

Martinus van Genuchten

List of Publications by Year in descending order

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232
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233
times ranked

10603
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | rosetta : a computer program for estimating soil hydraulic parameters with hierarchical pedotransfer functions. <i>Journal of Hydrology</i> , 2001, 251, 163-176. | 2.3 | 1,972 |
| 2 | Development and Applications of the HYDRUS and STANMOD Software Packages and Related Codes. <i>Vadose Zone Journal</i> , 2008, 7, 587-600. | 1.3 | 962 |
| 3 | Review and comparison of models for describing non-equilibrium and preferential flow and transport in the vadose zone. <i>Journal of Hydrology</i> , 2003, 272, 14-35. | 2.3 | 785 |
| 4 | Modeling Colloid Attachment, Straining, and Exclusion in Saturated Porous Media. <i>Environmental Science & Technology</i> , 2003, 37, 2242-2250. | 4.6 | 654 |
| 5 | Recent Developments and Applications of the HYDRUS Computer Software Packages. <i>Vadose Zone Journal</i> , 2016, 15, 1-25. | 1.3 | 629 |
| 6 | Neural Network Analysis for Hierarchical Prediction of Soil Hydraulic Properties. <i>Soil Science Society of America Journal</i> , 1998, 62, 847-855. | 1.2 | 528 |
| 7 | Modeling Nonequilibrium Flow and Transport Processes Using HYDRUS. <i>Vadose Zone Journal</i> , 2008, 7, 782-797. | 1.3 | 458 |
| 8 | Using Pedotransfer Functions to Estimate the van Genuchtenâ€œMualem Soil Hydraulic Properties: A Review. <i>Vadose Zone Journal</i> , 2010, 9, 795-820. | 1.3 | 344 |
| 9 | Effect of the shape of the soil hydraulic functions near saturation on variably-saturated flow predictions. <i>Advances in Water Resources</i> , 2000, 24, 133-144. | 1.7 | 311 |
| 10 | Evaluation of a first-order water transfer term for variably saturated dual-porosity flow models. <i>Water Resources Research</i> , 1993, 29, 1225-1238. | 1.7 | 300 |
| 11 | Parameter estimation for unsaturated flow and transport models â€” A review. <i>Journal of Hydrology</i> , 1987, 91, 255-293. | 2.3 | 288 |
| 12 | Water Flow and Heat Transport in Frozen Soil: Numerical Solution and Freezeâ€œThaw Applications. <i>Vadose Zone Journal</i> , 2004, 3, 693-704. | 1.3 | 286 |
| 13 | Analytical solutions for chemical transport with simultaneous adsorption, zero-order production and first-order decay. <i>Journal of Hydrology</i> , 1981, 49, 213-233. | 2.3 | 272 |
| 14 | Estimating Unsaturated Soil Hydraulic Properties from Tension Disc Infiltrometer Data by Numerical Inversion. <i>Water Resources Research</i> , 1996, 32, 2683-2696. | 1.7 | 251 |
| 15 | Modeling the Nonequilibrium Transport of Linearly Interacting Solutes in Porous Media: A Review. <i>Water Resources Research</i> , 1991, 27, 2287-2307. | 1.7 | 228 |
| 16 | Significance of straining in colloid deposition: Evidence and implications. <i>Water Resources Research</i> , 2006, 42, . | 1.7 | 209 |
| 17 | Macroscopic representation of structural geometry for simulating water and solute movement in dual-porosity media. <i>Advances in Water Resources</i> , 1996, 19, 343-357. | 1.7 | 200 |
| 18 | Scaling Parameter to Predict the Soil Water Characteristic from Particle-Size Distribution Data. <i>Soil Science Society of America Journal</i> , 1999, 63, 510-519. | 1.2 | 200 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 19 | Models for simulating salt movement in aggregated field soils. <i>Geoderma</i> , 1986, 38, 165-183. | 2.3 | 196 |
| 20 | An Agenda for Land Surface Hydrology Research and a Call for the Second International Hydrological Decade. <i>Bulletin of the American Meteorological Society</i> , 1999, 80, 2043-2058. | 1.7 | 188 |
| 21 | Straining and Attachment of Colloids in Physically Heterogeneous Porous Media. <i>Vadose Zone Journal</i> , 2004, 3, 384-394. | 1.3 | 185 |
| 22 | Convective-dispersive transport of solutes involved in sequential first-order decay reactions. <i>Computers and Geosciences</i> , 1985, 11, 129-147. | 2.0 | 184 |
| 23 | Parameter Estimation Analysis of the Evaporation Method for Determining Soil Hydraulic Properties. <i>Soil Science Society of America Journal</i> , 1998, 62, 894-905. | 1.2 | 184 |
| 24 | Estimating unsaturated soil hydraulic parameters using ant colony optimization. <i>Advances in Water Resources</i> , 2001, 24, 827-841. | 1.7 | 184 |
| 25 | The time-domain reflectometry method for measuring soil water content and salinity. <i>Geoderma</i> , 1986, 38, 237-250. | 2.3 | 183 |
| 26 | A comprehensive set of analytical solutions for nonequilibrium solute transport with first-order decay and zero-order production. <i>Water Resources Research</i> , 1993, 29, 2167-2182. | 1.7 | 181 |
| 27 | Modeling flow and transport in a two-dimensional dual-permeability system with spatially variable hydraulic properties. <i>Journal of Hydrology</i> , 2000, 238, 78-89. | 2.3 | 178 |
| 28 | A Modified Mualem-van Genuchten Formulation for Improved Description of the Hydraulic Conductivity Near Saturation. <i>Vadose Zone Journal</i> , 2006, 5, 27-34. | 1.3 | 178 |
