greece, July, 2002.

Semigroups and fractional diffusion with applications, Special session: Semigroups of Operators and Applications, First Joint Meeting of the American Mathematical Society (AMS) and the Unione Matematica Italiana (UMI), Pisa, Italy, June 2002.

Renewal-reward process with dependent infinite mean waiting times, Mathematics Colloquium, University of Siegen, Germany, June 2002 (with H. P. Scheffler* and P. Becker-Kern).

Renewal reward processes with dependent infinite mean waiting times, XXII International Seminar on Stability Problems for Stochastic Models, Varna, Bulgaria, May 2002 (with P. Becker-Kern* and H. P. Scheffler).

Describing Rate Limited Mass Transfer and Super-Fickian Dispersion With a Single Equation, American Geophysical Union Annual Meeting, Washington DC, May 2002 (with R. Schumer* and D. A. Benson).

Limit theorems for coupled Continuous Time Random Walks, German Open Conference on Probability and Statistics, Magdeburg, March 2002 (with P. Becker-Kern* and H. P. Scheffler).

On the distribution of Continuous Time Random Walk limits, German Open Conference on Probability and Statistics, Magdeburg, March 2002 (with P. Becker-Kern and H. P. Scheffler*).

Modeling multidimensional contaminant plume growth with fractal scaling, American Geophysical Union Meeting, San Francisco CA, December 2001 (with R. Schumer* and D. A. Benson).

Hydraulic conductivity, velocity, and the order of the fractional dispersion derivative in a highly heterogeneous system, American Geophysical Union Meeting, San Francisco, December 2001 (with M. Herrick, D. A. Benson*, and S. L. Painter).

Fractional-order diffusion equations, subordination, and the drunken sailor, American Geophysical Union Meeting, San Francisco, December 2001 (with D. A. Benson*).

Stable laws, fractional derivatives, and anomalous diffusion, Oberwolfach conference on stable laws, processes, and applications, Mathematical Research Institute Oberwolfach, Germany, November 2001.

Heavy Tailed Time Series Models with Applications, Mathematics Colloquium, Utah State University, March 2001.

Power-law velocity fluctuations in fracture networks: Numerical evidence and consequences for transport predictions, SIAM Geosciences Conference, Boulder, Colorado, June 2001 (with S. Painter*; V. Cvetkovic, Royal Institute of Technology, Stockholm; and J. O. Selroos, Swedish Nuclear Fuel and Waste Management Company).

Stochastic Solution for the Space-Time Fractional Advection Dispersion Equation, American Geophysical Union Meeting, San Francisco, December 2000 (with B/ Bäumer*, D. A. Benson, and H. P. Scheffler).

Fractional-Order Time and Space Governing Equations: Measurement and Modeling of Heterogeneous Aquifers, American Geophysical Union Meeting, San Francisco, December 2000 (with B. Bäumer*, D. A. Benson, and R. Schumer).

Applying a Multi-Dimensional Fractional Advection-Dispersion Equation, Geological Association of America Annual Meeting, Reno Nevada, November 2000 (with D. A. Benson and R. Schumer*).

Hydraulic Conductivity, Velocity and the Order of the Fractional Dispersion Derivative in a Highly Heterogeneous System, Geological Society of America Annual Meeting, Reno Nevada, November 2000 (with D. A. Benson, M. Herrick*, C. McCall, and S. Painter).

The Fractional-Order Transport Equation for Fractured Rock, Geological Association of America Annual Meeting, Reno Nevada, November 2000 (with B. Bäumer and D. A. Benson*).

Radial Fractal Flow, Geological Association of America Annual Meeting, Reno Nevada, November 2000 (with B. Bäumer, D. A. Benson*, and S. W. Wheatcraft).

Flood Frequence Estimation for the Truckee River, Truckee River Symposium, Nevada Water Resources Association, August 2000 (with R. Schumer*).

Generalized Scale Invariance in Groundwater Flow, American Geophysical Union Annual Meeting, Washington DC, June 2000 (with B. Bäumer, D. A. Benson, R. Schumer, and S. W. Wheatcraft).

Fractional Advection and Dispersion, American Geophysical Union Annual Meeting, Washington DC, June 2000 (with B. Bäumer*, D. A. Benson and S. W. Wheatcraft).

Fractional-Order Transport Equations for Fractured Rock, American Geophysical Union Annual Meeting, Washington DC, June 2000 (with D. A. Benson*; G. Pohll, Desert Research Institute, Reno; and B. Bäumer).

