Todd C Rasmussen, PhD

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Research Specialization

 Fluid flow and hydrogeochemical fate and transport in surface and subsurface environments; focusing on the physical, chemical, mathematical, and statistical description and quantification of hydrologic processes

Education

- 1988, Doctor of Philosophy, Dept of Hydrology & Water Resources, College of Engineering & Mines, University of Arizona; Dissertation: Fluid flow and solute transport through three-dimensional networks of variably saturated discrete fractures; Advisor: Daniel D Evans
- 1982, Master of Science, Dept of Hydrology & Water Resources, College of Earth Sciences, University of Arizona; Thesis: Solute transport in saturated fractured media; Advisor: Eugene S Simpson
- 1976, Bachelor of Science, School of Forestry, University of California, Berkeley; Major: Forest Resource Management; Advisor: Paul J Zinke

Academic Positions

- Warnell School of Forestry & Natural Resources, University of Georgia, Athens
 - 2007-present, Professor
 - 1998-2007, Associate Professor
 - 1992-1998, Assistant Professor
- Department of Hydrology & Water Resources, University of Arizona, Tucson
 - 1991-1992, Adjunct Assistant Professor
 - 1989-1991, Assistant Research Scientist
 - 1986-1989, Research Associate
 - 1980-1981, Graduate Teaching Assistant
 - 1979-1982, Graduate Research Assistant
- Division of Economic & Business Research, University of Arizona, Tucson
 - 1982-1986, Graduate Research Assistant

Professional Positions

- 1980-1988, Hydrologic Consultant, AquaScience Inc, Tucson AZ.
- 1983, Hydrologic Intern, Basalt Waste Isolation Project, US Dept of Energy, Hanford WA.
- 1976-1979, Watershed Technician (Peace Corps Volunteer), Corporación Honduraño de Desarrollo Forestal (CODEFOR), Honduras, Central America.

Publications

National Standards

• TC Rasmussen, Bollinger JS (chairs) (2010) Evaluation of subsurface radionuclide transport at commercial nuclear power plants ANSI/ANS-2.17-2010 (R2016), American Nuclear Society, La Grange Park IL.

Books and Monographs

- Depner JS, TC Rasmussen (2016) Hydrodynamics of time-periodic groundwater flow: Diffusion waves in porous media, Geophysical Monograph 224, Wiley.
- Rasmussen TC, GD Carroll, AP Georgakakos (eds) (2007) 2007 Georgia Water Resources Conference, Proceedings, Warnell School of Forestry & Natural Resources, University of Georgia, Athens GA, Mar 27-29, 2007, 633 pp.
- Evans DD, TJ Nicholson, TC Rasmussen (eds) (2001) Flow and transport through unsaturated fractured rock, Second Edition, Geophysical Monograph 42, American Geophysical Union, Washington DC, 196 pp.
- Rasmussen TC (ed) (1991) Survival in the desert: Water quality and quantity issues into the 21st century, Proceedings, Arizona Hydrological Society, Fourth Annual Symposium, Casa Grande AZ, Sept 12-13, 1991, 178 pp.
- Rasmussen TC (ed) (1990) Survival in the desert: Water quality and quantity issues into the 21st century, Proceedings, Arizona Hydrological Society, Third Annual Symposium, Casa Grande AZ, Sept 20-22, 1990, 316 pp.
- Rasmussen TC, SR Thompson (eds) (1984) Hydrology and water resources of Arizona and the Southwest Proceedings, AAAS-AWRA, Arizona-Nevada Chapter, Apr 7, 1984, 238 pp.
- Rasmussen TC, JL Mills (eds) (1983), Hydrology and water resources of Arizona and the Southwest, Proceedings, AAAS-AWRA, Arizona-Nevada Chapter, Apr 16, 1983, 147 pp.
- Rasmussen TC, ML Tidwell (eds) (1982) Hydrology and water resources of Arizona and the Southwest Proceedings, AAAS-AWRA, Arizona-Nevada Chapter, Apr 24, 1982, 167 pp.

Chapters in Books

- Sun G, PV Caldwell, SG McNulty, AP Georgakakos, S Arumugam, J Cruise, RT McNider, A
 Terando, PA Conrads, J Feldt, V Misra, L Romolo, TC Rasmussen, DA Marion (2013) Impacts of
 climate change and variability on water resources in the Southeast USA NCA Southeast Technical
 Report 204-234
- Rasmussen TC (2005) Deep soil-water movement Water encyclopedia 5:471-473.
- Evans DD, TC Rasmussen, TJ Nicholson (2001) Flow and transport through unsaturated fractured rock: An overview in Evans DD, TJ Nicholson, TC Rasmussen (eds), 2001, Flow and transport through unsaturated fractured rock, Second Edition, Geophysical Monograph 42, American Geophysical Union, Washington DC, p 1-18.

 Rasmussen TC (2001) Pressure wave vs. tracer velocities through unsaturated fractured rock in Evans DD, TJ Nicholson, TC Rasmussen (eds), 2001, Flow and transport through unsaturated fractured rock, Second Edition, Geophysical Monograph 42, American Geophysical Union, Washington, DC, p. 45-52.

