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EDUCATIONAL AND PROFESSIONAL EXPERIENCE

1971 B.S., M.S., Physics, Hydrogeology, Belarus State, Minsk, USSR (Belarus)
1979 Ph.D., Hydrogeology, Natl. Inst. Hydrogeol. and Eng. Geol., Moscow, USSR
1971-1979 Research Scientist, Water Resources Management Institute, Minsk, USSR
1980-1984 Senior Research Scientist, Water Resources Management Institute, Minsk, USSR
1985-1989 Associate Professor, Water Resources Management Institute, Minsk, USSR
1990-1997 Associate Professor, Geology Department, University of Nebraska-Lincoln
1997 Visiting scholar, Dept. Hydrology and Water Resources, U. Arizona, spring
1997-present Professor, Department of Earth and Atmospheric Sciences, Univ. Nebraska-Lincoln
1997, 1998 Visiting scholar, Inst. of Applied Geology, U. Tuebingen, Germany
1999 Visiting scholar, CSIRO, Adelaide, Australia
2002 Visiting scholar, National Yunlin University, Toiliu, Taiwan
2008 Visiting research fellow, Center for Continental and Coastal Environments,
Adelaide, Australia
2014 Visiting professor, Swiss Federal Institute of Technology (ETH), Switzerland

HONORS AND AWARDS

Fellow, R. Daugherty Water for Food Institute, University of Nebraska, 2015
J.B. Coffman Excellence Award, Department of Earth and Atmospheric Sciences, 2015
Fellow, Daugherty Water for Food Institute, University of Nebraska, 2015, 2016
Fellowship, Swiss Federal Institute of Technology, Switzerland, 2014
Honorary visiting research fellow, Flinders University, Adelaide, Australia, 2008
Fellow, Geological Society of America, 2006
J.B. Coffman Award for Distinguished Teaching and Research in Geology
Faculty excellence annual award, Dept. of Geosciences, UNL, 1993, 1995, 1997, 1998
Courtesy Professor, School of Natural Resources Sciences, UNL, 1998-present
Outstanding Service Award to Associate Editor of Ground Water Journal, 1997
Award of Belarus Academy of Sciences in Environmental Protection, Minsk, USSR, 1985

EDITORIAL BOARD SERVICE

Associate Editor, *Ground Water* journal, 1993-1997, 2004-present
Associate Editor, *Hydrogeology Journal*, 2014-present
Associate Editor, *Journal of Hydrology*, 2000-2008

PROFESSIONAL MEMBERSHIPS

Member, American Geophysical Union
Member, European Geosciences Union
Member, Geological Society of America
Member, National Association of Groundwater Scientists and Engineers
Member, International Association of Hydrogeologists

CURRENT RESEARCH INTERESTS

- Groundwater-surface water interactions in streams and lakes
- Saline lakes in arid and semi-arid environments
- Groundwater recharge
- Methods for characterization of flow and transport parameters in heterogeneous aquifers
- Modeling groundwater flow and transport
- Climate effects on lakes and wetlands