| 29 | Analytical Solutions for Solute Transport in Three-Dimensional Semi-infinite Porous Media. <i>Water Resources Research</i> , 1991, 27, 2719-2733. | 1.7 | 174 |
| 30 | Colloid transport in unsaturated porous media: The role of water content and ionic strength on particle straining. <i>Journal of Contaminant Hydrology</i> , 2008, 96, 113-127. | 1.6 | 172 |
| 31 | Macroscopic approaches to root water uptake as a function of water and salinity stress. <i>Agricultural Water Management</i> , 2006, 86, 140-149. | 2.4 | 164 |
| 32 | Hydropedology: Synergistic integration of pedology and hydrology. <i>Water Resources Research</i> , 2006, 42, . | 1.7 | 153 |
| 33 | Air entrapment effects on infiltration rate and flow instability. <i>Water Resources Research</i> , 1998, 34, 213-222. | 1.7 | 152 |
| 34 | Parameter Equivalence for the Brooks-Corey and Van Genuchten Soil Characteristics: Preserving the Effective Capillary Drive. <i>Water Resources Research</i> , 1996, 32, 1251-1258. | 1.7 | 150 |
| 35 | Relationship between the Hydraulic Conductivity Function and the Particle Size Distribution. <i>Soil Science Society of America Journal</i> , 1999, 63, 1063-1070. | 1.2 | 150 |
| 36 | 2,4-Dichlorophenoxyacetic acid (2,4-D) sorption and degradation dynamics in three agricultural soils. <i>Environmental Pollution</i> , 2005, 138, 92-99. | 3.7 | 146 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 37 | Using an inverse method to estimate the hydraulic properties of crusted soils from tension-disc infiltrometer data. <i>Geoderma</i> , 1998, 86, 61-81. | 2.3 | 134 |
| 38 | Estimation of the van Genuchten Soil Water Retention Properties from Soil Textural Data. <i>Pedosphere</i> , 2010, 20, 456-465. | 2.1 | 131 |
| 39 | Temporal stability in soil water content patterns across agricultural fields. <i>Catena</i> , 2008, 73, 125-133. | 2.2 | 125 |
| 40 | A root zone modelling approach to estimating groundwater recharge from irrigated areas. <i>Journal of Hydrology</i> , 2009, 367, 138-149. | 2.3 | 125 |
| 41 | Straining of colloids at textural interfaces. <i>Water Resources Research</i> , 2005, 41, . | 1.7 | 120 |
| 42 | Experimental investigation of solute transport in large, homogeneous and heterogeneous, saturated soil columns. <i>Transport in Porous Media</i> , 1995, 18, 283-302. | 1.2 | 119 |
| 43 | Water Flow and Heat Transport in Frozen Soil: Numerical Solution and Freeze-Thaw Applications. <i>Vadose Zone Journal</i> , 2004, 3, 693-704. | 1.3 | 119 |
| 44 | A comparison of numerical solutions of the one-dimensional unsaturated-saturated flow and mass transport equations. <i>Advances in Water Resources</i> , 1982, 5, 47-55. | 1.7 | 118 |
| 45 | Impacts of the 2004 tsunami on groundwater resources in Sri Lanka. <i>Water Resources Research</i> , 2006, 42, . | 1.7 | 115 |
| 46 | Analytical solution of the advection-diffusion transport equation using a change-of-variable and integral transform technique. <i>International Journal of Heat and Mass Transfer</i> , 2009, 52, 3297-3304. | 2.5 | 115 |
| 47 | Two-dimensional modelling of preferential water flow and pesticide transport from a tile-drained field. <i>Journal of Hydrology</i> , 2006, 329, 647-660. | 2.3 | 112 |
| 48 | ESTIMATING UNSATURATED SOIL HYDRAULIC PROPERTIES FROM MULTIPLE TENSION DISC INFILTROMETER DATA. <i>Soil Science</i> , 1997, 162, 383-398. | 0.9 | 106 |
| 49 | Evaluation of mulched drip irrigation for cotton in arid Northwest China. <i>Irrigation Science</i> , 2014, 32, 15-27. | 1.3 | 102 |
| 50 | A new convergence criterion for the modified Picard iteration method to solve the variably saturated flow equation. <i>Journal of Hydrology</i> , 1996, 178, 69-91. | 2.3 | 96 |
| 51 | Modelling coupled water flow, solute transport and geochemical reactions affecting heavy metal migration in a podzol soil. <i>Geoderma</i> , 2008, 145, 449-461. | 2.3 | 95 |
| 52 | HYDRUS: Model Use, Calibration, and Validation. <i>Transactions of the ASABE</i> , 2012, 55, 1263-1276. | 1.1 | 95 |
| 53 | Evaluating non-equilibrium solute transport in small soil columns. <i>Journal of Contaminant Hydrology</i> , 2001, 48, 189-212. | 1.6 | 92 |
| 54 | An experimental study of solute transport in a stony field soil. <i>Water Resources Research</i> , 1987, 23, 1785-1794. | 1.7 | 89 |

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|----|---|-----|-----------|
| 55 | Groundwater Recharge at Five Representative Sites in the Hebei Plain, China. <i>Ground Water</i> , 2011, 49, 286-294. | 0.7 | 89 |
| 56 | Water and solute movement in a coarse-textured water-repellent field soil. <i>Journal of Hydrology</i> , 1990, 120, 359-379. | 2.3 | 87 |
| 57 | Infiltration of Water into Soil with Cracks. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2000, 126, 41-47. | 0.6 | 86 |
| 58 | Analytical solutions for non-equilibrium solute transport in three-dimensional porous media. <i>Journal of Hydrology</i> , 1993, 151, 193-228. | 2.3 | 84 |