Analysis of Random and Systematic Error Effects on Uncertainty Propagation in Process Design and Simulation Using Distribution Tail Characterization, American Institute of Chemical Engineers Annual Meeting, Dallas, TX, November 1999 (with V. Vasquez* and W. Whiting).

Interquantile and Confidence Interval Estimation in Uncertainty Analysis of Chemical Processes under the Presence of Random and Systematic Errors, American Institute of Chemical Engineers Annual Meeting, Dallas, TX, November 1999 (with V. Vasquez* and W. Whiting).

Simple and Accurate Solutions of Heavy-Tailed Contaminant Transport in Aquifers, Applications of Heavy Tailed Distributions in Economics, Engineering and Statistics Conference, Washington DC, June 1999 (with D. A. Benson* and R. Schumer).

Shifted Hill's estimator for heavy tails, Applications of Heavy Tailed Distributions in Economics, Engineering and Statistics Conference, Washington DC, June 1999 (with I. B. Aban*).

Fractional Diffusion, Applications of Heavy Tailed Distributions in Economics, Engineering and Statistics Conference, Washington DC, June 1999 (with B. Bäumer and D. A. Benson*).

Simple and Accurate Solutions of Transport at a Highly Heterogeneous Site, American Geophysical Union Spring Meeting, Boston, June 1999 (with D. A. Benson* and R. Schumer).

On the Governing Equation of Stable Random Walks, American Geophysical Union Fall Meeting, San Francisco, December 1998 (with D. A. Benson* and S. W. Wheatcraft).

An advection-dispersion equation using fractional derivatives: Alpha-stable (heavy-tailed) plumes, non-Fickian growth and a constant dispersion coefficient, American Geophysical Union Chapman Conference on Fractal Scaling, Nonlinear Dynamics, and Chaos in Hydrologic Systems, May 1998 (with D. A. Benson and S. W. Wheatcraft*).

Techniques for assessing the effects of uncertainties in thermodynamic models and data, 8th International Conference on Properties and Phase Equilibria for Product and Process Design, Noordwijkerhout, The Netherlands, April-May 1998, paper 64. (with V. Vasquez* and W. Whiting).

Heavy tail statistical models with applications, Statistics Colloquium, Department of Mathematics, University of Nevada, Las Vegas, April 1998.

The fractional diffusion equation, Levy walks, and infinite variance plumes, American Geophysical Union Fall Meeting, December 1997 (with D. A. Benson* and S. W. Wheatcraft).

Periodic moving averages of random variables with regularly varying tails, Joint Statistical Meetings, Anaheim CA, August 1997 (with P. L. Anderson).

Sample covariance matrix for random vectors with regularly varying tails, Joint Statistical Meetings, Anaheim CA, August 1997 (with H. P. Scheffler).

Moving averages of random vectors in some generalized domain of attraction, Probability Seminar, University of Dortmund, June 1996 (with H. P. Scheffler).

Mathematical Modeling, Mathematics Association of America Minicourse, San Francisco CA, January 1995.

Norming Operators for Generalized Domains of Attraction, 57th Annual Meeting of the Institute for Mathematical Statistics, Chapel Hill NC, June 1994.

Mathematical Modeling: A Capstone Course for Senior Undergraduate Mathematics Majors, Special Session on Capstone Courses for Senior Undergraduate Mathematics Majors, 76th annual meeting of the Mathematical Association of America, San Antonio TX, January 1993.

The Symmetry Group of a Full Probability Measure, 99th annual meeting of the American Mathematical Society, San Antonio TX, January 1993 (with J. A. Veeh).

Operator Stable Laws and Generalized Domains of Attraction, Probability Seminar, Michigan State University, September 1992.

The Structure of the Exponents and Symmetries of an Arbitrary Operator-Stable Law, Special Topics Session on Asymptotics for Partial Sums, 55th annual meeting of the Institute for Mathematical Statistics, Boston MA, August 1992 (with J. A. Veeh).

Exponents and Symmetries of Arbitrary Operator-Stable Laws, 219th meeting of the Institute for Mathematical Statistics, Santa Barbara CA, July 1991.

Symmetry Groups for Random Vectors, Special session on Probability and Prediction Theory, 864th meeting of the American Mathematical Society, South Bend IN, March 1991.

Computing the Symmetries of an Operator-Stable Law, IMS meeting on the interface between statistics and computer science, E. Lansing, MI, May 1990.

Norming Operators for Generalized Domains of Attraction, 209th meeting of the Institute for Mathematical Statistics, Davis, CA, June 1989.

Mathematical Modeling in the Undergraduate Curriculum, panel discussion at the Lake Superior Regional Meeting of the Mathematics Association of America, April 1988.