INVITED LECTURES, PAPERS, AND KEYNOTE PRESENTATIONS

- 2017 Invited lecture, Bayreuth U., Germany, Bayreuth Center of Ecology and Environmental Research (BayCEER).
- 2016 Invited talk University of Hong Kong
- 2016 Invited talk, Geological Society of America
- 2016 Invited talk, China U. of Geosciences, Beijing, China
- 2016 Invited talk, Nanjing University, Nanjing, China
- 2016 Invited Talk, South University of Science and Technology, Shenzhen, China
- 2016 Keynote speaker, International Conference "Water Resources in Arid Areas: The way forward", NENA MWC, March 13-16, Muscat, Oman 2016.
- 2016 Keynote speaker, Int. Water Conference "Resources in Arid Areas" Oman, 2016
- 2014 Keynote speaker, European Geosciences Union, Vienna, Austria, Session HS 8.2.1
- 2014 Keynote speaker, Intern. Symposium "Disposal of large volumes of water: challenges and opportunities for arid environments in MAR practices", Sultan Qaboos University, Oman
- 2014 American Geophysical Union, Fall Meeting, San Francisco (co-author, with J. Lenters)
- 2014 Swiss Inst. Technology (ETH), Institute of Env. Engineering
- 2014 Milano Polytechnic U. Dept. Civil and Environmental Engineering
- 2014 Univ. Neuchatel, Switzerland, Center of Hydrogeology and Geothermics
- 2013 American Geophysical Union, San Francisco, Fall Meeting (co-presenter)
- 2012 American Geophysical Union, San Francisco, Fall Meeting,
- 2012 New Mexico Institute of Mining and Technology, Socorro, New Mexico
- 2010 Institute of Geo-ecology, Russian Academy of Sciences, St. Petersburg, Russia
- 2010 Invited lecture, Vilnius University, Faculty of Natural Sci., Hydrogeology Dept., Lithuania
- 2010 Invited lecture, Geological Survey of Lithuania, Vilnius
- 2010 American Geophysical Union, Fall Meeting, San Francisco
- 2010 Institute of Geocology, Russian Academy of Sciences, St. Petersburg
- 2010 Vilnius University, Faculty of Natural Sciences, Lithuania,
- 2010 Geological Survey of Lithuania, Vilnius
- 2008 Centre for Coastal and Catchment Environments, Flinders University, Adelaide, Australia
- 2007 Geological Society of America, Annual Meeting,
- 2006 Western Pacific Geophysical Union Meeting, Beijing, China
- 2002 Keynote Speaker, 13th Natl. Taiwan Conf. on Hydraulics, Natl. Yunlin Univ., R.O.C.
- 2002 Geological Survey, Taipei, R.O.C.
- 2002 Tainan Hydraulic Laboratory, Tainan, R.O.C
- 2002 National Cheng Kung University, Tainan, R.O.C.
- 1999 Commonwealth Science and Industry Research Organization (CSIRO), Adelaide, Australia
- 1999 Geological Society of America, Denver, Annual meeting
- 1997 Institute of Applied Geology, University of Tübingen, Germany
- 1998 Institute of Applied Geology, University of Tübingen, Germany

- 1997 Swiss Federal Institute of Technology (ETH), Zurich, Switzerland
- 1997 New Mexico Institute of Mining and Technology, Socorro, New Mexico
- 1997 Geohydrology Department, Sandia National Laboratory, New Mexico
- 1997 Hydrogeology Section, Los Alamos National Laboratory, New Mexico
- 1997 Department of Hydrology and Water Resources, University of Arizona
- 1994 American Geophysical Union, Fall Meeting, San Francisco
- 1993 Water Conservation Society, Minneapolis

RESEARCH FUNDING

- 2014-2016 Managed Aquifer Recharge using Treated Wastewater in Different Geological Settings of MENA countries", Multinational proposal, Co-PI, with PI-A.K. Al-Maktoumi, Sultan Qaboos University, Oman, Co-PI-Marwan M. Alraggad, University of Jordan. UNL share \$81,400, US AID – DAI (\$387,180).
- 2009-2014 Resilience and adaptive governance in stressed watersheds, Craig R. Allen, PI, Participating faculty with other 17 UNL faculty, NSF - IGERT Program (\$3,100,000)
- 2006-2011 Mechanisms of Temporal and Spatial Variability of Lake Salinity in Dune Environments: Nebraska Sand Hills, Collaborative Research", Lead PI, with Co-PIs J. Swinehart and S. Fritz and collaborators M. Person (Indiana University), T. Halihan (Oklahoma State), C. Simmons (Flinders University, Australia), J. Lane (USGS). NSF (\$320,000, UNL-\$219,000)
- 2007-2008 Using Electrical Resistivity Imaging to Evaluate Permanganate Performance during an In Situ Treatment of a RDX-Contaminated Aquifer, with S. Comfort, Co-PI, SNR, UNL, and T. Halihan, Co-PI, Oklahoma State University, DoD, ESCTP (\$98,777).
- 2005-2008 Field Scale Demonstrations of Innovative Remediation Techniques for Contaminated Soil and Water Co-PI, with S. Comfort, Lead PI. EPA (\$994,000)
- 2003-2007 Sand Hills biocomplexity: Integrating biogeophysical processes across space and time", NSF, Co-PI, with D. Wedin, UNL Lead PI, and G. Henebry, D. Loope, and 11 other CO-PIs. NSF (\$1,800,000)
- 2004-2006 Hydrogeological Controls of Salinity Patterns in the Sand Hills Lakes, Nebraska, Lead PI, with Co-PIs S. Fritz, D. Loope, J. Swinehart, DOI, USGS (\$19,975)
- 2002-2003 Assessment of thermal-infrared imaging as a tool for evaluation of groundwater-lake interactions in the Nebraska Sand Hills", Lead PI, DOI, USGS (\$17,000)
- 2001-2002 Evaluation of conductive properties of the surficial aquifer in the Nebraska Sand Hills, Lead PI, DOI, USGS (\$14,946)
- 2000-2001 Hydraulic conductivity profiles in the Platte River of Nebraska, Co-PI, with V.L. McGuire, USGS, PI, B.R. Zurbuchen, Co-PI, DOI, USGS and Cooperative Hydrology Study, Nebraska), (\$137,505)
- 1999-2003 Hydraulic characterization of the stream-aquifer interface: Prairie Creek Study, Principal Investigator. Central Platte Natural Resources District, Nebraska (\$40,000)
- 1998-2001 Hydraulic characterization of the stream-aquifer interface: theory, field implementation, and practical ramifications - a multi-state proposal, Lead PI, and Co-PI J.J. Butler, Jr., University of Kansas. DOI, USGS (\$105,000)
- 1996-1998 Field Verification of the Dipole Flow Test: A New Approach for the In-Situ Determination of Transport Parameters", Lead PI, with Co-PI J.J. Butler, Jr., University of Kansas. DOI, USGS (\$40,000)
- 1994-1996 A Dipole Method of Field Measurement of Transport Parameters in Contaminated Aquifers, PI, National Water Resources Institute, California (\$58,540)
- 1992-1995 Tracer Experiments for Transport Characteristics at Nebraska MSEA, Lead PI, with Co-PI