- Radcliffe DE, TC Rasmussen (2001) Chapter 4: Soil water movement in Warrick AW (Ed), Soil physics companion, CRC Press.
- Evans DD, TC Rasmussen (1994) Special problems in sampling fractured consolidated media in Wilson LG, LG Everett, SJ Cullen (eds), Vadose zone characterization and monitoring; Principles, methods and case studies, Lewis Publishers.
- Rasmussen TC, SC Rhodes (1994) Energy-related methods: Psychrometers in Wilson LG, L Everett, S Cullen (eds), Vadose zone characterization and monitoring; Principles, methods and case studies, Lewis Publishers.
- Rasmussen TC, PJ Sheets, DD Evans (1992) Unsaturated hydraulic conductivity estimates of Apache Leap Tuff obtained with a modified outflow method in van Genuchten MTh, FJ Leij, LJ Lund (eds), Indirect methods for estimating the hydraulic properties of unsaturated soils, University of California, Riverside, p 645-652.
- Rasmussen TC, TC Yeh, DD Evans (1989) Effect of variable matrix-permeability / fracture-permeability ratios on three dimensional fractured rock hydraulic conductivity in Buxton BE (ed), Geostatistical, sensitivity and uncertainty methods for ground-water flow and radionuclide transport modeling, Battelle Press, p 337-358.
- Rasmussen TC (1987) Computer simulation of steady fluid flow and solute transport through threedimensional networks of variably saturated, discrete fractures in Evans DD, TJ Nicholson (eds), Flow and transport through unsaturated fractured rock, Geophysical Monograph 42, American Geophysical Union, Washington DC, p 107-114.

Journal Articles

- Rugel K, SW Golladay, CR Jackson, TC Rasmussen (2016) Delineating groundwater/surface water interaction in a karst watershed: Lower Flint River Basin, southwestern Georgia, USA J Hydrology: Regional Studies 5:1-19.
- Mowrer J, M Cabrera, TC Rasmussen, K Cassity-Duffey (2014) Nitrogen in stored poultry litter: Uric acid and xanthine J Environmental Quality 43(6):2137-2145.
- Ssegane H, EW Tollner, YM Mohamoud, TC Rasmussen, JF Dowd (2012a) Advances in variable selection methods I: Causal selection methods versus stepwise regression and principal component analysis on data of known and unknown functional relationships J Hydrology, 438-439:16-25.
- Ssegane H, EW Tollner, YM Mohamoud, TC Rasmussen, JF Dowd (2012b) Advances in variable selection methods II: Effect of variable selection method on classification of hydrologically similar watersheds in three midAtlantic ecoregions J Hydrology, 438-439:26-38.
- Tedela NH, SC McCutcheon, TC Rasmussen, RH Hawkins, WT Swank, JL Campbell, MB Adams, CR Jackson, EW Tollner (2012a) Runoff curve numbers for 10 small forested watersheds in the mountains of the eastern United States J Hydrol Eng, Special Issue 7(11):1188-1198.

 Tedela NH, SC McCutcheon SC, JL Campbell, WT Swank, MB Adams, TC Rasmussen (2012b)
 Curve numbers for nine mountainous eastern U.S. watersheds: Seasonal variation and forest cutting J Hydrol Eng, Special Issue 7(11):1199-1203.

- Zhu X, Risse LM, McCutcheon SC, Tollner EW, Rasmussen TC, West LT (2010) Laboratory investigation of rill erosion on compost blankets under concentrated flow conditions *Transactions* ASABE 53(4):1077-1086.
- Rasmussen TC, TL Mote (2007) Monitoring surface and subsurface water storage using confined aquifer water levels at the Savannah River Site, USA Vadose Zone J 6(2):327-335.
- Belk EL, D Markewitz, TC Rasmussen, EJM Carvalho, DC Nepstad, EA Davidson (2007) Modeling
 the effects of throughfall reduction on soil water content in a Brazilian Oxisol under a moist tropical
 forest Water Resources Research 43:W08432.
- Toll NJ, TC Rasmussen (2007) Removal of barometric pressure effects and Earth tides from observed water levels *Ground Water* 45(1):101-105.
- Rasmussen TC, GQ Yu (2006) Determination of groundwater flowness, fluxes, velocities, and travel times using the complex variable boundary element method *Engr Analysis with Boundary Elements* 30(12):1030-1044.
- Mathes SE, TC Rasmussen (2006) Combining multivariate statistical analysis with geographic information systems mapping: A tool for delineating groundwater contamination *Hydrogeology J* 14(8):1493-1507.
- Carter TL, TC Rasmussen (2006) Hydrologic behavior of vegetated roofs J American Water Resources Association 42(5):1261-1274.
- Zeng X, TC Rasmussen, MB Beck, AK Parker, ZL Lin (2006) A biogeochemical model for metabolism and nutrient cycling in a Southeastern Piedmont impoundment Environmental Modelling & Software 21(8):1073-1095.
- Tollner EW, TC Rasmussen, B Upchurch, J Sikes (2005) Simulated moving bed form effects on real-time in-stream sediment concentration measurement with densitometry J Hydraulic Engineering ASCE 131(12):1141-1144.
- Zeng X, TC Rasmussen (2005) Multivariate statistical characterization of water quality in Lake Lanier, Georgia, USA J Environmental Quality 34:1980-1991.
- Rasmussen TC, KG Haborak, MH Young (2003) Estimating aquifer hydraulic properties using sinusoidal pumping at the Savannah River Site, South Carolina, USA Hydrogeology 11:466-482.
- Rasmussen TC, GQ Yu (2003) A complex variable boundary-element strategy for determining groundwater flowness and travel times Advances in Water Resources 26(4):395-406.
- Young MH, TC Rasmussen, FC Lyons, KD Pennell (2002) Optimized system to improve pumping rate stability during aquifer tests *Ground Water* 40(6):629-637.
- Rasmussen TC, RH Baldwin Jr., JF Dowd, AG Williams (2000) Tracer vs. pressure wave velocities through unsaturated saprolite Soil Science Society of America J 64(1):75-85.
- Holmbeck-Pelham SA, TC Rasmussen, LA Fowler (2000) Regulation of injected ground water tracers Ground Water 38(4):541-549.