Modelling the Performance of a Scanning Radio Communications Sensor, Lake Superior Regional Meeting of the Mathematics Association of America, April 1988.

Regular Variation has its Moments, Mini conference on Independent Random Variables, their Sums and Extremes, in conjunction with the 203rd meeting of the Institute for Mathematical Statistics, Boston, MA., March 1988.

Regular Variation in \mathbb{R}^k , American Mathematical Society Annual Meeting, Atlanta, GA, January 1988.

Application of Stochastic Processes to the Design and Evaluation of C^3I Systems, Defense Analysis Seminar IV, Republic of South Korea, September 1987 (with W. P. Cherry).

Regular Variation and Domains of Attraction, University of Michigan, Department of Statistics Seminar, September 1986.

Regular Variation and Generalized Domains of Attraction in \mathbb{R}^k , Joint Annual Meeting of the Institute for Mathematical Statistics, the American Statistical Association, and the Biometric Society, Chicago, IL, August 1986.

Co-chairman of a session on Teaching Applied mathematics, GLCA Mathematics Conference, Albion College, May 1986.

Modelling the Performance of a Scanning Radio Communications Sensor, special invited session on analysis of military intelligence systems, Joint Annual Meeting of the Operations Research Society of America/The Institute for Management Science, Atlanta, GA, November 1985 (with W. P. Cherry).

Operator-Normed Domains of Attraction and Regular Variation, American Mathematical Society Annual Meeting, Anaheim CA, January 1985.

GRANTS

Marsden Grant, Royal Society of New Zealand: Boundary conditions for non-local operators, 2018–2021 (with Boris Baeumer, Department of Mathematics and Statistics, University of Otago, Dunedin, New Zealand; and Mihály Kovács, Department of Mathematics, Chalmers University of Technology, Sweden) [\$ 680,000 NZD]

US Army Research Office (ARO) Conference grant W911NF-16-1-0394: Future Directions in Fractional Calculus Research and Applications, 07 July 2016 to 06 July 2017 [\$29,520]

US Army Research Office (ARO) Multidisciplinary University Research Initiative (MURI) grant W911NF-15-1-0562: Fractional PDEs for Conservation Laws and Beyond: Theory, Numerics and Applications. 16 September 2015 to 15 September 2020 (with PI George Em Karniadakis and Mark Ainsworth, Division of Applied Mathematics, Brown University; Hong Wang, Department of Mathematics, University of South Carolina; Qiang Du, Department of Applied Physics and Applied Mathematics, Columbia University; and Pol. D. Spanos, Departments of Mechanical Engineering, and Civil and Environmental Engineering, Rice University) [\$6,248,998 total; \$1,499,997 MSU]

NSF grant DMS-1462156: FRG: Collaborative Research: Extreme Value Theory for Spatially Indexed Functional Data. August 1, 2015 to July 31, 2018 (with Piotr Kokoszka, Department of Statistics, Colorado State University; Stilian Stoev, Department of Statistics, University of Michigan; and Joshua French, Department of Mathematical and Statistical Sciences, University of Colorado at Denver). [\$874,936 total; \$286,798 MSU]

NSF INSPIRE Track 1 grant EAR-1344280: Earthcasting fluvial systems: Physical, ecological, and biogeochemical dynamics, 9/1/2013 to 8/31/2017 (with Aaron Packman (PI), Department of Civil and Environmental Engineering, and Department of Earth and Planetary Sciences, Northwestern University; Diogo Bolster, Department of Civil and Environmental Engineering and Earth Sciences, University of Notre Dame; Douglas Jerolmack, Department of Earth and Environmental Science, University of Pennsylvania; and Jennifer Tank, Dept of Biological Sciences, University of Notre Dame) [\$834,000 total; \$199,742 MSU].

NSF travel grant DMS-1310224 for the 7th International Conference on Levy Processes: Theory and Applications, held on July 15 - 19, 2013 in Wroclaw, Poland. [\$15,000].

NIH grant R01-EB012079-01: Fast numerical modeling of medical ultrasound for therapy and imaging, 2010–2014 (with Robert McGough (PI) and Shanker Balasubramaniam, Electrical and Computer Engineering, Michigan State University) [\$262,195 first year].

National Science Foundation grant: CMG Collaborative Research: Tempered Stable Models for Preasymptotic Pollutant Transport in Natural Media, 2010–2013 (with Yong Zhang, Desert Research Institute, Las Vegas Nevada). [\$521,319 total: \$207,091 MSU; \$314,228 DRI]

National Science Foundation grant: Stochastic Models for Anomalous Diffusion, 2008–2011 (with V. Mandrekar, Department of Statistics and Probability, Michigan State University) [\$299,945].