- R.F. Spalding, UNL, Central Platte Natural Resources District, Nebraska (\$116,938)
- 1992-1993 Slug Test Techniques for Hydraulic Conductivity Measurements in Highly Permeable Shallow Sand and Gravel Aquifers, Lead PI, DOI, USGS (\$15,900)
- 1991-1993 Measurement of Injected Herbicide Mobility and Persistence in Ground Water, Co-PI, with R.F. Spalding, Lead PI, and Co-PIs J. Barker, University of Waterloo, Canada, W.-W. Yeh, D. Mackay, UCLA (US Department of Agriculture, CSRS (\$199,500)
- 1991-1992 Characterization of Shallow Unconfined Aquifer by Pumping Tests and Geophysical Surveys, Lead PI, DOI, USGS (\$18,500)
- 1990-1991 Management System Evaluation Area – Nebraska, Preliminary Aquifer Characterization, Co-PI, with R. Diffendal, Lead PI, and Co-PIs M. Spalding, R. Spalding, USDA, CSRS-ARS (\$12,500)

LIST OF SELECTED PUBLICATIONS

Peer-Reviewed Papers (underlined are names of advised students)

- Frei, S., M. Azizian, V.A. Zlotnik, S.B. Grant, V. Zlotnik, D. Toundykov, 2018, Analytical modeling of hyporheic flow and nitrate removal for in-stream bedforms: Perturbation method and implementation, *Env. Modeling and Software*, accepted
- Gilmore, T., V. Zlotnik, and M. Johnson, 2018, Recognition of regional water table patterns for estimating groundwater recharge rates, *Groundwater*, <https://doi.org/10.1111/gwat.12808>
- Zlotnik, V. and D. Tartakovsky, 2018, Interpretation of heat-pulse tracer tests for characterization of three-dimensional velocity fields in hyporheic zone, *Water Resour. Res.*, 54, 4028-4039, <https://doi.org/10.1029/2017WR022476>
- Adane, Z., P. Nasta, V. Zlotnik, D. Wedin, 2018, Impact of grassland conversion to forest on groundwater recharge in the Nebraska Sand Hills, *J. Hydrology (Regional Studies)*, 15, 171-183, <https://doi.org/10.1016/j.ejrh.2018.01.001>
- Rossman, NR., V.A. Zlotnik, C.M. Rowe, 2018, Using cumulative potential recharge for selection of GCM projections to force regional groundwater models: a Nebraska Sand Hills example, *J. Hydrology*, 561, 1105-1114, doi.org/10.1016/j.jhydrol.2017.09.019
- Rossman, NR., V.A. Zlotnik, C.M. Rowe, 2018, An approach to hydrogeological modeling of a large system of groundwater-fed lakes and wetlands in the Nebraska Sand Hills, USA, *Hydrogeology J.*, 26(3), 881-897, doi.org/10.1007/s10040-017-1691-0
- Zlotnik, V.A., A.R. Kacimov, A. Al-Maktoumi, 2017, Estimating Groundwater Mounding in Sloping Aquifers for Managed Aquifer Recharge, *Groundwater*, 55(6), 797-810, DOI: 10.1111/gwat.12530
- Riveros-Iregui, D.A., Lenters, J.D., Peake, C.S., Ong, J.B., Healey, N.C., Zlotnik, V.A., 2017, Evaporation from a shallow, saline lake in the Nebraska Sandhills: Energy balance drivers of seasonal and interannual variability, *J. Hydrology*, 553, 172-187
- Ledder, G. and V.A. Zlotnik, 2017, Methods for evaluation of oscillatory integrals for analytical groundwater flow and mass transport models, *Advances in Water Resources*, 104, 284-282, DOI: 10.1016/j.advwatres.2017.04.007
- Traylor, J.P., and V.A. Zlotnik, 2016, Analytical modeling of irrigation and land use effects on streamflow in semi-arid conditions, *J. Hydrology* 533 (2016) 591–602,