| 59 | Soil Water Content Distributions between Two Emitters of a Subsurface Drip Irrigation System. <i>Soil Science Society of America Journal</i> , 2011, 75, 488-497. | 1.2 | 84 |
| 60 | Two-dimensional simulation of water flow and solute transport below furrows: model calibration and validation. <i>Journal of Hydrology</i> , 2004, 290, 63-79. | 2.3 | 82 |
| 61 | Two-phase flow infiltration equations accounting for air entrapment effects. <i>Water Resources Research</i> , 1997, 33, 2759-2767. | 1.7 | 80 |
| 62 | Analytical solutions of the one-dimensional advection–dispersion solute transport equation subject to time-dependent boundary conditions. <i>Chemical Engineering Journal</i> , 2013, 221, 487-491. | 6.6 | 80 |
| 63 | A physically based model for predicting solute transfer from soil solution to rainfall–induced runoff water. <i>Water Resources Research</i> , 1990, 26, 2119-2126. | 1.7 | 74 |
| 64 | Field–Scale Water Flow Simulations Using Ensembles of Pedotransfer Functions for Soil Water Retention. <i>Vadose Zone Journal</i> , 2006, 5, 234-247. | 1.3 | 71 |
| 65 | MULTICOMPONENT GEOCHEMICAL TRANSPORT MODELING USING HYDRUS–1D AND HP1 ¹ . <i>Journal of the American Water Resources Association</i> , 2006, 42, 1537-1547. | 1.0 | 70 |
| 66 | Non-equilibrium water flow characterized by means of upward infiltration experiments. <i>European Journal of Soil Science</i> , 2001, 52, 13-24. | 1.8 | 69 |
| 67 | Estimating the water retention curve from soil properties: comparison of linear, nonlinear and concomitant variable methods. <i>Soil and Tillage Research</i> , 2004, 79, 145-152. | 2.6 | 67 |
| 68 | Overland Water Flow and Solute Transport: Model Development and Field-Data Analysis. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2003, 129, 71-81. | 0.6 | 66 |
| 69 | Estimation of Soil Hydraulic Properties from Numerical Inversion of Tension Disk Infiltrometer Data. <i>Vadose Zone Journal</i> , 2006, 5, 684-696. | 1.3 | 65 |
| 70 | Performance Evaluation of Models That Describe the Soil Water Retention Curve between Saturation and Oven Dryness. <i>Vadose Zone Journal</i> , 2008, 7, 87-96. | 1.3 | 65 |
| 71 | Multimodel Simulation of Water Flow in a Field Soil Using Pedotransfer Functions. <i>Vadose Zone Journal</i> , 2009, 8, 1-10. | 1.3 | 65 |
| 72 | Optimizing landfill site selection by using land classification maps. <i>Environmental Science and Pollution Research</i> , 2015, 22, 7754-7765. | 2.7 | 64 |

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|----|--|-----|-----------|
| 73 | Estimation of the Unsaturated Hydraulic Conductivity of Peat Soils: Laboratory versus Field Data. <i>Vadose Zone Journal</i> , 2006, 5, 628-640. | 1.3 | 63 |
| 74 | Exact analytical solutions for contaminant transport in rivers 1. The equilibrium advection-dispersion equation. <i>Journal of Hydrology and Hydromechanics</i> , 2013, 61, 146-160. | 0.7 | 63 |
| 75 | Parameter estimation of unsaturated soil hydraulic properties from transient flow processes. <i>Soil and Tillage Research</i> , 1998, 47, 27-36. | 2.6 | 61 |
| 76 | Estimating hysteresis in the soil water retention function from cone permeameter experiments. <i>Water Resources Research</i> , 1999, 35, 1329-1345. | 1.7 | 61 |
| 77 | Exact solutions for one-dimensional transport with asymptotic scale-dependent dispersion. <i>Applied Mathematical Modelling</i> , 1996, 20, 298-308. | 2.2 | 59 |
| 78 | Preferential transport of nitrate to a tile drain in an intermittent-flood-irrigated field: Model development and experimental evaluation. <i>Water Resources Research</i> , 1998, 34, 1061-1076. | 1.7 | 59 |
| 79 | A complete soil hydraulic model accounting for capillary and adsorptive water retention, capillary and film conductivity, and hysteresis. <i>Water Resources Research</i> , 2015, 51, 8757-8772. | 1.7 | 58 |
| 80 | New features of version 3 of the HYDRUS (2D/3D) computer software package. <i>Journal of Hydrology and Hydromechanics</i> , 2018, 66, 133-142. | 0.7 | 58 |
| 81 | Operator-splitting errors in coupled reactive transport codes for transient variably saturated flow and contaminant transport in layered soil profiles. <i>Journal of Contaminant Hydrology</i> , 2006, 88, 197-218. | 1.6 | 57 |
| 82 | Modeling Coupled Hydrologic and Chemical Processes: Long-Term Uranium Transport following Phosphorus Fertilization. <i>Vadose Zone Journal</i> , 2008, 7, 698-711. | 1.3 | 57 |
| 83 | Aging Effects on Cadmium Transport in Undisturbed Contaminated Sandy Soil Columns. <i>Journal of Environmental Quality</i> , 2001, 30, 1040-1050. | 1.0 | 56 |
| 84 | A Comparative Study of Multiple Approaches for Predicting the Soil-Water Retention Curve: Hyperspectral Information vs. Basic Soil Properties. <i>Soil Science Society of America Journal</i> , 2015, 79, 1043-1058. | 1.2 | 54 |
| 85 | Multiscale modelling of dual-porosity porous media; a computational pore-scale study for flow and solute transport. <i>Advances in Water Resources</i> , 2017, 105, 82-95. | 1.7 | 54 |