National Science Foundation grant: Collaborative Research: Geomorphic transport laws, landscape evolution, and fractional calculus, 2008–2011 (with Colin P. Stark, Columbia University; and Efi Foufoula-Georgiou, University of Minnesota-Twin Cities) [\$459,747 total: \$99,232 MSU; \$260,844 UMN-TC; and \$99,671 Columbia].

National Science Foundation grant: Collaborative Research: CMG: Multi-scaling Random Fields and Pollution Migration, 2004–2007 (with D. A. Benson, Desert Research Institute, Reno) [\$691,675 total: \$318,961 UNR and \$372,714 DRI].

Marsden Grant, Royal Society of New Zealand: Contaminant transport in fractal media, 2003–2005 (with Boris Baeumer-PI) [\$100,000 NZD]

National Science Foundation grant: Collaborative Research, Stochastic Methods for Fractional Partial Differential Equations, 2002–2005 (with D. A. Benson, Desert Research Institute, Reno; I. B. Aban, T. J. Kozubowski and A. Panorska, Department of Mathematics and Statistics, University of Nevada, Reno; and S. W. Wheatcraft, Department of Geological Sciences, University of Nevada, Reno) [\$968,859 total: \$595,330 UNR and \$373,529 DRI].

National Institute on Drug Abuse grant: Modeling the Course of Craving in Smoking Cessation Treatment, 2002 (with S. C. Hayes-PI and E. Gifford, Department of Psychology, University of Nevada, Reno) [\$68,405].

Mathematics Institute Oberwolfach Research in Pairs grant: Limit Theorems for Continuous Time Random Walks, 2001 (with H. P. Scheffler and P. Becker-Kern) [room and lodging only].

National Science Foundation grant: Investigation of Fractional Order, Non-Gaussian Solute Transport, 2000–2004 (with D. A. Benson and S. W. Wheatcraft) [\$360,370 total: \$149,200 UNR and \$211,170 DRI].

Mathematics Institute Oberwolfach Research in Pairs grant: Tail Estimator for random vectors with heavy tails, 1996 (with H. P. Scheffler) [room and lodging only].

EPSCoR proposal development grant: Time Series Models with Heavy Tails, 1996 [\$2,500].

Dwight D. Eisenhower education grant: Mathematical Modeling for high school teachers, 1995–1996 (with C. Gupta) [\$16,800].

National Science Foundation grant: Norming Operators for Generalized Domains of Attraction, 1991-1993 [\$14,425].

National Science Foundation grant: The Symmetry Group of a Random Vector, 1989–1991 [\$11,190].

Hewlitt-Mellon Faculty Development Grant: Regular Variation and Generalized Domains of Attraction, Albion College, 1986 [\$2,500].

HONORS AND AWARDS

University Distinguished Professor, Michigan State University, 2017 to present.

ISI/Clarivate Highly Cited Researcher, 2016.

ISI Highly Cited Researcher, 2015.

Mousel-Feltner Research Award, UNR College of Arts and Sciences, 2003.

Outstanding Faculty Award, UNR Graduate Program of Hydrologic Sciences, 2001.

Phi Beta Kappa Researcher of the Year, Albion College, 1993.

Undergraduate Mathematics Prize Competition (Putnam Examination) Team, University of Michigan, 1976.

University of Michigan Regents-Alumni Scholar, 1973.

Michigan Mathematics Prize Competition Semi-Finalist, 1973.

National Merit Commended Student, 1972.

Nominated to United States Air Force Academy, 1972.

PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

Guest Editor, Special Issue on "Future Directions in Fractional Calculus," Chaos, Solitons, and Fractals, 2017.

Coordinating Editor for Applied Mathematics, Probability, and Statistics, Proceedings of the American Mathematical Society, 2013 to 2016.

Editorial Board, International Journal of Applied and Computational Mathematics, 2014 to present.

Editorial Board, Progress in Fractional Differentiation and Applications, 2014 to present.

Editorial Board, Sohag Journal of Mathematics, 2014 to present.

Research Council, Hugo Steinhaus Center, Wrocław, Poland, 2013 to present.

Associate Editor, Statistics and Probability Letters, 2010 to 2012.

Editor (Probability), Proceedings of the American Mathematical Society, 2010 to 2016.

Organizing Committee, International Meeting on Fractional Differentiation and Its Applications, Nanjing, China, May, 2012.

Organizing Committee, 3rd International Conference on Porous Media and Annual meeting of the International Society for Porous Media, Purdue University, May, 2012.