<http://dx.doi.org/10.1016/j.jhydrol.2015.12.006> (near 400 downloads of related materials from the UNL Digital Commons)

- Sweeney, M.R. , V.A. Zlotnik, R.M. Joeckel, and J.E. Stout, 2016, Geomorphic and hydrologic controls of dust emissions during drought from Yellow Lake playa, West Texas, USA, *J. Arid Environments*, v.133, 37-46
- El-Rawy, M. V. Zlotnik, M. Al-Raggad, V.A. Al-Maktoumi, A. Kacimov, O. Abdalla, 2016, Conjunctive use of groundwater and surface water resources with aquifer recharge by treated wastewater: evaluation of management scenarios in the Zarqa River Basin, Jordan, *Environmental Earth Sciences* 75(15), August 2016, doi: 10.1007/s12665-016-5946
- Kacimov, A., V. Zlotnik, A. Al-Maktoumi, R. Al-Abri, 2016, Modeling of transient water table response to Managed Aquifer Recharge: A lagoon in Muscat, Oman, *Environmental Earth Sciences*, 2016, 75: 318. doi:10.1007/s12665-015-5137-5
- Wang, T., T.E. Franz, W. Yue, J. Szilagyi, V.A. Zlotnik, J. You, X. Chen, M.D. Shulski, A. Young, 2016, Feasibility analysis of using inverse modeling for estimating natural groundwater recharge from a large-scale soil moisture monitoring network, *J. Hydrology*, v.533, February 2016, 250-266, doi:10.1016/j.jhydrol.2015.12.019
- Zlotnik, V.A, D. Toundykov, M.B. Cardenas, 2015, An approach for analysis of flow in aquifers with spatially varying top boundary, *Groundwater*, v. 53, no.2, 335-341. doi:10.1111/gwat.12205
- Rossman, N.R. and V.A. Zlotnik, 2015, Simulation of groundwater flow and effects of 21st century climate scenarios on lakes in the Nebraska Sand Hills, in MODFLOW and More, 2015, Proceedings, May 31-June 3, 2015, Integrated Groundwater Modeling Center (IGWMC), p.157-161
- Zlotnik, V.A., 2015, Book Review: "Elements of Physical Hydrology", 2nd Edition. *Groundwater*, v. 53: 509–510. doi:10.1111/gwat.12343
- Wang, T., T. E. Franz, and V. A. Zlotnik, 2015, Controls of soil hydraulic characteristics on modeling groundwater recharge under different climatic conditions, *J. Hydrology*, 521, 470-481.
- Wang, T., T. Franz, V.A. Zlotnik, J. You, M.D. Shulski, 2015, Investigating soil controls on soil moisture spatial variability: numerical simulations and field observations, *J. Hydrology*, 524 (2015) 576–586 <http://dx.doi.org/10.1016/j.jhydrol.2015.03.019>
- Zlotnik V.A., 2014, Analytical methods for assessment of land-use change effects on stream runoff, *J. Hydrologic Eng.*, 10.1061/(ASCE)HE.1943-5584.0001084, 06014009.
- Rossman, N., V.A. Zlotnik, C. Rowe, J. Szilagyi, 2014, Vadose zone lag time and potential 21st century climate change effects on spatially distributed groundwater recharge in the semi-arid Nebraska Sand Hills, *J. Hydrology*, v. 519, 656–669, DOI: 10.1016/j.jhydrol.2014.07.057
- Zlotnik, V.A, D.Toundykov, M.B. Cardenas, 2014, An approach for analysis of flow in aquifers with spatially varying top boundary, *Groundwater*, doi: 10.1111/gwat.12205, online
- Wang, T., T. Franz, V.A. Zlotnik, 2014, Assessing controls of soil hydraulic characteristics on modeling groundwater recharge under different climatic conditions, *J. Hydrology*, doi:10.1016/j.jhydrol.2014.12.040, online
- Judge, A. I., D.W. Ostendorf; D.J. DeGroot, V.A. Zlotnik, 2014, A pneumatic permeameter for transient laboratory tests on coarse-grained materials, *J. Hydrologic Eng.*, V. 19, n. 2, 319-327
- Kacimov, A., V.A. Zlotnik, A. Ali Maktoumi, 2014, Analytical model of aquifer response to artificial groundwater recharge from wadi channels, *Proceedings of 10th International Conference of Greece of International Association of Hydrology*, Thessaloniki, Greece, 8-10 October, 2014, Publisher: The Geological Society of Greece, V.1, pp. 259-268

