## **Shmuel Assouline**

List of Publications by Year in descending order

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147 papers 6,248 citations

71102 41 h-index 72 g-index

154 all docs

154 docs citations

154 times ranked

5259 citing authors

#	Article	IF	Citations
1	Unique Relationship Between Rate and Cumulative Flow: A Property of Infiltration and Evaporation in Soils. Geophysical Research Letters, 2022, 49, .	4.0	2
2	Crusts and seals: Structural. , 2022, , .		0
3	Compaction effects on evaporation and salt precipitation in drying porous media. Hydrology and Earth System Sciences, 2022, 26, 2499-2517.	4.9	5
4	Critical knowledge gaps and research priorities in global soil salinity. Advances in Agronomy, 2021, , 1-191.	5.2	151
5	Lorentzian Filter Correction of Turbulence Measurements on Oscillating Floating Platforms: Impact on Wind Spectra and Eddyâ€Covariance Fluxes. Water Resources Research, 2021, 57, e2020WR027583.	4.2	O
6	Quantifying Shallow Overland Flow Patterns Under Laboratory Simulations Using Thermal and LiDAR Imagery. Water Resources Research, 2021, 57, e2020WR028857.	4.2	7
7	Reducing Evaporation From Water Reservoirs Using Floating Lattice Structures. Water Resources Research, 2021, 57, e2021WR029670.	4.2	6
8	Frequency analysis of storm-scale soil erosion and characterization of extreme erosive events by linking the DWEPP model and a stochastic rainfall generator. Science of the Total Environment, 2021, 787, 147609.	8.0	10
9	The impact of tree phenology on the response of irrigated avocado: The hysteretic nature of the maximum trunk daily shrinkage. Agricultural Water Management, 2021, 256, 107104.	5.6	1
10	Modeling Transient Evaporation From Porous Media as a Succession of Steadyâ€State Steps. Water Resources Research, 2021, 57, e2021WR030245.	4.2	4
11	What Can We Learn From the Water Retention Characteristic of a Soil Regarding Its Hydrological and Agricultural Functions? Review and Analysis of Actual Knowledge. Water Resources Research, 2021, 57, e2021WR031026.	4.2	13
12	Lateral Flow and Contributing Area Control Vegetation Cover in a Semiarid Environment. Water Resources Research, 2021, 57, e2021WR030998.	4.2	4
13	On the Relationships Between Radar Reflectivity and Rainfall Rate and Kinetic Energy Resulting From a Weibull Drop Size Distribution. Water Resources Research, 2020, 56, e2020WR028156.	4.2	2
14	Mitigating the Impact of Irrigation With Effluent Water: Mixing With Freshwater and/or Adjusting Irrigation Management and Design. Water Resources Research, 2020, 56, e2020WR027781.	4.2	13
15	Infiltration from the Pedon to Global Grid Scales: An Overview and Outlook for Land Surface Modeling. Vadose Zone Journal, 2019, 18, 1-53.	2.2	56
16	Evaporation From Multilayered Heterogeneous Bare Soil Profiles. Water Resources Research, 2019, 55, 5770-5783.	4.2	7
17	A Simple Method to Design Irrigation Rate and Duration and Improve Water Use Efficiency. Water Resources Research, 2019, 55, 6295-6301.	4.2	10
18	Liquid and Vapor Water in Vadose Zone Profiles Above Deep Aquifers in Hyperâ€Arid Environments. Water Resources Research, 2019, 55, 3619-3631.	4.2	11