Guest Editor, Special Issue on "Recent Advances in Fractional Calculus," Fractional Calculus and Applied Analysis, 2012.

Guest Editor, Special Issue "Advanced Theoretical and Applied Studies of Fractional Differential Equations" in honor of the 65th birthday of Prof. Ravi Agarwal, Journal of Abstract and Applied Analysis, December 2011.

National Science Foundation Panel member, September 2009.

Member of the Advisory Board, Center for Statistical Consulting (CSTAT), Michigan State University, 2009 to present.

Guest Editor, Special Issue on Fractional Differential Equations, International Journal of Differential Equations, February 2010.

Member of the Advisory Board, International Conference on Mathematical Modeling, Sultan Qaboos University, Muscat, Sultanate of Oman, February 2009.

Member of the Quantitative Biology and Modeling Initiative, Michigan State University, 2007 to present.

Member of the executive committee of the Michigan Center for Industrial and Applied Mathematics, 2007–2009

Associate Editor, New Zealand Journal of Mathematics, 2006–2008.

National Science Foundation Panel member, October 2006.

Member of the Committee on Probability and Statistics in the Physical Sciences, Bernoulli Society for Mathematical Statistics and Probability, 2005–2008.

Member of the Institute for Mathematical Statistics, 2008–2011.

Member of the American Geophysical Union, 1999 to present.

Member of the Institute for Mathematical Statistics, 1984 to 1999.

Member of the American Mathematical Society, 1982 to 1987.

Member of the Operations Research Society of America, 1983 to 1988.

Reviewer for Advances in Applied Probability

Reviewer for The Annals of Applied Statistics

Reviewer for Annales de l'Institut Henri Poincaré (B) Probabilités et Statistiques

Reviewer for The Annals of Probability

Reviewer for Applied Mathematical Modelling

Reviewer for Applied Numerical Mathematics

Reviewer for Applied Stochastic Models in Business and Industry

Reviewer for the Asian-European Journal of Mathematics

Reviewer for the ANZIAM Journal

Reviewer for Chaos

Reviewer for the Chilean Research Fund Council

Reviewer for Communications in Computational Physics

Reviewer for Communications in Statistics: Stochastic Models

Reviewer for Computer Physics Communications

Reviewer for US Department of Energy, Office of Basic Energy Sciences

Reviewer for the Electronic Journal of Differential Equations

Reviewer for the Electronic Journal of Probability

Reviewer for Empirical Finance

Reviewer for $Environmental\ Fluid\ Mechanics$

Reviewer for $Environmental\ Research\ Letters$

Reviewer for Fluctuation and Noise Letters

Reviewer for Fractals

Reviewer for the Fractional Dynamic Systems

Reviewer for IEEE Transactions on Communications

Reviewer for IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control

Reviewer for the International Journal of Heat and Mass Transfer

Reviewer for the International Journal of Mathematics and Mathematical Sciences

Reviewer for the International Journal of Modern Physics B

Reviewer for the Journal of Applied Probability

Reviewer for the Journal of Computational and Applied Mathematics

Reviewer for the Journal of Computational Physics

Reviewer for the Journal of Engineering Mathematics

Reviewer for the Journal of Evolution Equations

Reviewer for the Journal of Fluid Mechanics

Reviewer for the Journal of Geophysical Research: Earth Science

Reviewer for the Journal of Hydrology

Reviewer for the Journal of Mathematical Biology

Reviewer for the Journal of Mathematical Physics

Reviewer for the Journal of Mathematical Sociology

Reviewer for the Journal of Multivariate Analysis

Reviewer for Journal of Physics A: Mathematical and Theoretical

Reviewer for Numerical Algorithms

Reviewer for Journal of Statistical Physics

Reviewer for Journal of Stochastic Analysis and Its Applications

Reviewer for Journal of Stochastic Analysis and Its Applications

Reviewer for the Journal of Theoretical Probability

Reviewer for $Linear\ Algebra\ and\ Its\ Applications$

Reviewer for Louisiana Board of Regents Research Competitiveness Fund

Reviewer for Mathematical Reviews

Reviewer for National Science Foundation, Computational Mathematics and Geophysics

Reviewer for National Science Foundation, Hydrologic Sciences

Reviewer for National Science Foundation, Statistics and Probability

Reviewer for Nonlinear Analysis: Modelling and Control

Reviewer for PRIMUS (Problem Resources and Issues in Mathematics Undergraduate Studies)