| 86 | Approximate analytical solutions for solute transport in two-layer porous media. <i>Transport in Porous Media</i> , 1995, 18, 65-85. | 1.2 | 53 |
| 87 | Estimating unsaturated soil hydraulic properties from laboratory tension disc infiltrometer experiments. <i>Water Resources Research</i> , 1999, 35, 2965-2979. | 1.7 | 52 |
| 88 | Analytical Solution for Multi-Species Contaminant Transport Subject to Sequential First-Order Decay Reactions in Finite Media. <i>Transport in Porous Media</i> , 2009, 80, 373-387. | 1.2 | 52 |
| 89 | Deriving and validating pedotransfer functions for some calcareous soils. <i>Journal of Hydrology</i> , 2011, 399, 93-99. | 2.3 | 51 |
| 90 | Experimental and theoretical analysis of solute transport from a diffuse source of pollution. <i>Journal of Hydrology</i> , 1989, 105, 225-251. | 2.3 | 49 |

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|-----|--|-----|-----------|
| 91 | Information content and complexity of simulated soil water fluxes. <i>Geoderma</i> , 2006, 134, 253-266. | 2.3 | 49 |
| 92 | Characterizing the hydraulic properties of paper coating layer using FIB-SEM tomography and 3D pore-scale modeling. <i>Chemical Engineering Science</i> , 2017, 160, 275-280. | 1.9 | 49 |
| 93 | Modeling the coupled effects of pore space geometry and velocity on colloid transport and retention. <i>Water Resources Research</i> , 2009, 45, . | 1.7 | 47 |
| 94 | Comparison of Models for Indirect Estimation of Water Retention and Available Water in Surface Soils. <i>Vadose Zone Journal</i> , 2004, 3, 1455-1463. | 1.3 | 46 |
| 95 | Measurement modeling of soil-water dynamics evapotranspiration of drained peatland soils. <i>Journal of Plant Nutrition and Soil Science</i> , 2006, 169, 762-774. | 1.1 | 46 |
| 96 | Isotherm nonlinearity and nonequilibrium sorption effects on transport of fenuron and monuron in soil columns. <i>Environmental Science & Technology</i> , 1995, 29, 1000-1007. | 4.6 | 44 |
| 97 | STANMOD: Model Use, Calibration, and Validation. <i>Transactions of the ASABE</i> , 2012, 55, 1355-1368. | 1.1 | 44 |
| 98 | Water and Solute Transport in a Cultivated Silt Loam Soil: 1. Field Observations. <i>Vadose Zone Journal</i> , 2005, 4, 573-586. | 1.3 | 43 |
| 99 | Progress in unsaturated flow and transport modeling. <i>Reviews of Geophysics</i> , 1987, 25, 135-140. | 9.0 | 41 |
| 100 | Analysing problems in describing field and laboratory measured soil hydraulic properties. <i>Geoderma</i> , 1994, 64, 93-110. | 2.3 | 41 |
| 101 | Analytical Modeling of Nonaqueous Phase Liquid Dissolution with Green's Functions. <i>Transport in Porous Media</i> , 2000, 38, 141-166. | 1.2 | 41 |
| 102 | Straining and Attachment of Colloids in Physically Heterogeneous Porous Media. <i>Vadose Zone Journal</i> , 2004, 3, 384-394. | 1.3 | 41 |
| 103 | Kirkham's Legacy and Contemporary Challenges in Soil Physics Research. <i>Soil Science Society of America Journal</i> , 2011, 75, 1589-1601. | 1.2 | 40 |
| 104 | Comparison of three hydraulic property measurement methods. <i>Journal of Hydrology</i> , 1997, 199, 295-318. | 2.3 | 39 |
| 105 | Effects of Sand Compaction and Mixing on Pore Structure and the Unsaturated Soil Hydraulic Properties. <i>Vadose Zone Journal</i> , 2016, 15, 1-11. | 1.3 | 38 |
| 106 | Simulating unsaturated flow and transport in a macroporous soil to tile drains subject to an entrance head: model development and preliminary evaluation. <i>Journal of Hydrology</i> , 2001, 254, 67-81. | 2.3 | 37 |
| 107 | Software to estimate $\hat{\theta}^{33}$ and $\hat{\theta}^{1500kPa}$ soil water retention using the non-parametric k-Nearest Neighbor technique. <i>Environmental Modelling and Software</i> , 2008, 23, 254-255. | 1.9 | 37 |
| 108 | Analytical Solution for Multi-Species Contaminant Transport in Finite Media with Time-Varying Boundary Conditions. <i>Transport in Porous Media</i> , 2010, 85, 171-188. | 1.2 | 37 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 109 | Parameter Determination for Chloride and Tritium Transport in Undisturbed Lysimeters during Steady Flow. <i>Hydrology Research</i> , 1992, 23, 89-104. | 1.1 | 37 |
| 110 | Analysis of Water Flow under Trickle Irrigation: I. Theory and Numerical Solution. <i>Soil Science Society of America Journal</i> , 1989, 53, 1310-1318. | 1.2 | 36 |
| 111 | Comparison of Pesticide Transport Processes in Three Tile-Drained Field Soils Using HYDRUS-2D. <i>Vadose Zone Journal</i> , 2006, 5, 838-849. | 1.3 | 36 |
| 112 | Solute transport in a loamy soil under subsurface porous clay pipe irrigation. <i>Agricultural Water Management</i> , 2013, 121, 73-80. | 2.4 | 35 |
| 113 | Correspondence and Upscaling of Hydraulic Functions for Steady-State Flow in Heterogeneous Soils. <i>Vadose Zone Journal</i> , 2004, 3, 527-533. | 1.3 | 34 |
| 114 | Organic acids enhance the uptake of lead by wheat roots. <i>Planta</i> , 2007, 225, 1483-1494. | 1.6 | 34 |
| 115 | First- and third-type boundary conditions in two-dimensional solute transport modeling. <i>Water Resources Research</i> , 1990, 26, 339-350. | 1.7 | 33 |