• Lewis AJ, TC Rasmussen (1999) Determination of suspended sediment concentrations and particle size distributions using pressure measurements J Environmental Quality 28:1490-1496.

- Yu GQ, TC Rasmussen (1997) Application of the ordinary least squares approach for solution of complex variable boundary element problems International J Numerical Methods in Engineering 40(7):1281-1293.
- Rasmussen TC, LA Crawford (1997) Identifying and removing barometric pressure effects in confined and unconfined aguifers *Ground Water* 35(3):502-511.
- Rasmussen TC (1995) Laboratory characterization of fluid flow parameters in a porous rock containing a discrete fracture Geophysical Research Letters 22(11):1401-1404.
- Elder AN, TC Rasmussen (1994) Neutron probe calibration in unsaturated tuff Soil Science Society of American J 58:1301-1307.
- Chen YD, SC McCutcheon, TC Rasmussen, WL Nutter, RF Carsel (1993) Integrating water quality modeling with ecological risk assessment for nonpoint source pollution control: A conceptual framework Water Science & Technology 28:431-440.
- Rasmussen TC, DD Evans, PJ Sheets, JH Blanford (1993) Permeability of Apache Leap Tuff: Borehole and core measurements using water and air Water Resources Research 29(7):1997-2006.
- Rasmussen TC, DD Evans (1993) Water infiltration into exposed fractured rock surfaces Soil Science Society of America J 57(2):324-329.
- Davis DR, TC Rasmussen (1993) A comparison of linear regression with Clark's method for estimating barometric efficiency of confined aquifers Water Resources Research 29(6):1849-1854.
- Rasmussen TC (1991) Steady fluid flow and travel times in partially saturated fractures using a discrete air-water interface Water Resources Research 27(1):67-77.
- Haldeman WR, Y Chuang, TC Rasmussen, DD Evans (1991) Laboratory analysis of fluid flow and solute transport through a fracture embedded in porous tuff Water Resources Research 27(1):53-66.
- Kilbury RK, TC Rasmussen, DD Evans, AW Warrick (1986) Water and air intake of surface-exposed rock fractures in situ Water Resources Research 22(10): 1431-1443.

Articles in Published Proceedings

- Rasmussen TC, 2011, Hydrologic Impacts of Energy Production in GD Carroll (ed), Proceedings 2011 Georgia Water Resources Conference, April 11-13, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA.
- Avant BK, AR Ignatius, TC Rasmussen, AJ Grundstein, TL Mote, JM Shepherd, 2011, Coupling Tritium Release Data with Remotely Sensed Precipitation Data to Assess Model Uncertainties in GD Carroll (ed), Proceedings 2011 Georgia Water Resources Conference, April 11-13, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA.
- Sheridan R, GD Carroll, CR Jackson, TC Rasmussen JL Shelton, 2009, Simple Alternative Methods for the Biological Component of Watershed Assessments in GD Carroll (ed), Proceedings 2009 Georgia Water Resources Conference, April 27-29, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA.

 Zeng W, Y Zhang, B Couch, TC Rasmussen, 2009, Incorporating the Cold-Water Pool in Lake Lanier Conservation Storage Management in GD Carroll (ed), Proceedings 2009 Georgia Water Resources Conference, April 27-29, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA.

