

# Yu V Obnosov

## List of Publications by Year in descending order

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papers

688  
citations

623188

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713013

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73  
docs citations

73  
times ranked

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citing authors

#	ARTICLE	IF	CITATIONS
1	Periodic Heterogeneous Structures: New Explicit Solutions and Effective Characteristics of Refraction of an Imposed Field. SIAM Journal on Applied Mathematics, 1999, 59, 1267-1287.	0.8	52
2	Four-Phase Checkerboard Composites. SIAM Journal on Applied Mathematics, 2001, 61, 1839-1856.	0.8	46
3	Analytical solution for a sharp interface problem in sea water intrusion into a coastal aquifer. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2001, 457, 3023-3038.	1.0	28
4	Steady water flow around parabolic cavities and through parabolic inclusions in unsaturated and saturated soils. Journal of Hydrology, 2000, 238, 65-77.	2.3	25
5	Analytical Determination of Seeping Soil Slopes of a Constant Exit Gradient. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2002, 82, 363.	0.9	22
6	Phreatic surface flow from a near-reservoir saturated tongue. Journal of Hydrology, 2004, 296, 271-281.	2.3	22
7	A generalized Milne-Thomson theorem. Applied Mathematics Letters, 2006, 19, 581-586.	1.5	18
8	A generalized Milne-Thomson theorem for the case of parabolic inclusion. Applied Mathematical Modelling, 2009, 33, 1970-1981.	2.2	18
9	Analytical solutions for seepage near material boundaries in dam cores: The Davison-Kalinin problems revisited. Applied Mathematical Modelling, 2012, 36, 1286-1301.	2.2	18
10	Optimal shape of an anthill dome: Bejan's constructal law revisited. Ecological Modelling, 2013, 250, 384-390.	1.2	18
11	Groundwater flow in a medium with a parquet-type conductivity distribution. Journal of Hydrology, 1999, 226, 242-249.	2.3	17
12	Analytic Solution to a Problem of Seepage in a Chequer-Board Porous Massif. Transport in Porous Media, 1997, 28, 109-124.	1.2	16
13	Explicit, rigorous solutions to two-dimensional heat transfer: two-component media and optimization of cooling fins. International Journal of Heat and Mass Transfer, 1997, 40, 1191-1196.	2.5	16
14	Analytical Solution to a Sea-water Intrusion Problem with a Fresh Water Zone Tapering to a Triple Point. Journal of Engineering Mathematics, 2006, 54, 197-210.	0.6	16
15	ANALYTICAL METHODS FOR HEAT CONDUCTION IN COMPOSITES. Mathematical Modelling and Analysis, 2008, 13, 67-78.	0.7	15
16	Conduction through a grooved surface and Sierpinsky fractals. International Journal of Heat and Mass Transfer, 2000, 43, 623-628.	2.5	14
17	Strip-focused phreatic surface flow driven by evaporation: Analytical solution by the Riesenkampf function. Advances in Water Resources, 2006, 29, 1565-1571.	1.7	14
18	Semipermeable Boundaries and Heterogeneities: Modeling by Singularities. Journal of Hydrologic Engineering - ASCE, 2001, 6, 217-224.	0.8	12