- Lim, J., D. Lee, V.A. Zlotnik, and H. Choi, 2014, Analytical interpretation of slug test in a vertical cutoff wall, *Groundwater*, V. 52, n. 2, 284-290
- Loope D.B., Elder J.F., Zlotnik V.A., Kettler R.M., Pederson D.T., 2013, Jurassic earthquake sequence recorded by multiple generations of sand blows, Zion National Park: Utah: *Geology*, v. 41, 1131–1134, doi:10.1130/G34619.1
- Rossman, N.R., and V.A. Zlotnik, 2013, Review: Regional groundwater flow modeling in heavily irrigated basins of selected states in the western United States, *Hydrogeology Journal*, v. 21, no. 6, 1173-1192, DOI 10.1007/s10040-013-1010-3.
- Szilagyi, J., V.A. Zlotnik, J. Sozsa, 2013, Regional scale groundwater discharge and recharge versus depth to groundwater: relationship in the Platte River Valley of Nebraska, USA, *Ground Water*, v. 51, no. 6, 945-951, doi: 10.1111/gwat.12007
- Zlotnik, V.A., J.B. Ong, and J.D. Lenters, J. Schmieder, S.C. Fritz, 2012, Quantification of salt dust pathways from a groundwater-fed lake: implications for solute budgets and dust emission rates, *J. Geophys. Res.*, v. 117, F02014, doi:10.1029/2011JF002107
- Befus, K., M. B. Cardenas, J.B. Ong, and V.A. Zlotnik, 2012, Classification and delineation of groundwater - lake interactions in the Nebraska Sand Hills (USA) using quasi-3D electrical resistivity surveys, *Hydrogeology J.*, 20(8), 1483-1495, doi:10.1007/s10040-012-0891-x, 2012
- Wang, T., and V.A. Zlotnik, 2012, A complementary relationship between actual and potential evapotranspiration and soil effects, 2012, *J. Hydrology*, v.456-457, 146 - 150, HYDROL 18143, DOI: 10.1016/j.jhydrol.2012.03.034, on line 24 March
- Halihan, T., J. Albano, S.D. Comfort, V.A. Zlotnik, 2012, Electrical resistivity imaging of a permanganate injection during in Situ treatment of RDX-contaminated ground water, *Ground Water Monitoring & Remediation*, 32(1), 43-52, doi:10.1111/j.1745-6592.2011.01361.x
- Zlotnik, V.A., M.B. Cardenas, D. Toundykov, 2011, Effects of multiscale anisotropy on basin and hyporheic groundwater flow, *Ground Water*, 49(4), 576-583, doi:10.1111/j.1745-6584.2010.00775.x
- Szilagyi, J., V.A. Zlotnik, J.B. Gates, J. Jozsa, 2011, Mapping mean annual groundwater recharge in the Nebraska Sand Hills, *Hydrogeology Journal*, 2011, 19: 1503–1513, doi:10.1007/s10040-011-0769-3
- Ong, J. B., and V. A. Zlotnik, 2011, Assessing lakebed hydraulic conductivity and seepage flux by potentiomanometer, *Ground Water*, 2011, 49(2), 270-274, doi: 10.1111/j.1745-6584.2010.00717.x
- Zlotnik, V. A., N. I. Robinson, and C. T. Simmons, 2010, Salinity dynamics of discharge lakes in dune environments: conceptual model, *Water Resour. Res.*, vol. 46, doi:10.1029/2009WR008999.
- Albano, J., Comfort, S. D., Zlotnik, V., Halihan, T., Burbach, M., Chokejaroenrat, C., Onanong, S. and Clayton, W., 2010, In Situ Chemical Oxidation of RDX-Contaminated Groundwater with Permanganate at the Nebraska Ordnance Plant. *Ground Water Monitoring & Remediation*, 30: 96–106. doi: 10.1111/j.1745-6592.2010.01295.x
- Ong, J., J. Lane, V. Zlotnik, T. Halihan, and E. White, 2010, Combined use of frequency-domain electromagnetic and electrical resistivity surveys to delineate near-lake groundwater flow in the semi-arid Nebraska Sand Hills, USA, *Hydrogeology Journal*, 18, no 6, 1539–1545, DOI 10.1007/s10040-010-0617-x
- Zlotnik, V.A., D. Goss, G. Duffield, 2010, General shape factor for a partially penetrating well, *Ground Water*, v. 48, no. 1, 111-116
- Christensen, S., V.A. Zlotnik, D.M. Tartakovsky, 2010, Numerical analysis of implications of designing a pumping test in a leaky aquifer connected to a stream using analytical solutions, *J. Hydrology*, v. 381, 341–351.
- Zlotnik, V.A., D. Goss, G. Duffield, 2010, General shape factor for a partially penetrating well, *Ground Water*, v. 48, no. 1, 111-116
- Wang, T., V.A. Zlotnik, J. Šimuněk, M. Schaap, 2009, Using process-based models and pedotransfer