- Little E, LM Risse, V Nzengung, TC Rasmussen, T Sherrell, 2009, Remediation Processes in a State Botanical Garden Wetland Impacted by Agricultural Nutrient Loading in GD Carroll (ed), Proceedings 2009 Georgia Water Resources Conference, April 27-29, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA.
- Rasmussen TC, E Ceballos, 2009, The Effects of Sediment Removal on Internal Nutrient Cycling and Eutrophication in Lake Allatoona in GD Carroll (ed), Proceedings 2009 Georgia Water Resources Conference, April 27-29, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA.
- Tedela N, SC McCutcheon, TC Rasmussen, 2007, Effects of seasonal variation on runoff Curve Number for selected watersheds of Georgia: Preliminary study in Rasmussen TC, GD Carroll, AP Georgakakos, (eds), 2007, Proceedings 2007 Georgia Water Resources Conference March 27-29, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA, ISBN 0979410002, p. 64-67.
- Carter TL, TC Rasmussen, CR Jackson, A Keeler, L Fowler, JL Meyer, D Gattie, 2007, Vegetated roofs: Performance and policy in Athens, GA in Rasmussen TC, GD Carroll, AP Georgakakos, (eds), 2007, Proceedings 2007 Georgia Water Resources Conference March 27-29, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA, ISBN 0979410002, p. 218-221.
- Little E, S Eggert, D Wenner, T Rasmussen, D Conners, D Fischer, 2007 Results from six years
 of community-based volunteer water quality monitoring by the Upper Oconee Watershed Network
 in Rasmussen TC, GD Carroll, AP Georgakakos, (eds), 2007, Proceedings 2007 Georgia Water
 Resources Conference March 27-29, Warnell School of Forestry and Natural Resources, University
 of Georgia, Athens GA, ISBN 0979410002, p. 438-441.
- Ceballos EL, TC Rasmussen, 2007, Internal loading in Southeastern Piedmont impoundments in Rasmussen TC, GD Carroll, AP Georgakakos, (eds), 2007, Proceedings 2007 Georgia Water Resources Conference March 27-29, Warnell School of Forestry and Natural Resources, University of Georgia, Athens GA, ISBN 0979410002, p. 599-602.
- Carter TL, TC Rasmussen, 2005, *Use of green roofs for ultra-urban stream restoration in the Georgia Piedmont(USA)* in Hatcher, KJ (ed), Proceedings 2005 Georgia Water Resources Conference, Athens GA, p. 612-616.
- Keeler AG, TC Rasmussen, 2005, Essential decisions for an instream flow policy in Hatcher, KJ (ed), Proceedings 2005 Georgia Water Resources Conference, Athens GA, p. 266-269.
- Carroll GD, TC Rasmussen, 2005, *Identifying sewage failures in urban environments: Examples from Athens, GA* in Hatcher, KJ (ed), Proceedings 2005 Georgia Water Resources Conference, Athens GA, p. 218-231.
- Rasmussen TC, Yu GQ, 2004, Determination of groundwater velocities using complex flux boundary conditions, in, Miller CT, Farthing MW, Gray WG, Pinder GF (eds), Computational Methods in Water Resources, Proceedings of the XVth International Conference on Computational Methods in Water Resources (CMWR XV), June 1317, 2004, Chapel Hill, NC, Elsevier, p. 393-404.

 Mayhew, M, TC Rasmussen, and AK Parker, 2001, Phosphorus Binding by Iron-Rich Soil in the Southeastern Piedmont: Implications for Point and Non-point Sources of Phosphorus in Hatcher, KJ (ed), Proceedings 2001 Georgia Water Resources Conference, Athens GA, p. 453-456.

- Parker, AK and TC Rasmussen, 2001, Phosphorus Cycling in Southeastern Piedmont Lakes in Hatcher, KJ (ed) Proceedings 2001 Georgia Water Resources Conference, p. 457-460.
- Vallotton, BA and TC Rasmussen, 2001, Interviews of Georgia Water Resources Scientists and Managers in Hatcher, KJ (ed), Proceedings 2001 Georgia Water Resources Conference, Athens GA, p. 525-527.
- Mathes, SE and TC Rasmussen, 2001, GIS Modeling of Ground-Water Contamination at the Savannah River Site in Hatcher, KJ (ed), Proceedings 2001 Georgia Water Resources Conference, Athens GA, p. 594-596.
- Calhoun, DL and TC Rasmussen, 2001, Densimetric Monitoring of Suspended-Sediment Concentrations, Northeastern Georgia in Proceedings of the Seventh Federal Interagency Sedimentation Conference, Reno NV.
- Calhoun, DL and TC Rasmussen, 1999, Real-Time Density and Sediment Measurements using Pressure Transducers 1999 Georgia Water Resources Conference, Athens, Georgia, p. 303-306.
- Cox, BV and TC Rasmussen, 1999, Daily Sediment Loads in the North Oconee River 1999 Georgia Water Resources Conference, Athens, Georgia, p. 307-309.
- Zeng XQ and TC Rasmussen, 1999, Water Quality Dynamics in Lake Lanier 1999 Georgia Water Resources Conference, Athens, Georgia, p. 350-353.
- Rasmussen, TC, J Reed, J Bollinger, 1998, A Decision Tree Methodology for Source Water Assessment and Protection Source Water and Protection 98, Dallas, TX, p. 39-45.
- Holmbeck-Pelham, SA and TC Rasmussen, 1997, Characterization of Temporal and Spatial Variability of Turbidity in the Upper Chattahoochee River 1997 Georgia Water Resources Conference, Athens, Georgia, p. 144-147.
- Burkingstock, BK, PB Bush, YC Berisford, JF Dowd, JB Feild, WW Johnson, TC Rasmussen, and JW Taylor, 1997, Predicting the Fate of Imidacloprid in a Coastal Plain Setting Using VS2DT 1997 Georgia Water Resources Conference, Athens, Georgia, p. 508-511.
- Rasmussen TC and GQ Yu, 1997, Complex Variable Boundary Integral Modeling of Groundwater Flow and Transport 1997 Georgia Water Resources Conference, Athens, Georgia, p. 379-382.
- Rasmussen, TC and JE Kundell, 1996, Enforceable Turbidity Standards: The Policy and Technical Debate in Georgia Effectiveness of Erosion and Sediment Control: Practices and Perspectives North Carolina Sedimentation Control Commission, Raleigh, NC, September 24-25.
- Bennett, CB, JK Reed, AC Bruns and TC Rasmussen, 1996, Real and Perceived Sources of Gradient Calculation Error in the Savannah River Site Groundwater Monitoring Program International Topical Meeting on Nuclear and Hazardous Waste Management, Seattle, WA, August 18-23, p. 1138-1145.
- Reed, JK, CB Bennett, AC Bruns and TC Rasmussen, 1996, Shared Benefits of an ERDA Task:
 The Savannah River Site and University of Georgia at Athens International Topical Meeting on
 Nuclear and Hazardous Waste Management, American Nuclear Society, Seattle, WA, August 18-23,
 p. 1636-1643.