| 116 | Scaling the Dependency of Soil Penetration Resistance on Water Content and Bulk Density of Different Soils. <i>Soil Science Society of America Journal</i> , 2013, 77, 1488-1495. | 1.2 | 33 |
| 117 | A Mathematical View of Water Table Fluctuations in a Shallow Aquifer in Brazil. <i>Ground Water</i> , 2016, 54, 82-91. | 0.7 | 33 |
| 118 | HYDRUS-2D simulations of water and potassium movement in drip irrigated tropical soil container cultivated with sugarcane. <i>Agricultural Water Management</i> , 2019, 221, 334-347. | 2.4 | 33 |
| 119 | Effects of Flow Depth on Water Flow and Solute Transport in Furrow Irrigation: Field Data Analysis. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2003, 129, 237-246. | 0.6 | 32 |
| 120 | Sensitivity Analysis of the Nonparametric Nearest Neighbor Technique to Estimate Soil Water Retention. <i>Vadose Zone Journal</i> , 2006, 5, 1222-1235. | 1.3 | 32 |
| 121 | Performance of Pitcher Irrigation System. <i>Soil Science</i> , 2009, 174, 312-320. | 0.9 | 32 |
| 122 | Further tests of the HYPROP evaporation method for estimating the unsaturated soil hydraulic properties. <i>Journal of Hydrology and Hydromechanics</i> , 2018, 66, 161-169. | 0.7 | 32 |
| 123 | Effects of Biological Stabilization on the Water Retention Properties of Unsaturated Soils. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2019, 145, . | 1.5 | 32 |
| 124 | Simulation of two-dimensional contaminant transport with isoparametric Hermitian finite elements. <i>Water Resources Research</i> , 1977, 13, 451-458. | 1.7 | 31 |
| 125 | SIMULTANEOUS INVERSE ESTIMATION OF SOIL HYDRAULIC AND SOLUTE TRANSPORT PARAMETERS FROM TRANSIENT FIELD EXPERIMENTS: HOMOGENEOUS SOIL. <i>Transactions of the American Society of Agricultural Engineers</i> , 2003, 46, 1085. | 0.9 | 31 |
| 126 | Fractal-based models for the unsaturated soil hydraulic functions. <i>Geoderma</i> , 2017, 306, 144-151. | 2.3 | 31 |

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|-----|--|-----|-----------|
| 127 | An efficient Eulerian-Lagrangian Method for solving solute transport problems in steady and transient flow fields. <i>Water Resources Research</i> , 1993, 29, 4131-4138. | 1.7 | 28 |
| 128 | Modeling Nonwetting-Phase Relative Permeability Accounting for a Discontinuous Nonwetting Phase. <i>Soil Science Society of America Journal</i> , 1997, 61, 1348-1354. | 1.2 | 28 |
| 129 | Numerical simulation of transport and sequential biodegradation of chlorinated aliphatic hydrocarbons using CHAIN_2D. <i>Hydrological Processes</i> , 1999, 13, 2847-2859. | 1.1 | 28 |
| 130 | WATER AND CHLORIDE TRANSPORT IN A FINE-TEXTURED SOIL: FIELD EXPERIMENTS AND MODELING. <i>Soil Science</i> , 2000, 165, 624-631. | 0.9 | 28 |
| 131 | An improved analysis of gravity drainage experiments for estimating the unsaturated soil hydraulic functions. <i>Water Resources Research</i> , 1991, 27, 569-575. | 1.7 | 27 |
| 132 | Simulating the Gas Diffusion Coefficient in Macropore Network Images: Influence of Soil Pore Morphology. <i>Soil Science Society of America Journal</i> , 2006, 70, 1252-1261. | 1.2 | 27 |
| 133 | An Eulerian-Lagrangian approach with an adaptively corrected method of characteristics to simulate variably saturated water flow. <i>Water Resources Research</i> , 1994, 30, 499-507. | 1.7 | 26 |
| 134 | Solution of the nonlinear transport equation using modified Picard iteration. <i>Advances in Water Resources</i> , 1998, 21, 237-249. | 1.7 | 26 |
| 135 | INVERSE ESTIMATION OF SOIL HYDRAULIC AND SOLUTE TRANSPORT PARAMETERS FROM TRANSIENT FIELD EXPERIMENTS: HETEROGENEOUS SOIL. <i>Transactions of the American Society of Agricultural Engineers</i> , 2003, 46, 1097. | 0.9 | 26 |
| 136 | Inverse estimation of soil hydraulic properties under oil palm trees. <i>Geoderma</i> , 2015, 241-242, 306-312. | 2.3 | 26 |
| 137 | Effects of Porosity and Water Saturation on the Effective Diffusivity of a Cathode Catalyst Layer. <i>Journal of the Electrochemical Society</i> , 2017, 164, F298-F305. | 1.3 | 26 |
| 138 | Effect of temporal averaging of meteorological data on predictions of groundwater recharge. <i>Journal of Hydrology and Hydromechanics</i> , 2018, 66, 143-152. | 0.7 | 26 |
| 139 | Water flow and solute transport in furrow-irrigated fields. <i>Irrigation Science</i> , 2003, 22, 57-65. | 1.3 | 25 |
| 140 | Water and Solute Transport in a Cultivated Silt Loam Soil: 2. Numerical Analysis. <i>Vadose Zone Journal</i> , 2005, 4, 587-601. | 1.3 | 25 |
| 141 | The effects of preferential flow and soil texture on risk assessments of a NORM waste disposal site. <i>Journal of Hazardous Materials</i> , 2010, 174, 648-655. | 6.5 | 25 |
| 142 | A Semidiscrete Model for Water and Solute Movement in Tile-Drained Soils: 1. Governing Equations and Solution. <i>Water Resources Research</i> , 1991, 27, 2439-2447. | 1.7 | 24 |
| 143 | Upscaling Schemes and Relationships for the Gardner and van Genuchten Hydraulic Functions for Heterogeneous Soils. <i>Vadose Zone Journal</i> , 2007, 6, 186-195. | 1.3 | 24 |