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19	Irrigation of â€~Hass' avocado: effects of constant vs. temporary water stress. Irrigation Science, 2019, 37, 451-460.	2.8	19
20	Effect of Water Surface Salinity on Evaporation: The Case of a Diluted Buoyant Plume Over the Dead Sea. Water Resources Research, 2018, 54, 1460-1475.	4.2	46
21	Diurnal Course of Evaporation From the Dead Sea in Summer: A Distinct Double Peak Induced by Solar Radiation and Night Sea Breeze. Water Resources Research, 2018, 54, 150-160.	4.2	23
22	The effect of irrigation level in the kernel dry matter accumulation period on almond yield, kernel dry weight, fruit count, and canopy size. Irrigation Science, 2018, 36, 1-8.	2.8	3
23	Modeling Rainfallâ€Runoff and Soil Erosion Processes on Hillslopes With Complex Rill Network Planform. Water Resources Research, 2018, 54, 10,117.	4.2	23
24	Avocado fertilization: Matching the periodic demand for nutrients. Scientia Horticulturae, 2018, 241, 231-240.	3.6	22
25	Seasonal and diurnal evaporation from a deep hypersaline lake: The Dead Sea as a case study. Journal of Hydrology, 2018, 562, 155-167.	5.4	33
26	Evaporation From Deep Aquifers in Arid Regions: Analytical Model for Combined Liquid and Vapor Water Fluxes. Water Resources Research, 2018, 54, 4805-4822.	4.2	32
27	Introduction and evaluation of a <scp>W</scp> eibull hydraulic conductivityâ€pressure head relationship for unsaturated soils. Water Resources Research, 2017, 53, 4956-4964.	4.2	14
28	Insights from "The Hidden Half†The impact of root-zone oxygen and redox dynamics on the response of avocado to long-term irrigation with treated wastewater in clayey soil. Israel Journal of Plant Sciences, 2017, 64, 1-18.	0.5	8
29	Evaporation From Soil Containers With Irregular Shapes. Water Resources Research, 2017, 53, 8795-8806.	4.2	10
30	An explicit, parsimonious, and accurate estimate for ponded infiltration into soils using the <scp>G</scp> reen and <scp>A</scp> mpt approach. Water Resources Research, 2017, 53, 7481-7487.	4.2	21
31	The foam drainage equation for drainage dynamics in unsaturated porous media. Water Resources Research, 2017, 53, 5706-5724.	4.2	6
32	Estimation of Intrinsic Length Scales of Flow in Unsaturated Porous Media. Water Resources Research, 2017, 53, 9980-9987.	4.2	8
33	Highâ€Resolution Measurement of Topographic Changes in Agricultural Soils. Vadose Zone Journal, 2017, 16, 1-18.	2.2	8
34	Erosion and Lateral Surface Processes. Vadose Zone Journal, 2017, 16, 1-4.	2.2	13
35	Synchrotron microtomographic quantification of geometrical soil pore characteristics affected by compaction. Soil, 2016, 2, 211-220.	4.9	2
36	On the variability of the Priestleyâ€∓aylor coefficient over water bodies. Water Resources Research, 2016, 52, 150-163.	4.2	37

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37	Evaluating the relative air permeability of porous media from their water retention curves. Water Resources Research, 2016, 52, 3428-3439.	4.2	14
38	Climate, not conflict, explains extreme Middle East dust storm. Environmental Research Letters, 2016, 11, 114013.	5.2	48
39	Combined Effect of Sodicity and Organic Matter on Soil Properties under Longâ€Term Irrigation with Treated Wastewater. Vadose Zone Journal, 2016, 15, 1-10.	2.2	27
40	Modeling Soil Processes: Review, Key Challenges, and New Perspectives. Vadose Zone Journal, 2016, 15, 1-57.	2.2	445
41	Scale dependence of Hortonian rainfallâ€runoff processes in a semiarid environment. Water Resources Research, 2016, 52, 5149-5166.	4.2	41
42	Deviations from unity of the ratio of the turbulent Schmidt to Prandtl numbers in stratified atmospheric flows over water surfaces. Physical Review Fluids, $2016, 1, .$	2.5	15
43	The dual role of soil crusts in desertification. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2108-2119.	3.0	41
44	Balancing water scarcity and quality for sustainable irrigated agriculture. Water Resources Research, 2015, 51, 3419-3436.	4.2	140
45	Irrigation with desalinated water: A step toward increasing water saving and crop yields. Water Resources Research, 2015, 51, 450-464.	4.2	40
46	Introduction to a special section on ecohydrology of semiarid environments: Confronting mathematical models with ecosystem complexity. Water Resources Research, 2015, 51, 8677-8683.	4.2	6
47	Natural length scales define the range of applicability of the Richards equation for capillary flows. Water Resources Research, 2015, 51, 7130-7144.	4.2	37
48	The effect of soil surface sealing on vegetation water uptake along a dry climatic gradient. Water Resources Research, 2015, 51, 7452-7466.	4.2	15
49	The effects of container geometry on water and heat regimes in soilless culture: lettuce as a case study. Irrigation Science, 2015, 33, 53-65.	2.8	18
50	Comment on "Column-scale unsaturated hydraulic conductivity estimates in coarse-textured homogeneous and layered soils derived under steady-state evaporation from a water tableâ€by M. Sadeghi, M. Tuller, M.R. Gohardoust and S.B. Jones. Journal of Hydrology, 2015, 529, 1274-1276.	5.4	3
51	Temporal variability of soil water content in a semiarid hillslope across time scales: Effect of soil surface condition. Journal of Arid Environments, 2015, 112, 64-74.	2.4	4
52	Soil Surface Sealing Effect on Soil Moisture at a Semiarid Hillslope: Implications for Remote Sensing Estimation. Remote Sensing, 2014, 6, 7469-7490.	4.0	10
53	Analysis of the impact of surface layer properties on evaporation from porous systems using column experiments and modified definition of characteristic length. Water Resources Research, 2014, 50, 3933-3955.	4.2	49
54	Impact of ambient conditions on evaporation from porous media. Water Resources Research, 2014, 50, 6696-6712.	4.2	41