Rasmussen, TC, 1996, Overcoming Diffusion-Limited Processes Using Enhanced Advective Fields
 Emerging Technologies in Hazardous Waste Management, American Chemical Society, Atlanta,
 GA.

- Kundell, JE and TC Rasmussen, 1995, Recommendations of the Georgia Board of Regents' Scientific Panel on Evaluating the Erosion Measurement Standard Defined by the Georgia Erosion and Sedimentation Act 1995 Georgia Water Resources Conference, Athens, Georgia, p. 211-217.
- Crawford, LA and TC Rasmussen, 1995, Effects of Barometric Pressure on Water Levels and Gradients at the Savannah River Site 1995 Georgia Water Resources Conference, Athens, Georgia, p. 224-228.
- Kitchens, S and TC Rasmussen, 1995, Hydraulic Evidence for Vertical Flow from Okeefenokee Swamp to the Underlying Floridan Aquifer in Southeast Georgia 1995 Georgia Water Resources Conference, Athens, Georgia, p. 156-157.
- Nicholson, TJ, R Hills, M Rockhold, G Wittmeyer, TC Rasmussen, A. Guzman-Guzman, 1994,
 Partially-Saturated Porous and Fractured Media Test Cases: Las Cruces and Apache Leap Tuff
 Studies INTRAVAL Conference, Paris, France.
- Rasmussen, TC, 1993, Field vs. Laboratory Permeability Estimates 1993 Georgia Water Resources Conference, Athens, GA, p. 185-188.
- Rasmussen, TC, TJ Nicholson, and DD Evans, 1990, Validation Efforts in Modeling Flow and Transport Through Partially Saturated Fractured Rock The Apache Leap Tuff Studies GEOVAL 90: International Symposium on Validation of Geosphere Transport Models, Stockholm, Sweden.
- Rasmussen, TC and DD Evans, 1990, Fractured Apache Leap Tuff: Interstitial, Hydraulic, Pneumatic, and Thermal Properties Waste Management 90, Tucson, AZ.
- Sully, MJ and TC Rasmussen, 1989, Microscopic Capillary Length Scales and Pore Size Distributions for Tuffaceous Rocks ASA-CSSA-SSSA Annual Meetings, Las Vegas, NV.
- Rasmussen, TC, JH Blanford, and PJ Sheets, 1989, Characterization of Unsaturated Fractured Tuff at the Apache Leap Tuff Site: Comparison of Laboratory/Field, Matrix/Fracture and Water/Air Flow Data FOCUS '89: Nuclear Waste Isolation in the Unsaturated Zone, Las Vegas, NV.
- Evans, DD and TC Rasmussen, 1988, Unsaturated Fractured Rock Flow Model Calibration for a Tuff Site International Conference and Workshop on the Validation of Flow and Transport Models for the Unsaturated Zone, Ruidoso, NM.
- Rasmussen, TC, Guo Z, and DD Evans, 1988, Unsaturated Hydraulic Properties of the Apache Leap Tuff Matrix International Conference and Workshop on the Validation of Flow and Transport Models for the Unsaturated Zone, Ruidoso, NM.
- Tidwell, VC, TC Rasmussen and DD Evans, 1988, Saturated Hydraulic Conductivity Estimates for Fractured Rock in the Unsaturated Zone International Conference and Workshop on the Validation of Flow and Transport Models for the Unsaturated Zone, Ruidoso, NM, May 1988.
- Rasmussen, TC, 1987, Meso-Scale Estimates of Unsaturated Fractured Rock Fluid Flow Parameters in Farmer, I.W., J.J.K. Daemen, C.S. Desai, C.E. Glass and SP Neuman (eds), Rock Mechanics: Proceedings of the 28th US Symposium, Tucson, AZ, A.A. Balkema, June 1987, p. 525-532.

• Evans, DD, TC Rasmussen and TJ Nicholson, 1987, Fracture System Characterization for Unsaturated Rock Waste Management '87, 2:209-212.