Reviewer for Physica A: Statistical and Theoretical Physics

Reviewer for Physical Review E: Statistical, Nonlinear, and Soft Matter Physics

Reviewer for Physical Review Letters

Reviewer for Physics Letters A: Statistical and Theoretical Physics

Reviewer for Portuguese Foundation for Science and Technology

Reviewer for Probability and Mathematical Statistics

Reviewer for Proceedings of the Royal Society A

Reviewer for Publications de l'Institut Mathematique

Reviewer for Qatar National Priorities Research Program

Reviewer for Quarterly Journal of Mechanics and Applied Mathematics

Reviewer for the Soil Science Society of America Journal

Reviewer for Statistics and Probability Letters

Reviewer for Stochastic Models

Reviewer for Stochastic Processes and Their Applications

Reviewer for Water Resources Research

COURSES TAUGHT

Remedial Algebra, U Michigan, Ann Arbor (Fr)

Introduction to Computers, Albion College (Fr)

Introduction to Statistics, U Nevada (Fr)

Precalculus/Functions, Albion College (Fr)

Calculus for Life Sciences I, U Nevada (Fr)

Calculus for Life Science Majors I, II, U Michigan, Ann Arbor (Fr)

Calculus I, II U Nevada (Fr)

Calculus I, II Albion College (Fr)

Calculus I, II, III, U Michigan, Ann Arbor (Fr/So)

Introduction to Statistics, Michigan State University (Fr/So)

Calculus III, U Michigan, Dearborn (So)

Introduction to Statistics, Albion College (So/Jr)

Differential Equations, Albion College (So/Jr)

FORTRAN Programming, Albion College (So/Jr)

Probability and Statistics, U Nevada (Jr/Sr)

Probability and Statistics, Michigan State University (Jr/Sr)

Operations Research, Albion College (Jr/Sr)

Advanced Calculus, Albion College (Jr/Sr)

Mathematical Modelling, Albion College (Jr/Sr)

Discrete Mathematical Modeling, U Washington (Jr/Sr)

Mathematical Modeling, U Nevada (Sr/Grad)

Probability Theory, U Nevada (Sr/Grad)

Stochastic Operations Research, U Nevada (Grad)

Stochastic Methods in Optimization, Michigan State University (Grad)

Stochastic Models and Simulation, U Nevada (Grad)

Applied Linear Regression, U Nevada (Grad)

Time Series Analysis, U Nevada (Grad)

Time Series Analysis, Michigan State University (Grad)

Advanced Mathematics for Earth Science, U Nevada (Grad)

Fractal Calculus, U Nevada (Grad)

DEPARTMENTAL SERVICE

PhD Committee member, Eduardo de Moraes, Computational Mathematics, Science, and Engineering, 2017 to present.

PhD Committee member, Michael Delaura, Statistics and Probability, 2017 to present.

PhD Committee member, Samiee Mehdi, Computational Mathematics, Science, and Engineering, 2016 to present.

Postdoctoral supervisor, James Kelly, 2015 to present.

Postdoctoral supervisor, Harish Sankaranarayanan, 2015–2017.

PhD Advisor, Metin Ergolu, Statistics and Probability, 2015 – 2016.

Postdoctoral supervisor, Ozlem Defterli, 2014.

PhD Committee member, Nasreen Nawaz, Department of Economics, 2013 – 2016.

PhD Committee member, Pedro Nariyoshi, Bioengineering, 2013 – 2016.

PhD Advisor, Farzad Sabzikar, Statistics and Probability, 2010 – 2014.

PhD Advisor, Kai Zhang, Statistics and Probability, 2010 – 2013.

PhD Advisor, Yuzhen Zhou, Statistics and Probability, 2011.

PhD Committee member, Mine Dogan, Geological Sciences, 2010 – 2013.

PhD Committee member, Lening Kang, Statistics and Probability, 2008 – 2013.

PhD Committee member, Wei-Ying Wu, Statistics and Probability, 2008–2011.

 ${\it MS\ Committee\ member,\ Samarth\ Jain,\ Construction\ Management,\ 2008-2010.}$

PhD Committee member, Sumit Sinha, Statistics and Probability, 2008–2011.

PhD Committee member, Yun Xue, Statistics and Probability, 2007–2010.

PhD Committee member, Wei Wang, Crop and Soil Science, 2007–2009.

PhD committee member, Paramita Chakraborty, Statistics and Probability, 2006–2009.

Postdoctoral supervisor, Hongwen Guo, 2006–2007.

Postdoctoral supervisor, Wensheng Wang, 2006–2007.

MSc thesis advisor, Leonardos Louloudis, Statistics, 2006.

PhD thesis advisor, Natalie Zhou, Applied Mathematics, 2005–2006.