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55	Effects of heterogeneous soilâ€water diffusivity on vegetation pattern formation. Water Resources Research, 2014, 50, 5743-5758.	4.2	32
56	The concept of field capacity revisited: Defining intrinsic static and dynamic criteria for soil internal drainage dynamics. Water Resources Research, 2014, 50, 4787-4802.	4.2	120
57	Secondary dispersal driven by overland flow in drylands: Review and mechanistic model development. Movement Ecology, 2014, 2, 7.	2.8	22
58	Evaporation from a shallow water table: Diurnal dynamics of water and heat at the surface of drying sand. Water Resources Research, 2013, 49, 4022-4034.	4.2	49
59	Prediction of Unsaturated Relative Hydraulic Conductivity from Kosugi's Water Retention Function. Procedia Environmental Sciences, 2013, 19, 609-617.	1.4	9
60	Combined effect of irrigation regime and fruit load on the patterns of trunk-diameter variation of †Hass†avocado at different phenological periods. Agricultural Water Management, 2013, 129, 87-94.	5.6	14
61	Infiltration into soils: Conceptual approaches and solutions. Water Resources Research, 2013, 49, 1755-1772.	4.2	170
62	The roles of fruit sink in the regulation of gas exchange and water uptake: A case study for avocado. Agricultural Water Management, 2013, 116, 21-28.	5.6	31
63	The foam drainage equation for unsaturated flow in porous media. Water Resources Research, 2013, 49, 6258-6265.	4.2	9
64	Prediction of spatially variable unsaturated hydraulic conductivity using scaled particleâ€size distribution functions. Water Resources Research, 2013, 49, 4219-4229.	4.2	27
65	The role of soil-surface sealing, microtopography, and vegetation patches in rainfall-runoff processes in semiarid areas. Water Resources Research, 2013, 49, 5585-5599.	4.2	104
66	Effect of Longâ€Term Irrigation with Treated Wastewater on the Root Zone Environment. Vadose Zone Journal, 2013, 12, 1-10.	2.2	51
67	Conceptual and Parametric Representation of Soil Hydraulic Properties: A Review. Vadose Zone Journal, 2013, 12, 1-20.	2.2	118
68	Plant Water Use Efficiency over Geological Time – Evolution of Leaf Stomata Configurations Affecting Plant Gas Exchange. PLoS ONE, 2013, 8, e67757.	2.5	27
69	Changes in Chemical Properties of Semiarid Soils under Long-Term Secondary Treated Wastewater Irrigation. Soil Science Society of America Journal, 2012, 76, 1358-1369.	2.2	65
70	Impact of Water Regime and Growing Conditions on Soil–Plant Interactions: From Single Plant to Field Scale. Vadose Zone Journal, 2012, 11, vzj2012.0006.	2.2	10
71	Response of †Hass†Mavocado trees to irrigation management and root constraint. Agricultural Water Management, 2012, 104, 95-103.	5.6	23
72	Soil water content variability at the hillslope scale: Impact of surface sealing. Water Resources Research, 2012, 48, .	4.2	38