| 144 | Water Distribution in an Arid Zone Soil: Numerical Analysis of Data from a Large Weighing Lysimeter. <i>Vadose Zone Journal</i> , 2018, 17, 1-17. | 1.3 | 24 |

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|-----|--|-----|-----------|
| 145 | Simple functions for describing soil water retention and the unsaturated hydraulic conductivity from saturation to complete dryness. <i>Journal of Hydrology</i> , 2020, 588, 125041. | 2.3 | 24 |
| 146 | Soil moisture prediction of bare soil profiles using diffuse spectral reflectance information and vadose zone flow modeling. <i>Remote Sensing of Environment</i> , 2016, 187, 218-229. | 4.6 | 23 |
| 147 | Exact Analytical Solutions for Contaminant Transport in Rivers. <i>Journal of Hydrology and Hydromechanics</i> , 2013, 61, 250-259. | 0.7 | 22 |
| 148 | Optimal parameters for the Green-Ampt infiltration model under rainfall conditions. <i>Journal of Hydrology and Hydromechanics</i> , 2015, 63, 93-101. | 0.7 | 22 |
| 149 | The role of uncertainty in bedrock depth and hydraulic properties on the stability of a variably-saturated slope. <i>Computers and Geotechnics</i> , 2017, 88, 222-241. | 2.3 | 22 |
| 150 | The HPx software for multicomponent reactive transport during variably-saturated flow: Recent developments and applications. <i>Journal of Hydrology and Hydromechanics</i> , 2018, 66, 211-226. | 0.7 | 22 |
| 151 | RETMCL: Incorporating maximum-likelihood estimation principles in the RETC soil hydraulic parameter estimation code. <i>Computers and Geosciences</i> , 2000, 26, 319-327. | 2.0 | 21 |
| 152 | Alternate furrow irrigation can radically improve water productivity of okra. <i>Agricultural Water Management</i> , 2016, 173, 55-60. | 2.4 | 21 |
| 153 | Analysis of the Hysteretic Hydraulic Properties of Unsaturated Soil. <i>Vadose Zone Journal</i> , 2017, 16, 1-9. | 1.3 | 21 |
| 154 | An Hermitian finite element solution of the two-dimensional saturated-unsaturated flow equation. <i>Advances in Water Resources</i> , 1983, 6, 106-111. | 1.7 | 19 |
| 155 | Spatio-temporal dynamics of water and heat in a field soil. <i>Soil and Tillage Research</i> , 1998, 47, 133-143. | 2.6 | 19 |
| 156 | Modeling Virus Transport and Remobilization during Transient Partially Saturated Flow. <i>Vadose Zone Journal</i> , 2012, 11, vzt2011.0090. | 1.3 | 19 |
| 157 | Quasi-Saturated Layer: Implications for Estimating Recharge and Groundwater Modeling. <i>Ground Water</i> , 2020, 58, 432-440. | 0.7 | 19 |
| 158 | Unsaturated flow effects on solute transport in porous media. <i>Journal of Hydrology</i> , 2021, 598, 126301. | 2.3 | 19 |
| 159 | Solute Transport in Simulated Conductivity Fields under Different Irrigations. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 1997, 123, 336-343. | 0.6 | 17 |
| 160 | SALTDATA: A Database of Plant Yield Response to Salinity. <i>Agronomy Journal</i> , 1998, 90, 556-562. | 0.9 | 17 |
| 161 | A partitioned solution procedure for simulating water flow in a variably saturated dual-porosity medium. <i>Advances in Water Resources</i> , 1995, 18, 335-343. | 1.7 | 16 |
| 162 | USING THE TRANSPIRATION REGIME TO ESTIMATE BIOMASS PRODUCTION. <i>Soil Science</i> , 2008, 173, 401-407. | 0.9 | 16 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 163 | A New Approach to Estimate Soil Hydraulic Parameters Using Only Soil Water Retention Data. Soil Science Society of America Journal, 2008, 72, 471-479. | 1.2 | 16 |
| 164 | HYPROP measurements of the unsaturated hydraulic properties of a carbonate rock sample. Journal of Hydrology, 2020, 591, 125706. | 2.3 | 16 |
| 165 | HORIZONTAL INFILTRATION REVISITED USING PARAMETER ESTIMATION. Soil Science, 2000, 165, 708-717. | 0.9 | 16 |
| 166 | LYSIMETER STUDY OF ANION TRANSPORT DURING STEADY FLOW THROUGH LAYERED COARSE-TEXTURED SOIL PROFILES. Soil Science, 1992, 154, 196-205. | 0.9 | 15 |
| 167 | Flux-Averaged Concentrations for Transport in Soils Having Nonuniform Initial Solute Distributions. Soil Science Society of America Journal, 1993, 57, 1406-1409. | 1.2 | 15 |
| 168 | Bacteriophage PRD1 batch experiments to study attachment, detachment and inactivation processes. Journal of Contaminant Hydrology, 2013, 152, 12-17. | 1.6 | 15 |
| 169 | Bayesian estimation of the hydraulic and solute transport properties of a small-scale unsaturated soil column. Journal of Hydrology and Hydromechanics, 2016, 64, 30-44. | 0.7 | 15 |
| 170 | The Root Zone: Soil Physics and Beyond. Vadose Zone Journal, 2018, 17, 1-6. | 1.3 | 15 |
| 171 | Selected HYDRUS modules for modeling subsurface flow and contaminant transport as influenced by biological processes at various scales. Biologia (Poland), 2009, 64, 465-469. | 0.8 | 14 |
| 172 | Reclamation of Saline Soils by Partial Ponding: Simulations for Different Soils. Vadose Zone Journal, 2010, 9, 486-495. | 1.3 | 14 |
| 173 | Simulating the Fate and Transport of Coal Seam Gas Chemicals in Variably-Saturated Soils Using HYDRUS. Water (Switzerland), 2017, 9, 385. | 1.2 | 14 |