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19	A three-phase tessellation: solution and effective properties. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 1017-1037.	1.0	11
20	Can heterogeneity of the near-wellbore rock cause extrema of the Darcian fluid inflow rate from the formation (the Polubarinova-Kochina problem revisited)?. Computers and Geosciences, 2010, 36, 1252-1260.	2.0	11
21	Tensionâ€saturated and unsaturated flows from line sources in subsurface irrigation: <sc>R</sc>iesenkampf's and <sc>P</sc>hilip's solutions revisited. Water Resources Research, 2016, 52, 1866-1880.	1.7	11
22	Analytical solution for tensionâ€saturated and unsaturated flow from wicking porous pipes in subsurface irrigation: The <sc>K</sc>ornevâ€<sc>P</sc>hilip legacies revisited. Water Resources Research, 2017, 53, 2542-2552.	1.7	11
23	Checkerboard composites with separated phases. Journal of Mathematical Physics, 2001, 42, 5379-5388.	0.5	10
24	Water exclusion from tunnel cavities in the saturated capillary fringe. Advances in Water Resources, 2004, 27, 237-243.	1.7	10
25	Ant mound as an optimal shape in constructal design: Solar irradiation and circadian brood/fungi-warming sorties. Journal of Theoretical Biology, 2014, 355, 21-32.	0.8	10
26	Evaporation-Induced Capillary Siphoning Through Hydraulically Connected Porous Domains: The Vedernikovâ€Bouwer Model Revisited. Transport in Porous Media, 2019, 129, 231-251.	1.2	10
27	Threeâ€phase eccentric annulus subjected to a potential field induced by arbitrary singularities. Quarterly of Applied Mathematics, 2011, 69, 771-786.	0.5	9
28	Steady Darcian Flow in Subsurface Irrigation of Topsoil Impeded by a Substratum: Kornevâ€Riesenkampfâ€Philip Legacies Revisited. Irrigation and Drainage, 2018, 67, 374-391.	0.8	9
29	Well-bore clogging of a pumping well in hydraulic interference with an ambient groundwater flow: the Strack-Kostitsina refraction problem in an annular composite redux. Hydrogeology Journal, 2018, 26, 2531-2541.	0.9	9
30	Analytical solutions by the hodograph method to hydrodynamic problems for oil and gas traps. Journal of Hydrology, 2001, 254, 33-46.	2.3	8
31	A Model four-phase square checkerboard structure. Quarterly Journal of Mechanics and Applied Mathematics, 2005, 59, 1-27.	0.5	8
32	Pseudo-hysteretic double-front hiatus-stage soil water parcels supplying a plantâ€root continuum: the Green-Ampt-Youngs model revisited. Hydrological Sciences Journal, 2013, 58, 237-248.	1.2	8
33	Size and Shape of Steady Seawater Intrusion and Sharp-Interface Wedge: The Polubarinova-Kochina Analytical Solution to the Dam Problem Revisited. Journal of Hydrologic Engineering - ASCE, 2016, 21, .	0.8	8
34	Seepage through earth dam with clay core and toe drain: the Casagrandeâ€Numerov analytical legacy revisited. ISH Journal of Hydraulic Engineering, 2021, 27, 264-272.	1.1	8
35	Analytic solutions for fresh groundwater lenses floating on saline water under desert dunes: The Kunin-Van Der Veer legacy revisited. Journal of Hydrology, 2019, 574, 733-743.	2.3	8
36	Analytical solution to 2D problem for an anticline-diverted brine flow with a floating hydrocarbon trap. Transport in Porous Media, 2008, 71, 39-52.	1.2	7

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37	Leaky-layer seepage: the Verigin function revisited. <i>Journal of Engineering Mathematics</i> , 2008, 62, 345-354.	0.6	7
38	How much floating light nonaqueous phase liquid can a phreatic surface sustain? Riesenkampf's scheme revisited. <i>Water Resources Research</i> , 2011, 47, .	1.7	7
39	A Well in a "Target" Stratum of a Two-Layered Formation: The Muskat "Riesenkampf Solution Revisited. <i>Transport in Porous Media</i> , 2011, 87, 437-457.	1.2	7
40	An exact analytical solution for steady seepage from a perched Aquifer to a low-permeable sublayer: Kirkham-Brock's legacy revisited. <i>Water Resources Research</i> , 2015, 51, 3093-3107.	1.7	7
41	Steady Flow from an Array of Subsurface Emitters: Kornev's Irrigation Technology and Kidder's Free Boundary Problems Revisited. <i>Transport in Porous Media</i> , 2018, 121, 643-664.	1.2	7
42	Seepage to ditches and topographic depressions in saturated and unsaturated soils. <i>Advances in Water Resources</i> , 2020, 145, 103732.	1.7	7
43	Groundwater flow in a medium with periodic inclusions. <i>Fluid Dynamics</i> , 1995, 30, 758-766.	0.2	6
44	Groundwater flow in hillslopes: Analytical solutions by the theory of holomorphic functions and hydraulic theory. <i>Applied Mathematical Modelling</i> , 2015, 39, 3380-3397.	2.2	6
45	Dipolic Flows Relevant to Aquifer Storage and Recovery: Strack's Sink Solution Revisited. <i>Transport in Porous Media</i> , 2018, 123, 21-44.	1.2	6
46	Analytical Solutions for Steady Phreatic Flow Appearing/Re-emerging Toward/from a Bedrock/Caprock Isobaric Breach: The Polubarinova-Kochina "Numerov and Pavlovsky Problems Revisited. <i>Transport in Porous Media</i> , 2015, 109, 337-358.	1.2	5
47	Nonlinear mixed Cherepanov boundary-value problem. <i>Complex Variables and Elliptic Equations</i> , 2019, 64, 979-996.	0.4	5
48	Minimizing Evaporation by Optimal Layering of Topsoil: Revisiting Ovsinsky's Smart Mulching Tillage Technology Via Gardner-Warrick's Unsaturated Analytical Model and HYDRUS. <i>Water Resources Research</i> , 2019, 55, 3606-3618.	1.7	5
49	Infiltration-induced phreatic surface flow to periodic drains: Vedernikov "Engelund "Vasil "ev's legacy revisited. <i>Applied Mathematical Modelling</i> , 2021, 91, 989-1003.	2.2	5
50	Profiling ponded soil surface in saturated seepage into drain-line sink: Kalashnikov's method of lateral leaching revisited. <i>European Journal of Applied Mathematics</i> , 2023, 34, 367-384.	1.4	5
51	An accurately solvable problem of the mutual effect of inclusions in the theory of heterogeneous media. <i>Journal of Applied Mechanics and Technical Physics</i> , 1990, 31, 21-28.	0.1	4
52	Two-dimensional seepage in porous media with heterogeneities. <i>Journal of Geochemical Exploration</i> , 2000, 69-70, 251-255.	1.5	4
53	An exact analytical solution of an $R$ -linear conjugation problem for a $n$ -phased concentric circular heterogeneous structure. <i>Applied Mathematical Modelling</i> , 2016. 40. 5292-5300.	2.2	4
54	Modelling of 2-D seepage from aquifer towards stream via clogged bed: The toth-treffitz legacy conjugated. <i>Advances in Water Resources</i> , 2019, 131, 103372.	1.7	4