- functions for soil hydraulic characteristics to estimate groundwater recharge in semi-arid regions. *Water Resour. Res.*, Vol. 45, W04412, doi:10.1029/2008WR006903
- Wang, T., D. Wedin, V.A. Zlotnik, 2009, Field evidence of a negative correlation between saturated hydraulic conductivity and soil carbon in a sandy Soil, *Water Resour. Res.*, Vol. 45, W07503, doi:10.1029/2008WR006865
- Ostendorf, D.W., V.A. Zlotnik, and D.J. DeGroot, 2009, A linear theory for annular slug tests, *J. Hydrol.*, 368 (2009) 205–213
- Zlotnik, V.A., and D.M. Tartakovsky, 2009, Closure to “Stream depletion by groundwater pumping in leaky aquifers”, by Vitaly A. Zlotnik and Daniel M. Tartakovsky, *J. Hydrol. Eng.*, February 2008, Vol. 13, No. 2, pp 43-50. *J. Hydrol. Eng.*, Vol. 14, n. 8, 889-891
- Christensen, S., V.A. Zlotnik, D.M. Tartakovsky, 2009, Optimal design of pumping test to predict stream flow depletion caused by pumping from a leaky aquifer, *J. Hydrology*, v. 375, 554-565, doi:10.1016/j.jhydrol.2009.07.006, 2009
- Zlotnik, V.A., F. Olaguera, J.B. Ong, 2009, An approach to assessment of flow regimes of groundwater-dominated lakes in arid environments, *J. Hydrology*, v. 371, 22-30, doi: 10.1016/j.jhydrol.2009.03.012
- Zlotnik, V.A. and D.M. Tartakovsky, 2008, Stream depletion by groundwater pumping from leaky aquifers, *J. Hydrol. Eng.*, v. 13, n. 2, pp 43-50. DOI: 10.1061/(ASCE)1084-0699(2008).
- Yeh, H.D., Y.C. Chang, V.A. Zlotnik, 2008, Stream depletion rate and volume of flow in wedge-shape aquifers, *J. Hydrol.*, v. 349, 501-511, doi:10.1016/j.jhydrol.2007.11.025
- Butler, J.J., Jr., and X. Zhan, V.A. Zlotnik, 2008, Discussion of paper "Pumping-induced drawdown and stream depletion in a leaky aquifer system", by Butler, J.J. Jr., X. Zhan, and V.A. Zlotnik, 2007, *Ground Water*, v. 45, no 2, 178–186, Authors' reply by James J. Butler Jr., X. Zhan, and V.A. Zlotnik, July-August issue, *Ground Water*, v. 46, no. 4: 530-531
- Wang, T., V.A. Zlotnik, D. Wedin, K.D. Wally, 2007, Spatial trends in saturated hydraulic conductivity of vegetated dunes in the Nebraska Sand Hills: Effects of depth and topography, *J. Hydrol.*, v. 349, 88-97, doi: 10.1016/j.jhydrol.2007.10.027.
- Kollet, S.J., and V.A. Zlotnik, 2007, Evaluation of the streambed leakage concept in analytical models using data from three pumping tests, *Hydrogeology J.*, v. 15, 1051-1062, DOI 10.1007/s10040-006-0156-7, 1-12
- Bennett, D. M. , S.C.Fritz, J.C. Holz, A.A. Holz , and V.A. Zlotnik, 2007, Evaluating climatic and non-climatic influences on ion chemistry in natural and man-made lakes of Nebraska, USA, *Hydrobiologia*, Volume 591, Number 1 / October, 103-115
- Zlotnik, V.A., M. Burbach, J. Swinehart, D. Bennett, S. Fritz, D. Loope, 2007, A case study of direct push methods for aquifer characterization in dune-lake environments, *Environmental and Engineering Geoscience*, v. XIII, no 3, 205-216
- Zlotnik, V.A., D.E. Eisenhauer, D.J. Schlautman, B.R. Zurbuchen, D. Van Peurse, 2007, Entrapped Air Effects on Dipole Flow in Sand Tank Experiments: Hydraulic Conductivity and Head Distribution, *J. Hydrology*, v. 339, 193-205
- Zlotnik, V.A., and V.N. Emikh, 2007, Pelageya Yakovlevna Polubarinova-Kochina (1899-1999): A Soviet era mathematician. *Ground Water*, 45(3), 383-387
- Zlotnik, V.A., T. Wang, J. Nieber, J. Šimuněk, 2007, Verification of Numerical Solutions of the Richards Equation Using a Traveling Wave Solution, *Advances in Water Resour.*, v. 30, 1973-1980.
- Goss, D., and V.A. Zlotnik, 2007, Applicability of Air Permeameter for Investigation of Surficial Dune Structures in Nebraska Sand Hills, USA, *AAPG Bulletin*, v. 91, no 5, 1-8
- Butler, J.J. Jr., X. Zhan, and V.A. Zlotnik, 2007, Pumping-induced drawdown and stream depletion in a leaky aquifer system, *Ground Water*, v. 45, no 2, 178–186
- Butler, J.J., Jr., V.A. Zlotnik, and M.-S.Tsou, 2006, Discussion of papers, "Drawdown and Stream Depletion Produced by Pumping in the Vicinity of a Partially Penetrating Stream" by James J. Butler Jr., Vitaly A. Zlotnik, and Ming-Shu Tsou, September-October 2001 issue, v. 39, no. 5: *Ground*