- Rasmussen, TC, CH Huang and DD Evans, 1985, Numerical Experiments on Artificially-Generated, Three-Dimensional Fracture Networks: An Examination of Scale and Aggregation Effects Hydrogeology of Rocks of Low Permeability, 17:676-682.
- Rasmussen, TC, 1985, Improved Site Characterization Using Multiple Approaches Symposium on Groundwater Flow and Transport Modeling For Performance Assessment of Deep Geologic Disposal of Radioactive Waste: A Critical Evaluation of the State of the Art, Albuquerque, NM, NUREG/CP-0079.
- Woodard, GC and TC Rasmussen, 1984, Models of Indoor and Outdoor Water Demand for Single Family Residences in Tucson, Arizona Hydrology and Water Resources in Arizona and the Southwest, Proceedings of the American Association for the Advancement of Science (AAAS) and American Water Resources Association - Arizona Chapter, 13:67-74.
- Woodard, GC and TC Rasmussen, 1984, Residential Water Demand: A Micro Analysis Using Survey Data Hydrology and Water Resources in Arizona and the Southwest, Proceedings of the AAAS and AWRA - Arizona Chapter, 14:9-20.
- Rasmussen, TC and FC Tracy, 1981, Use of the Universal Soil Loss Equation in the Tropics Hydrology and Water Resources in Arizona and the Southwest, Proceedings of the AAAS and AWRA Arizona Chapter, 11:47-53.

Bulletins or Reports

- Rasmussen TC, AY Özalp, BK Avant, SE Younger, JB Deemy, JA Floyd, HM Wolff, 2012, Ground-water vulnerability and risk assessment U.S. Forest Service, Southern Region (Region 8), Atlanta GA.
- Jones CD, Couch AM, Sherrell RD, Rasmussen TC, Dowd JF. 2010. Southeast Coast Network Surface Water Discharge Monitoring: Analysis of Existing Data and Data Acquisition Applications Natural Resource Report NPS/SECN/NRR-2010/264. National Park Service, Fort Collins CO.
- Rasmussen TC, Dowd JF, McKinnon RJ, Price BM, Sherrell RD. 2009. Southeast Coast Network Groundwater Monitoring: Protocol Development and Analysis of Existing Data. Natural Resource Report NPS/SECN/NRR-2009/126. National Park Service, Fort Collins CO.
- Rasmussen, TC, CR Jackson, and MB Beck, 2000, Sediment Transport Characterization in the Georgia Piedmont Environmental Resources Center, Georgia Institute of Technology, Atlanta GA, for U.S. Department of the Interior, Geological Survey, 85 pp.
- Lewis, AJ and TC Rasmussen, 1996, A New, Passive Technique for the In Situ Measurement of Total Suspended Solids Concentrations in Surface Water ERC 08-96, Environmental Resources Center, Georgia Institute of Technology, Atlanta GA, for U.S. Department of the Interior, Geological Survey, 66 pp.
- Rasmussen, TC, SC Rhodes, A Guzman and SP Neuman, 1995, Apache Leap Tuff INTRAVAL Experiments: Results and Lessons Learned NUREG/CR-6096, U.S. Nuclear Regulatory Commission, 94 pp.

 Rasmussen, TC and DD Evans, 1992, Nonisothermal Hydrologic Transport Experimental Plan NUREG/CR-5880, U.S. Nuclear Regulatory Commission, 41 pp.

- Evans, DD and TC Rasmussen, 1991, Unsaturated Flow and Transport Through Fractured Rock Related to High-Level Waste Repositories Final Report, Phase III, NUREG/CR-5581, U.S. Nuclear Regulatory Commission, 67 pp.
- Chuang, Y, WR Haldeman, TC Rasmussen, and DD Evans, 1990, Laboratory Analysis of Fluid Flow and Solute Transport Through a Variably Saturated Fracture Embedded in Porous Tuff NUREG/CR-5482, U.S. Nuclear Regulatory Commission, 328 pp.
- Rasmussen, TC, DD Evans, PJ Sheets and JH Blanford, 1990, Unsaturated Fractured Rock Character ization Methods and Data Sets at the Apache Leap Tuff Site NUREG/CR-5596, U.S. Nuclear Regulatory Commission, 139 pp.
- Rasmussen, TC and DD Evans, 1989, Fluid Flow and Solute Transport Modeling Through Three-Dimensional Networks of Variably Saturated Discrete Fractures NUREG/CR-5239, U.S. Nuclear Regulatory Commission, 193 pp.
- Yeh, TC, TC Rasmussen, and DD Evans, 1988, Simulation of Liquid and Vapor Movement in Unsaturated Fractured Rock at the Apache Leap Tuff Site: Models and Strategies NUREG/CR-5097, U.S. Nuclear Regulatory Commission, 73 pp.
- Rasmussen, TC and DD Evans, 1987, Unsaturated Flow and Transport Through Fractured Rock Related to High-Level Waste Repositories Final Report Phase II, NUREG/CR-4655, U.S. Nuclear Regulatory Commission, 475 pp.
- Sorooshian, S, DR Davis, TC Rasmussen, RH Nevulis, RW Ritzi, and RA Wolford, 1986, Statistical
 Criteria for Baselining of Time-Variant Hydrogeologic Parameters Basalt Waste Isolation Project,
 U.S. Department of Energy, 206 pp.
- Sorooshian, S, DR Davis, TC Rasmussen and RH Nevulis, 1985, Baseline Prediction Models, Baseline Prediction Model Validations, Ground-Water Level Correlations, Direction and Magnitude of Ground-Water Gradients, and Optimal Sampling Frequencies for Ground-Water Levels in Nine Hydrostratigraphic Units at Well Clusters DC-19, DC-20, and DC-22 Basalt Waste Isolation Project, U.S. Department of Energy, 188 pp.
- Sorooshian, S, DR Davis, TC Rasmussen, and LK Kher, 1984, Criteria for Baselining of Time-Variant Hydrologic Parameters Basalt Waste Isolation Project, U.S. Department of Energy, 126 pp.
- Rasmussen, TC and D Earp, 1982, Study of the Rio San Jose Basin above the Acoma Indian Reservation Pueblo of Acoma, Bureau of Indian Affairs, 371 pp.
- Rasmussen, TC, DR Davis, and DD Evans, 1980, *Hydrologic Models for Desert Regions* Systems and Projects, Inc., U.S. Army Corps of Engineers, 143 pp.
- Evans, DD, DR Davis, and TC Rasmussen, 1980, Irrigation Computer Model for Naval Bases in Saudi Arabia Planning Development Services, Inc., U.S. Army Corps of Engineers, 231 pp.