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55	Hydraulically optimal porous liner around a porous lens: Strack's problem revisited. <i>ISH Journal of Hydraulic Engineering</i> , 2021, 27, 79-89.	1.1	4
56	Water table rise in arid urban area soils due to evaporation impedance and its mitigation by intelligently designed capillary chimney siphons. <i>Environmental Earth Sciences</i> , 2021, 80, 1.	1.3	4
57	A generalised Milne-Thomson theorem for the case of an elliptical inclusion. <i>European Journal of Applied Mathematics</i> , 2012, 23, 469-484.	1.4	3
58	Accumulation of a light non-aqueous phase liquid on a flat barrier baffling a descending groundwater flow. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012, 468, 3667-3684.	1.0	3
59	TOPOLOGY OF STEADY HEAT CONDUCTION IN A SOLID SLAB SUBJECT TO A NONUNIFORM BOUNDARY CONDITION: THE CARSLAW-JAEGER SOLUTION REVISITED. <i>ANZIAM Journal</i> , 2012, 53, 308-320.	0.3	3
60	Analytical Solution for Interface Flow to a Sink With an Upconed Saline Water Lens: Strack's Regimes Revisited. <i>Water Resources Research</i> , 2018, 54, 609-620.	1.7	3
61	HEAT CONDUCTION IN TWO-DIMENSIONAL PARQUETS AND OPTIMIZATION OF SPINE SHAPE. , 1997, , .		3
62	Seepage to staggered tunnels and subterranean cavities: Analytical and HYDRUS modeling. <i>Advances in Water Resources</i> , 2022, 164, 104182.	1.7	3
63	Seepage refraction in a semicircular lens located at the boundary of two porous massifs. <i>Prikladnaya Matematika I Mekhanika</i> , 1998, 62, 749-762.	0.4	2
64	An $R$ -linear conjugation problem for a plane two-component heterogeneous structure with an array of periodically distributed sinks/sources. <i>Applied Mathematical Modelling</i> , 2013, 37, 2830-2837.	2.2	2
65	Seepage-evaporation controlled depletion of initially water-filled reservoirs on Earth and Mars: Analytic versus HYDRUS modeling. <i>Icarus</i> , 2022, 372, 114719.	1.1	2
66	Analytic solution of an $R$ -linear conjugation problem in the case of hyperbolic interface. <i>Lithuanian Mathematical Journal</i> , 2008, 48, 322-331.	0.2	1
67	Regular hexagonal three-phase checkerboard. <i>Journal of Mathematical Analysis and Applications</i> , 2019, 478, 1147-1162.	0.5	1
68	Electric forces on a circular cylindrical inclusion at the surface separating two dielectrics. <i>Journal of Applied Mechanics and Technical Physics</i> , 1994, 34, 465-473.	0.1	0
69	Estimates for Integral Means of Hyperbolically Convex Functions. <i>Siberian Mathematical Journal</i> , 2005, 46, 1062-1068.	0.2	0
70	Polubarinova-Kochina Methods for Steady and Transient Systems Governed by the Laplace and Charney Equations. <i>Journal of Mathematical Sciences</i> , 2005, 129, 3596-3602.	0.1	0
71	An $R$ -linear conjugation problem for two concentric annuli. <i>Lobachevskii Journal of Mathematics</i> , 2015, 36, 215-224.	0.1	0
72	Drawdown of urban drain trenches triggering 2-D transient seepage in soil massifs subject to managed aquifer discharge: sandbox experiments, analytical and HYDRUS2D modeling. <i>Urban Water Journal</i> , 2022, 19, 299-313.	1.0	0