- Water*, 651–659, v. 44, no. 2, 142-143
- Kollet, S.J., and V.A. Zlotnik, 2005, Reply to comment by H. Lough, Department of Civil Engineering, University of Canterbury, Christchurch, New Zealand, on the paper “Stream depletion predictions using pumping test data from a heterogeneous stream-aquifer system (a case study from the Great Plains, USA)” by S.J. Kollet and V.A. Zlotnik, 281: 96-114, *J. of Hydrology*, 313, 149-152.
- Tcherepanov, E.N., V.A. Zlotnik, and G. Henebry, 2005, Using Landsat thermal imagery and GIS for identification of ground water discharge into shallow ground water - dominated Lakes, *Int. J. Remote Sensing*, v. 26, No. 17, 10 September 2005, 3649–3661, doi: 10.1080/01431160500177315
- Zlotnik V. A., 2005, Reply to comment by Sushil K. Singh on “A concept of maximum stream depletion rate for leaky aquifers in alluvial valleys”, *Water Resour. Res.*, 41, W08602, doi:10.1029/2004WR003836
- Zlotnik V. A., H. Zhan (2005), Aquitard effect on drawdown in water table aquifers, *Water Resour. Res.*, 41, W06022, doi:10.1029/2004WR003716.
- Kollet, S.J., and V.A. Zlotnik, 2005, Influence of aquifer heterogeneity and return flow on pumping test data interpretation, *J. Hydrology*, 300, 267–285
- Zlotnik, V.A., 2004, A concept of maximum stream depletion rate for leaky aquifers in alluvial valleys, *Water Resour. Res.*, v. 40(6), W06507, doi: 10.1029/2003 WR002932.
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TEACHING