| 174 | A Semidiscrete Model for Water and Solute Movement in Tile-Drained Soils: 2. Field Validation and Applications. Water Resources Research, 1991, 27, 2449-2456. | 1.7 | 13 |
| 175 | A THIRD-ORDER NUMERICAL SCHEME WITH UPWIND WEIGHTING FOR SOLVING THE SOLUTE TRANSPORT EQUATION. International Journal for Numerical Methods in Engineering, 1997, 40, 1623-1637. | 1.5 | 13 |
| 176 | Alternative Analytical Expressions for the General van Genuchten-Mualem and van Genuchten-Burdine Hydraulic Conductivity Models. Vadose Zone Journal, 2011, 10, 618-623. | 1.3 | 13 |
| 177 | Evaluation of a horizontal permeable reactive barrier for preventing upward diffusion of volatile organic compounds through the unsaturated zone. Journal of Environmental Management, 2015, 163, 204-213. | 3.8 | 13 |
| 178 | ANALYSIS OF UNSATURATED WATER FLOW IN A LARGE SAND TANK. Soil Science, 2003, 168, 3-14. | 0.9 | 12 |
| 179 | A control volume scheme using compact integrated radial basis function stencils for solving the Richards equation. Journal of Hydrology, 2020, 580, 124240. | 2.3 | 12 |
| 180 | A modeling framework to quantify the effects of compaction on soil water retention and infiltration. Soil Science Society of America Journal, 2021, 85, 1931-1945. | 1.2 | 12 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 181 | Improved Tension Infiltrometer for Measuring Low Fluid Flow Rates in Unsaturated Fractured Rock. <i>Vadose Zone Journal</i> , 2005, 4, 885-890. | 1.3 | 12 |
| 182 | Software for pest-management science: computer models and databases from the United States Department of Agriculture?Agricultural Research Service. <i>Pest Management Science</i> , 2003, 59, 691-698. | 1.7 | 11 |
| 183 | Pedotransfer Functions. <i>Encyclopedia of Earth Sciences Series</i> , 2011, , 556-561. | 0.1 | 11 |
| 184 | Dissipation of s-triazines and thiocarbamates from soil as related to soil moisture content. <i>Environmental Pollution</i> , 1990, 66, 253-262. | 3.7 | 10 |
| 185 | Potential Impact of a Seepage Face on Solute Transport to a Pumping Well. <i>Vadose Zone Journal</i> , 2010, 9, 686-696. | 1.3 | 10 |
| 186 | Revisiting the horizontal redistribution of water in soils: Experiments and numerical modeling. <i>Water Resources Research</i> , 2017, 53, 7576-7589. | 1.7 | 10 |
| 187 | Capillary pressureâ€“saturation curves of thin hydrophilic fibrous layers: effects of overburden pressure, number of layers, and multiple imbibitionâ€“drainage cycles. <i>Textile Research Journal</i> , 2019, 89, 4906-4915. | 1.1 | 10 |
| 188 | MILESTONES IN SOIL PHYSICS. <i>Soil Science</i> , 2006, 171, S21-S28. | 0.9 | 9 |
| 189 | Analytical Advectionâ€“Dispersion Model for Transport and Plant Uptake of Contaminants in the Root Zone. <i>Vadose Zone Journal</i> , 2007, 6, 890-898. | 1.3 | 9 |
| 190 | Leaching of Contaminants to Groundwater. , 2011, , 787-850. | | 9 |
| 191 | Comparison of alternative soil particle-size distribution models and their correlation with soil physical attributes. <i>Journal of Hydrology and Hydromechanics</i> , 2019, 67, 179-190. | 0.7 | 9 |
| 192 | Reply [to â€œComment on the treatment of residual water content in â€“a consistent set of parametric models for the two-phase flow of immiscible fluids in the subsurfaceâ€™ by L. Luckner et al.â€]. <i>Water Resources Research</i> , 1991, 27, 663-664. | 1.7 | 8 |
| 193 | Measured and predicted transport of two S-triazine herbicides through soil columns. <i>Water, Air, and Soil Pollution</i> , 1996, 86, 137-149. | 1.1 | 8 |
| 194 | Modeling of Horizontal Water Redistribution in an Unsaturated Soil. <i>Vadose Zone Journal</i> , 2016, 15, 1-11. | 1.3 | 8 |
| 195 | Unsaturated hydraulic properties of heterogeneously packed sands: A pore-scale computational study. <i>Journal of Hydrology</i> , 2018, 565, 570-580. | 2.3 | 8 |
| 196 | Computational and experimental pore-scale studies of a carbonate rock sample. <i>Journal of Hydrology and Hydromechanics</i> , 2019, 67, 372-383. | 0.7 | 8 |
| 197 | A perturbation solution of the nonlinear Boussinesq equation: The case of constant injection into a radial aquifer. <i>Journal of Hydrology</i> , 1980, 48, 269-280. | 2.3 | 7 |
| 198 | Modeling solute transfer from soil to surface runoff: The concept of effective depth of transfer. <i>Journal of Hydrology</i> , 1989, 109, 307-317. | 2.3 | 7 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 199 | Progress and Opportunities in Hydrologic Research, 1987–1990. <i>Reviews of Geophysics</i> , 1991, 29, 189-192. | 9.0 | 7 |
| 200 | Comparison of Models for Indirect Estimation of Water Retention and Available Water in Surface Soils. <i>Vadose Zone Journal</i> , 2004, 3, 1455-1463. | 1.3 | 7 |
| 201 | Closed-form hydraulic conductivity equations for multimodal unsaturated soil hydraulic properties. <i>Vadose Zone Journal</i> , 2022, 21, e20168. | 1.3 | 7 |