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73	Evaporation suppression from water reservoirs: Efficiency considerations of partial covers. Water Resources Research, 2011, 47, .	4.2	57
74	Effects of longâ€term irrigation with treated wastewater on the hydraulic properties of a clayey soil. Water Resources Research, 2011, 47, .	4.2	57
75	Evaporation from a reservoir with fluctuating water level: Correcting for limited fetch. Journal of Hydrology, 2011, 404, 146-156.	5.4	34
76	Soil Surface Sealing and Crusting. Encyclopedia of Earth Sciences Series, 2011, , 786-791.	0.1	4
77	Evaporation from partially covered water surfaces. Water Resources Research, 2010, 46, .	4.2	47
78	On the Diurnal Soil Water Content Dynamics during Evaporation using Dielectric Methods. Vadose Zone Journal, 2010, 9, 709-718.	2.2	21
79	Drop size distributions and kinetic energy rates in variable intensity rainfall. Water Resources Research, 2009, 45, .	4.2	18
80	Water uptake, active root volume, and solute leaching under drip irrigation: A numerical study. Water Resources Research, 2009, 45, .	4.2	24
81	Evaporation from three water bodies of different sizes and climates: Measurements and scaling analysis. Advances in Water Resources, 2008, 31, 160-172.	3.8	89
82	Evaporation from a small water reservoir: Direct measurements and estimates. Journal of Hydrology, 2008, 351, 218-229.	5.4	130
83	Characteristic lengths affecting evaporative drying of porous media. Physical Review E, 2008, 77, 056309.	2.1	358
84	Air entry–based characteristic length for estimation of permeability of variably compacted earth materials. Water Resources Research, 2008, 44, .	4.2	14
85	Wind Spatial Variability and Topographic Wave Frequency. Journal of Physical Oceanography, 2008, 38, 2085-2096.	1.7	1
86	Dynamics of Soil Surface Bulk Density: Role of Water Table Elevation and Rainfall Duration. Soil Science Society of America Journal, 2008, 72, 412-423.	2.2	29
87	Response of Leucadendron â€~Safari Sunset' to regulated deficit irrigation: Effects of stress timing on growth and yield quality. Agricultural Water Management, 2007, 87, 162-170.	5.6	16
88	Estimating hydraulic properties of rainfall-induced soil surface seals from infiltration experiments and X-ray bulk density measurements. Journal of Hydrology, 2007, 341, 12-26.	5.4	29
89	A simple accurate method to predict time of ponding under variable intensity rainfall. Water Resources Research, 2007, 43, .	4.2	56
90	Effect of wind variability on topographic waves: Lake Kinneret case. Journal of Geophysical Research, 2007, 112, .	3.3	17