MSc thesis advisor, Matt Davis, Statistics, 2005.

Postdoctoral supervisor, Charles Tadjeran, 2003–2006.

MS thesis advisor, Suresh Kumar, 2004.

MS thesis advisor, Erick Foster, 2004.

Postdoctoral supervisor, Satoko Kurita, 2004–2005.

MS thesis advisor, Kristen Bianchi, 2002–2003.

MS Committee member, Seidu Inusah, 2002-2003.

MS Committee member, Jigna Bhatt, 2002-2003.

MS committee member, Abraham Ayebo, 2001-2002.

MS comprehensive examination advisor, R. Schumer, 2000.

BS honors thesis advisor, Tonya Call, 1997.

MS comprehensive examination advisor, Bayard Webb, 1997.

MS comprehensive examination advisor, Brad Ramirez, 1996.

MS thesis advisor, Julie Christiansen, 1994–1996.

Faculty advisor for the Mathematical Competition in Modelling, 1994 to present.

Undergraduate academic advisor, 1996–2000.

Internship coordinator, 1997–1999.

Undergraduate curriculum committee, 2004-2005.

Departmental web pages, 2004-2005.

Statistics search committee, 2003-2004.

Computer equipment and space committee, 2002-2004.

Graduate committee, 2001-2004.

Curriculum committee (chair), 2002–2003.

Applied mathematics search committee, 2001-2002.

Statistics search committe, 2001-2002.

Teaching mentor, 2001-2002.

Merit committee, 2001-2002.

Curriculum committee (chair), 2000-2001.

Operations Research Search Committee, 2000-2001.

Statistics Search Committee, 1999-2000.

Executive Committee, 1997-1999, 1995-1996 and 1993-1994.

Statistics Search Committee (chair), 1998-1999.

Computer and Equipment Committee (chair), 1997-1998.

Operations Research Search Committee (chair), 1996-1997.

Library Committee, 1994-1996 (chair 1995-1996).

Statistics Search Committee, 1995-1996.

Applied Mathematics Search Committee (chair), 1994-1995.

Curriculum committee, 1993-1996 (chair 1995-1996).

Departmental Plan Committee, 1993-1994.

Placement Exam Committee, 1993-1994.

Developed new course MATH 767 Advanced Mathematics for Earth Science, 2003.

Developed new course MATH 758 Time Series Analysis, 2002.

Co-author of successful proposal for MS option in statistics, 2001.

Co-author of successful proposal for BS option in statistics and minor in statistics, 1996.

Helped develop new math core course (MATH 152) in statistics, 1996.

Co-author of successful proposal for MS in mathematics applied option, 1995.

Co-author of successful proposal for BS in mathematics applied option, 1994.

Analyzed data and wrote report for survey of mathematics departments at peer institutions, 1993-1994.

Supervised purchase of computer display equipment for classroom use, 1993.

Author of successful proposal to make Mathematical Modeling (Math 420) a capstone course for Mathematics majors, 1993.

Maximum likelihood estimation for stable laws, applied mathematics seminar, March 1997.

Supervisor, Math Tutor Program, Albion College, 1988-1992.

Mathematics Colloquium Lecture: Applying to Graduate Schools, Albion College, September 1986.

Faculty advisor for the Mathematical Competition in Modelling, Albion College, 1985-1992.

Member of Placement Examination Committee, Albion College, 1985-1992.

Mathematics Colloquium Lecture: Forgetful Models are Best, Albion College, November 1985.

COLLEGE/UNIVERSITY SERVICE

PhD committee member, Wei Wang, Crop and Soil Science, 2007–2010.

PhD committee member, Shelley McDonell, Geography, Otago University, 2005–2006.

PhD thesis internal examiner, Timothy Williams, Otago University, 2005.

PhD thesis external examiner, Brett Painter, Lincoln University, 2005.

PhD committee member, Jeffrey Olsen, Hydrology, 2003–2008.

PhD thesis advisor, Yonas Gebeyehu Tesfaye, Hydrology, 2003–2005.

PhD committee member, Erich Foster, Hydrology, 2004 to present.

MS committee member, Ellen Considine, Hydrology, 2003 to present

MS committee member, Aglika Gyaourova, Computer Science, 2003.

MS committee member, Lucretia Rodriguez, Chemical Engineering, 2001–2003.

PhD committee member, Jie Xu, Hydrology, 2001–2003.

 MS committee member, Manish Nilawar, Computer Science, 2002–2003.

MS committee member, Pritish Kar, Materials Science, 2002–2003.

PhD committee member, Assem Sonbol, Electrical Engineering, 2001–2004.