| 202 | Economic, Environmental, and Natural Resource Benefits of Plastic Shelters in Vegetable Production in a Humid Tropical Environment. <i>Agroecology and Sustainable Food Systems</i> , 2001, 17, 123-143. | 0.9 | 6 |
| 203 | Inverse modeling of vadose zone flow processes using squared μ -insensitivity loss function. <i>Journal of Hydrology and Hydromechanics</i> , 2010, 58, . | 0.7 | 6 |
| 204 | Borage (<i>Borago officinalis</i> L.) response to salinity at early growth stages as influenced by seed pre-treatment. <i>Agricultural Water Management</i> , 2021, 253, 106925. | 2.4 | 6 |
| 205 | Solute Transport in Heterogeneous Field Soils. , 1989, , 177-187. | | 6 |
| 206 | Modelling uranium leaching from agricultural soils to groundwater as a criterion for comparison with complementary safety indicators. <i>Materials Research Society Symposia Proceedings</i> , 2006, 932, 1. | 0.1 | 5 |
| 207 | Environmental Impact Assessment of Liquid Waste Ponds in Uranium Milling Installations. <i>Waste and Biomass Valorization</i> , 2013, 4, 197-211. | 1.8 | 5 |
| 208 | Determination of specific LNAPL volumes in soils having a multimodal pore-size distribution. <i>Journal of Environmental Management</i> , 2019, 237, 576-584. | 3.8 | 5 |
| 209 | Thematic Issue on HYDRUS Software Applications to Subsurface Fluid Flow and Contaminant Transport. <i>Journal of Hydrology and Hydromechanics</i> , 2018, 66, 129-132. | 0.7 | 5 |
| 210 | On Infiltration and Infiltration Characteristic Times. <i>Water Resources Research</i> , 2022, 58, . | 1.7 | 5 |
| 211 | Dissolution kinetics of volatile organic compound vapors in water: An integrated experimental and computational study. <i>Journal of Contaminant Hydrology</i> , 2017, 196, 43-51. | 1.6 | 4 |
| 212 | Effect of soil textural characteristics on longitudinal dispersion in saturated porous media. <i>Journal of Hydrology and Hydromechanics</i> , 2021, 69, 161-170. | 0.7 | 4 |
| 213 | SIGNIFICANCE OF MACROPOROSITY AND HYDROLOGY FOR SOIL MANAGEMENT AND SUSTAINABILITY OF AGRICULTURAL PRODUCTION IN A HUMID-TROPICAL ENVIRONMENT. <i>Soil Science</i> , 1999, 164, 586-601. | 0.9 | 4 |
| 214 | Contaminant Transport in the Unsaturated Zone. , 2006, , 22-1-22-46. | | 4 |
| 215 | Solute Transport. , 2001, , 189-248. | | 4 |
| 216 | Reply [to "Comment on "Flux-Averaged and Volume-Averaged Concentration in Continuum Approaches to Solute Transport" by J. C. Parker and M. Th. van Genuchten". <i>Water Resources Research</i> , 1985, 21, 1301-1302. | 1.7 | 3 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 217 | Multicomponent transport model for variably-saturated porous media: application to the transport of heavy metals in soils. <i>Developments in Water Science</i> , 2002, 47, 555-562. | 0.1 | 3 |
| 218 | The Use of Numerical Flow and Transport Models in Environmental Analyses. , 2014, , 349-376. | | 3 |
| 219 | Reassessment of the Goi nia radioactive waste repository in Brazil using HYDRUS-1D. <i>Journal of Hydrology and Hydromechanics</i> , 2018, 66, 202-210. | 0.7 | 3 |
| 220 | Field-scale assessment of the unsaturated hydraulic properties of residual soils in southeastern Brazil. <i>Journal of Hydrology and Hydromechanics</i> , 2022, 70, 244-256. | 0.7 | 3 |
| 221 | Analysis of Temperature Effects on Tension Infiltrometry of Low Permeability Materials. <i>Vadose Zone Journal</i> , 2005, 4, 481-487. | 1.3 | 2 |
| 222 | Editorial: The Future of Vadose Zone Journal. <i>Vadose Zone Journal</i> , 2006, 5, 125-125. | 1.3 | 2 |
| 223 | Author's Reply. <i>Ground Water</i> , 2013, 51, 9-13. | 0.7 | 2 |
| 224 | <i>Vadose Zone Journal</i>: A Decade of Multidisciplinary Research. <i>Vadose Zone Journal</i> , 2013, 12, 1-3. | 1.3 | 2 |
| 225 | Theoretical bounds for the exponent in the empirical power-law advance-time curve for surface flow. <i>Agricultural Water Management</i> , 2018, 210, 208-216. | 2.4 | 2 |
| 226 | Predicting the hydraulic properties of compacted soils: model validation. , 2021, , . | | 2 |
| 227 | Modeling the water flow in unsaturated waste rock pile: an important step in the overall closure planning of the first uranium mining site in Brazil. , 2008, , 177-186. | | 2 |
| 228 | Integral transform analysis of radionuclide transport in variably saturated media using a physical non-equilibrium model: application to solid waste leaching at a uranium mining installation. <i>Anais Da Academia Brasileira De Ciencias</i> , 2020, 92, e20190427. | 0.3 | 2 |
| 229 | Improving wheat (<i>Triticum aestivum</i> L.) antioxidative defense mechanisms against salinity stress by exogenous application of potassium silicate. <i>Journal of Plant Nutrition</i> , 2022, 45, 2887-2905. | 0.9 | 2 |
| 230 | Effects of carbonated water injection on the pore system of a carbonate rock (coquina). <i>Journal of Hydrology and Hydromechanics</i> , 2022, 70, 257-268. | 0.7 | 2 |
| 231 | Letter to the Editor on A National Strategy for Vadose Zone Science and Technology. <i>Vadose Zone Journal</i> , 2002, 1, 197. | 1.3 | 1 |
| 232 | Nonequilibrium and Multicomponent Transport Models. <i>Agronomy</i> , 0, , 405-430. | 0.2 | 0 |