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91	Runoff from heterogeneous small bare catchments during soil surface sealing. Water Resources Research, 2006, 42, .	4.2	56
92	Anisotropy factor of saturated and unsaturated soils. Water Resources Research, 2006, 42, .	4.2	33
93	Effects of rainfall intensity and slope gradient on the dynamics of interrill erosion during soil surface sealing. Catena, 2006, 66, 211-220.	5.0	267
94	Soilâ€Plant System Response to Pulsed Drip Irrigation and Salinity. Soil Science Society of America Journal, 2006, 70, 1556-1568.	2.2	73
95	Effects of a shading screen on microclimate and crop water requirements. Irrigation Science, 2006, 25, 171-181.	2.8	62
96	Hydraulic characteristics and water relations of net house-grown bell pepper as affected by irrigation regimes in a Mediterranean climate. Environmental and Experimental Botany, 2006, 57, 226-235.	4.2	9
97	Modeling the Relationship between Soil Bulk Density and the Hydraulic Conductivity Function. Vadose Zone Journal, 2006, 5, 697-705.	2.2	101
98	Modeling the Relationship between Soil Bulk Density and the Water Retention Curve. Vadose Zone Journal, 2006, 5, 554-563.	2.2	112
99	Infiltration. , 2006, , 7-1-7-18.		2
100	Effects of Effluent Irrigation on Seal Formation, Infiltration, and Soil Loss during Rainfall. Soil Science Society of America Journal, 2005, 69, 1432-1439.	2.2	41
101	High fertigation frequency and phosphorus level: Effects on summer-grown bell pepper growth and blossom-end rot incidence. Plant and Soil, 2005, 270, 135-146.	3.7	62
102	On the relationships between the pore size distribution index and characteristics of the soil hydraulic functions. Water Resources Research, 2005, 41, .	4.2	34
103	Use of Bulk Density Profiles from Xâ€Radiography to Examine Structural Crust Models. Soil Science Society of America Journal, 2004, 68, 1169-1176.	2.2	24
104	Free Flow at the Interface of Porous Surfaces: A Generalization of the Taylor Brush Configuration. Transport in Porous Media, 2004, 54, 345-360.	2.6	22
105	Effects of management policies, including artificial recharge, on salinization in a sloping aquifer: The Israeli Coastal Aquifer case. Water Resources Research, 2004, 40, .	4.2	25
106	Comment on "Laboratory evaluation of a hydrodynamic inverse modeling method based on water content data―by S. Lambot, F. Hupet, M. Javaux, and M. Vanclooster. Water Resources Research, 2004, 40, .	4.2	1
107	Rainfall-Induced Soil Surface Sealing: A Critical Review of Observations, Conceptual Models, and Solutions. Vadose Zone Journal, 2004, 3, 570-591.	2.2	61
108	Rainfallâ€Induced Soil Surface Sealing: A Critical Review of Observations, Conceptual Models, and Solutions. Vadose Zone Journal, 2004, 3, 570-591.	2.2	204

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109	Title is missing!. Transport in Porous Media, 2003, 53, 75-94.	2.6	21
110	Effects of Water Applications and Soil Tillage on Water and Salt Distribution in a Vertisol. Soil Science Society of America Journal, 2003, 67, 852-858.	2.2	4
111	Effects of Water Applications and Soil Tillage on Water and Salt Distribution in a Vertisol. Soil Science Society of America Journal, 2003, 67, 852.	2.2	5
112	The Effects of Microdrip and Conventional Drip Irrigation on Water Distribution and Uptake. Soil Science Society of America Journal, 2002, 66, 1630-1636.	2.2	79
113	Modified Brinkman equation for a free flow problem at the interface of porous surfaces: The Cantor-Taylor brush configuration case. Water Resources Research, 2002, 38, 56-1-56-13.	4.2	32
114	Infiltration during soil sealing: The effect of areal heterogeneity of soil hydraulic properties. Water Resources Research, 2002, 38, 22-1-22-9.	4.2	63
115	Microdrip Irrigation of Field Crops. Soil Science Society of America Journal, 2002, 66, 228-235.	2.2	23
116	Tillage Effects on Water and Salt Distribution in a Vertisol during Effluent Irrigation and Rainfall. Agronomy Journal, 2002, 94, 1295-1304.	1.8	11
117	Modeling soil compaction under uniaxial compression. Soil Science Society of America Journal, 2002, 66, 1784-1787.	2.2	18
118	Microdrip Irrigation of Field Crops. Soil Science Society of America Journal, 2002, 66, 228.	2.2	19
119	A model for soil relative hydraulic conductivity based on the water retention characteristic curve. Water Resources Research, 2001, 37, 265-271.	4.2	94
120	Unsaturated hydraulic conductivity function based on a soil fragmentation process. Water Resources Research, 2001, 37, 1309-1312.	4.2	36
121	Soil seal formation and its effect on infiltration: Uniform versus nonuniform seal approximation. Water Resources Research, 2001, 37, 297-305.	4.2	16
122	Simulation of Non-enzymatic Template-directed Synthesis of Oligonucleotides and Peptides. Journal of Theoretical Biology, 2001, 208, 117-125.	1.7	17
123	Modeling the dynamics of soil seal formation: Analysis of the effect of soil and rainfall properties. Water Resources Research, 2000, 36, 2341-2349.	4.2	40
124	Tillage and Saline Irrigation Effects on Water and Salt Distribution in a Sloping Field. Soil Science Society of America Journal, 2000, 64, 2096-2102.	2.2	7
125	A probabilistic approach towards modeling the relationships between particle and pore size distributions: the multicomponent packed sphere case. Powder Technology, 1998, 96, 33-41.	4.2	58
126	Modeling the Disordered Dense Phase in the Packing of Binary Mixtures of Spheres. Journal of Colloid and Interface Science, 1998, 204, 87-92.	9.4	3