MS committee member, Javier Martinez, Chemical Engineering, 2001–2003.

PhD committee member, Ted Oleson, Social Psychology, 2000–2005.

MS committee member, Jason Brown, Physics, 2000–2001.

MS committee member, Yu Xin, Computer Science, 2000.

PhD committee member, Peter Hakel, Physics, 2000–2001.

PhD committee member, Mounira Boudjema, Physics, 2000–2001.

MS committee member, Matt Herrick, Hydrology, 2000–2001.

PhD committee member, Yu Xin, Chemical & Metallurgical Engineering, 2000–2002.

PhD committee member, David Purvance, Hydrology, 1998–2000.

PhD committee member, Rosemary Woods Carroll, Hydrology, 1998–2000.

PhD committee member, Mike Widmer, Hydrology, 1998–2004.

PhD committee member, R. Schumer, Hydrology, 1998–2002.

MS committee member, Yu Xin, Chemical & Metallurgical Engineering, 1998–2000.

PhD committee member, Victor Vasquez, Chem. & Metallurgical Eng., 1998-1999.

MS committee member, James Hilger, Ecology, 1997-1998.

MS committee member, Victor Vasquez, Chem. & Metallurgical Eng., 1996-1997.

PhD committee member, D. A. Benson, Hydrology, 1996-1998.

MS committee member, Kyle Comanor, Hydrology, 1996-1998.

Chair in Clinical Pharmacy Search Committee, U Otago, 2005.

Commerce Board, U Otago, 2005.

University grievance committee, 2004–2005.

Core mathematics committee (chair), program in hydrologic sciences, 2002-2003.

University Special Hearing Committee, 2000-2001.

Faculty senate 111 technology committee, 1996-1997.

VPAA Statistics coordinating committee, 1994-1996.

Forum for the future committee, 1995-1997.

University library committee, 1994-1995.

Apportionment Committee, College of Arts and Sciences, 1994-1995.

Participant in UCCSN faculty workload in-depth study, 1994.

IEEE-Computer Science-Electrical Engineering Seminar: Heavy Tails, Fractional Derivatives, and Fractals, April 2003.

Chemical Engineering Undergraduate Seminar: Chaos and Fractals, April 2001.

Chemical and Metallurgical Engineering Department colloquium: Cooking without a recipe. Heavy tail models in statistics, September 1998.

Hydrology Department colloquium: Heavy tail probability models with applications to hydrology, December 1996.

Physics Department colloquium: Probability models with fat tails, September 1995.

Electrical Engineering Department colloquium: Murphy's law, February 1995.

Member of Resource Allocation Committee, Albion College, 1991-92.

Member of College Petitions Committee, Albion College, 1990-91.

Faculty Lecture: The Mathematical Basis for Murphy's Law, Albion College, November 1987.

Member of College Faculty Development Committee, subcommittee on new faculty, Albion College, 1985-86.

COMMUNITY SERVICE

Drought frequency model for Truckee Meadows Water Authority, 2002.

Chaos and Fractals, UNR Science and Technology Day, 1998–2002.

Mathematical models of bad luck, Recreational Mathematics Conference, California Mathematics Council, Community Colleges, Stateline NV, April 1997.

Expert witness, Statistics and Probability, Washoe County District Court, November 1996.

Mathematical modeling for high school teachers, summer workshop, 1995 (with Chaitan Gupta, Department of Mathematics).

Helped write curriculum for new high school course in statistics for Washoe County, Fall 1994.

Chaos and Fractals, UNR Science and Technology Day, 1994–1996 (with Chaitan Gupta).

Introduction to Statistics on the TI-82 Graphing Calculator, Rancho HS Summer Science Program for Minority Students, Las Vegas NV, May 1994.

Introduction to Statistics on the TI-81 Graphing Calculator, In-Service for Washoe County Secondary School Teachers, February 1994.

Introduction to Linear Regression on the TI-81 Graphing Calculator, In-Service for Washoe County Secondary School Teachers, February 1994.

Member of Mathematical Association of America, Michigan Chapter, High School Visiting Lecture Program, 1989-1991.

President of School Board, St. John Catholic School, Albion MI, 1989-1990.

Member of School Board, St. John Catholic School, Albion MI, 1988-1990.

Guest speaker: The Mathematical Basis for Murphy's Law, Albion Rotary Club, March 1988.

Adult Leader, Cub Scouts Pack #161, St. John Catholic School, Albion MI, 1987-1991.

Member of Computer Advisory Committee, St. John Catholic School, Albion MI, 1986-1987.

Commentator, St. John Catholic Church, Albion MI, 1986-1992.