Other Documents

• Rasmussen TC, 1988, Fluid Flow and Solute Transport Through Three-Dimensional Networks of Variably-Saturated Discrete Fractures Ph.D. Dissertation, Department of Hydrology and Water Resources, University of Arizona, Tucson.

• Rasmussen TC, 1982, Solute Transport in Saturated Fractured Media Masters Thesis, Department of Hydrology and Water Resources, University of Arizona, Tucson.

Book Reviews

 Pruitt B, TC Rasmussen, Review of Practical Handbook for Wetland Identification and Delineation by John Grimson Lyon, 1993, Lewis Publishers, CRC Press, Boca Raton, FL.

Honors and Awards

- 2001, University of Georgia Alumni Outstanding Teaching Award
- 1985, John and Margaret Harshbarger Award for Outstanding Student Research

Grants Received

- Southeast Coast Network stream flow discharge monitoring Protocol development and analysis of existing data U.S. Department of the Interior, \$44,790, PI (100%).
- Evaluation and improvement of the curve number method of hydrological analysis on selected forested watersheds of Georgia Georgia Water Resources Institute, \$13,000, Co-PI (25%).
- Characterizing Nutrient Releases from Southeastern Piedmont Lake Sediments 2005-2007, U.S. Geological Survey, Georgia Water Research Institute, \$54,000, Principal Investigator (100%).
- Estimation, Removal, and Interpretation of Barometric Pressure and Earth Tide Effects in Aquifer Water Levels U.S. Department of Energy, Sandia National Laboratories, \$33,649, Todd Rasmussen, 2006-2007.
- Effects of Dredging on Water Quality in Southeastern Piedmont Impoundments 2005-2006, Enviro-Trade, \$35,000, Principal Investigator (100%).
- Estimating Aquifer Properties using Sinusoidal Aquifer Test at the Waste Isolation Pilot Project U.S. Department of Energy, Sandia National Laboratories, \$29,851, Todd Rasmussen, 2004-2005.
- Evaluation of Sediment Best Management Practices on the Broad River Georgia Environmental Protection Division, \$750,000, David Radcliffe, Todd Rasmussen, Jimmy Bramblett, and Mark Risse, 2002-2004
- Effects of Best Management Practices on Water Quality U.S. Environmental Protection Agency, \$450,000, Rhett Jackson and Todd Rasmussen, 2001-2003.
- Single Land-Use Watersheds for Pathogen TMDLs U.S. Department of Agriculture Special Grants Program, \$300,000, Mark Risse, Mark Bakker, Larry West, David Radcliffe, Bill Segars, and Todd Rasmussen, 2001-2004
- Use of Pressure Transducers to Monitor Sediment Movement U.S. Environmental Protection Agency, \$50,000, Bill Tollner, Bruce Upchurch, and Todd Rasmussen, 2000-2002.

• Community Values and the Long-Term Ecological Integrity of Rapidly Urbanizing Watersheds 1997, EPA/NSF Water and Watersheds Grant, \$850,000, Co-Principal Investigator (17%), Co-Principal Investigator (17%)

- Minimizing Investigation-Derived Waste (IDW) using Sinusoidal Aquifer Tests 1997, U.S. Department of Energy, \$336,400, Principal Investigator
- An Investigation of the Regulatory and Technical Suitability of Tracers for Groundwater Tracer Tests at the Savannah River Site 1997, U.S. Department of Energy, \$81,400. Principal Investigator.
- Hydrologic Restoration of Tate's Hell Swamp: A Comparative Watershed Analysis of Ecosystem Response and Recovery 1995, U.S Fish and Wildlife Contract, \$176,000, Principal Investigator.
- Lake Lanier Clean Lakes Study U.S. Environmental Protection Agency, \$175,000, Co-Principal Investigator (10%).
- Bedload sediment transport measurement and modeling at Wine Spring Creek watershed 1993,
 Coweeta Hydrologic Laboratory, Southeast Forest Experiment Station, \$22,000, Principal Investigator.
- An investigation of water level variations in groundwater monitoring wells at the Savannah River Site 1993, Education, Research and Development Association of Georgia Universities, \$39,721, Principal Investigator.
- A new, passive technique for the measurement of total suspended solids concentrations in surface water in Situ 1993, Georgia Water Resources Research Program, \$13,000, Principal Investigator.
- Solute transport through unsaturated fractured rock 1989-1992, U.S. Nuclear Regulatory Commission, \$375,000, Coprincipal Investigator (33%).
- Water resources assessment for Capitol Reef National Park 1990-1992, U.S. National Park Service, \$32,000, Principal Investigator.
- Subsurface removal of volatile organic compounds using forced ventilation 1989, Institute for Crustal Studies, \$27,000, Principal Investigator.
- Hydrologic forecast models for Oman 1989-1991, Oman Ministry of Water Resources, \$82,000, Coprincipal Investigator (50%).
- Water resources assessment for Ambos-Nogales 1990-1992, Ford Foundation, \$170,000, Affiliated Investigator (10%).
- Subsurface removal of volatile organic compounds using forced ventilation 1987-1989, Salt River Project, \$18,000, Coprincipal Investigator (50%).
- Development and calibration of real-time forecasting models on the Salt River 1986, Salt River Project, \$30,000, Coprincipal Investigator (75%).
- Statistical analyses of water level observations 1986-1988, Rockwell International Hanford Operations, \$135,000, Affiliated Investigator (50%).
- Regional hydro-geochemical investigation of the San Jose River Basin in west-central New Mexico 1980-1982, Bureau of Indian Affairs, \$75,000, Principal Investigator.