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127	A conceptual model of the soil water retention curve. Water Resources Research, 1998, 34, 223-231.	4.2	170
128	Modeling the dynamics of seal formation and its effect on infiltration as related to soil and rainfall characteristics. Water Resources Research, 1997, 33, 1527-1536.	4.2	122
129	Effect of Compaction on Soil Physical and Hydraulic Properties: Experimental Results and Modeling. Soil Science Society of America Journal, 1997, 61, 390.	2.2	117
130	Modelling the physical characteristics of simulated rainfall: a comparison with natural rainfall. Journal of Hydrology, 1997, 196, 336-347.	5.4	15
131	Modeling the relationships between particle and pore size distributions in multicomponent sphere packs: application to the water retention curve. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1997, 127, 201-210.	4.7	45
132	Spatial and Temporal Variability in Microclimate and Evaporation over Lake Kinneret: Experimental Evaluation. Journal of Applied Meteorology and Climatology, 1996, 35, 1076-1084.	1.7	17
133	Soil Sealing, Infiltration and Runoff. Water Science and Technology Library, 1996, , 131-181.	0.3	14
134	Reply [to "Comment on †Effect of Rainfall-Induced Soil Seals on Soil Water Regime: Wetting Processes' by Y. Mualem, S. Assouline, and D. Eltahanâ€]. Water Resources Research, 1995, 31, 235-236.	4.2	4
135	Comment on "A partial contributing area model for linking rainfall simulation data with hydrographs of a small arid watershed―by J. Ben-Asher and G. Humborg. Water Resources Research, 1994, 30, 139-141.	4.2	1
136	Evaporation from Lake Kinneret: 1. Eddy correlation system measurements and energy budget estimates. Water Resources Research, 1993, 29, 901-910.	4.2	68
137	Evaporation from Lake Kinneret: 2. Estimation of the Horizontal variability using a two-dimensional numerical mesoscale model. Water Resources Research, 1993, 29, 911-916.	4.2	18
138	Estimation of lake hydrologic budget terms using the simultaneous solution of water, heat, and salt balances and a Kalman Filtering Approach: Application to Lake Kinneret. Water Resources Research, 1993, 29, 3041-3048.	4.2	50
139	Effect of rainfall-induced soil seals on soil water regime: Wetting processes. Water Resources Research, 1993, 29, 1651-1659.	4.2	37
140	Rainfall induced soil seal (C) A dynamic model with kinetic energy instead of cumulative rainfall as independent variable. Catena, 1990, 17, 289-303.	5.0	25
141	Rainfall induced soil seal (A) A critical review of observations and models. Catena, 1990, 17, 185-203.	5.0	93
142	Rainfall induced soil seal (B) Application of a new model to saturated soils. Catena, 1990, 17, 205-218.	5.0	13
143	The Similarity of Regional Rainfall: A Dimensionless Model of Drop Size Distribution. Transactions of the American Society of Agricultural Engineers, 1989, 32, 1216-1222.	0.9	24
144	Modeling soil seal as a nonuniform layer. Water Resources Research, 1989, 25, 2101-2108.	4.2	77

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#	Article	IF	CITATIONS
145	Mathematical Model for Rain Drop Distribution and Rainfall Kinetic Energy. Transactions of the American Society of Agricultural Engineers, 1986, 29, 0494-0500.	0.9	31
146	Electrical Resistivity Tomography of the Root Zone. SSSA Special Publication Series, 0, , 223-245.	0.2	6
147	Computed Tomographic Evaluation of Earth Materials with Varying Resolutions. SSSA Special Publication Series, 0, , 97-112.	0.2	1