• Computer simulation model of large-scale irrigation projects in Jedda and Jubail, Saudi Arabia 1980-1981, U.S. Corps of Engineers, \$80,000, Affiliated Investigator (10%).

- Watershed simulation models for rural water supply in Saudi Arabia 1981, Funded by Agricultural Systems, Inc. of Saudi Arabia, \$8,000, Principal Investigator.
- Estimation of stream velocities and erosion potential of reclaimed strip-mines in Montana, Colorado, and Arizona 1980-1981, Peabody Coal Co., \$16,000, Affiliated Investigator (20%).

Editorial Board Member or Reviewer

Associate Editor

- 2012-present, Journal of Hydrology
- 2002-2007, Hydrogeology Journal
- 1992-1995, Water Resources Research

Review of Scientific Articles in Journals

- Water Resources Research
- Water Resources Bulletin Journal of the American Water Resources Assn
- American Society of Civil Engineers Hydraulics Division
- Soil Science Society of America Journal
- Ground Water
- Hydrologic Processes
- American Society of Agricultural Engineers
- Journal of Hydrology

Professional Societies and Organizations

Membership in Professional Organizations

- American Geophysical Union, Hydrology Section, member since 1981, associate editor for four years
- American Water Resources Association, member since 1980, state section officer for four years
- Association of Ground Water Scientists and Engineers, member since 1984
- Georgia Ground Water Association, member since 1993
- National Speleological Society, member since 1985, active since 1965
- Soil Science Society of America, member since 1986

Officer in Professional Organizations

 2011-present, Board of Directors, Consortium of Universities for the Advancement of Hydrologic Sciences, Inc.

- 1996-1997, President, Georgia Section, American Water Resources Association
- 1995-1996, President-Elect, Georgia Section, American Water Resources Association
- 1994-1995, Vice-President, Georgia Section, American Water Resources Association
- 1994-1997, Newsletter editor, Georgia Section, American Water Resources Association
- 1992-1998, Faculty Co-Advisor, University of Georgia Student Chapter, Georgia Section, American Water Resources Association.
- 1991-1992, Corporate Board Member, Arizona Hydrological Society
- 1990-1991, Vice-President, Tucson Chapter, Arizona Hydrological Society
- 1989-1990, President, Tucson Chapter, Arizona Hydrological Society
- 1981-1982, President, Student Chapter, Arizona Section, American Water Resources Association.

Professional Conferences Organized

- 2007, Organizer, American Nuclear Society Fall Meeting Session on Site Characterization, Monitoring, and Modeling Strategies for Groundwater Transport of Radionuclides at Nuclear Facilities.
- 1997, Organizer, 1997 Georgia Ground-Water Conference Two-day conference focusing on Georgia's Ground-Water Resources, in cooperation with Daniel B. Warnell School of Forest Resources, Georgia Section American Water Resources Assn, Georgia Ground-Water Assn, Georgia Water and Pollution Control Assn, April 1997.
- 1997, Organizer, Unsaturated Zone Flow and Transport in the Eastern United States Special Session, American Geophysical Union, Spring Meeting, Baltimore MD, May 1997.
- 1997, Organizer, Coupling Regulatory Strategies with Geosphere Transport Models Special Session, American Geophysical Union, Spring Meeting, Baltimore MD, May 1995.

Professional Service Awards

- 1996-1997, Appreciation Award Georgia Section, American Water Resources Association.
- 1995, Georgia State Senate, Senate Resolution 318, by Senators Gillis of the 20th, Egan of the 40th, Cagle of the 49th and others, Recognizing and commending the members of the Georgia Erosion and Sedimentation Control Panel; and for other purposes March 13, 1995.
- 1995, The UCOWR Award for Education and Public Service in Water Resources The Universities Council on Water Resources, Inc., Education and Public Service Committee, Honorable Mention, August 3, 1995.
- 1994-1996, Certificate of Appreciation, Co-Faculty Advisor, University of Georgia Student Chapter American Water Resources Association.
- 1994-1995, Certificate of Appreciation for Outstanding Service American Water Resources Association. 1992, Corporate Board Appreciation Award, Arizona Hydrological Society