University Courses Taught

- Professional Development in Earth and Atmospheric Sciences (GEOS 372), 2 cr. hours
- "Water and Earth Connections" (GEOL 372), 3 cr. hours
- "Water in Geosciences" (GEOL 472/872), 3 cr. hours
- "Contaminant Hydrogeology" (GEOL 986), 3 cr. hours
- "Introduction to Groundwater Modeling" (GEOL 988), 3 cr. hours
- "Field Techniques in Hydrogeology" (GEOL 870), 3 cr. hours
- "Modern Problems in Hydrogeology" (GEOL 898), 2 cr. hours
- UNL graduate specialization "Hydrogeology", UNL, 1998-present
Instrumented field-training site maintenance for hydrogeology program (Fremont, Nebraska)

STUDENT SUPERVISION AND ADVISING

Ph.D. Dissertations Supervised, Awards, and Post-Graduate Information

- Adane, Zablon, 2017, Evaluating the impact of grassland conversions to forest on groundwater recharge in the Nebraska Sand Hills (NGO, Ethiopia)
- Rossmann, Nathan, 2015, Groundwater modeling as a tool of studying resilience of stressed watersheds in the Sand Hills, 2015 (HDR Company, USA)
- Ong, John B., 2010, Investigation of spatial and temporal processes of lake-aquifer interactions in the Nebraska Sand Hills (EPA-USGS, Post-doc, currently in U. Philippines, Manila)
- Wang, Tiejun, 2008, Effects of climate change on recharge in the Sand Hills, Nebraska and ramifications for dune stability Professor, Tianjin University, China)
- Kollet, Stefan, 2003, Stream-aquifer interactions under pumping conditions in an unconfined aquifer considering three-dimensional flow, aquifer heterogeneity, and anisotropy. (Lawrence Livermore National Lab., USA; Professor, Bonn University, Institute of Meteorology, Sci. Director of Centre for High-Performance Sci. Computing, Jülich, Germany)
- Zurbuchen, Brian, 2000, Hydraulic single-borehole techniques for characterizing hydraulic conductivity in highly permeable aquifers: slug test, borehole flowmeter test, and dipole-flow test. (US EPA Region VII, Superfund Program Manager)
- Tandon, Vikas, 2000, Contaminant transport in high-capacity pumping setting with a vertical groundwater flow component: Field tracer experiments and numerical modeling. (Senior Hydrogeologist, Shaw Environmental, USA)

Completed Masters Theses Supervised, Awards, and Post-Graduate Information

- Gibson, Justin, 2015, Effects of land use on groundwater recharge (Ph.D. Program, UNL)
- Taylor, Jonathan, 2012, Analytical modeling of irrigation and land use changes on streamflow in semi-arid conditions: Frenchman Creek, Nebraska (USGS)
- Turco, Michael, M.S., 2009, Numerical simulation of groundwater flow and areas contributing recharge to public supply wells Near York, Nebraska (US Geological Survey, Sub-district Chief, Houston and San-Antonio, TX)
- Albano, Jeff M.S., 2009, In-situ chemical oxidation of RDX-contaminated groundwater with permanganate at the Nebraska Ordnance Plant (Environmental industry, CH2MHill).
- Olaguera, Francia, 2007, Investigating factors affecting flow-through regimes of the Sandhills lakes (Environmental industry, URS).

- Goss, David, 2004, Subsurface permeametry in the Nebraska Sand Hills (Professor, Nebraska Wesleyan University)
- Tcherepanov, Evguenii, 2003, Application of remote sensing and GIS for the studies of groundwater/surface water interactions in the Nebraska Sandhills, *2002 GSA Student Grant* (Ph.D. program, Rice University, currently with Exxon-Mobil Corp.)
- Cardenas, Bayani, 2002, Determination of small-scale spatial variability of hydraulic conductivity of modern streambed deposits through hydraulic testing and grain-size analysis: Prairie Creek, Nebraska, *2001 AAPG Student Grant, 2001 Fall American Geophysical Union Meeting Outstanding Student Paper Award, AGU Horton Award, 2002* (currently Associate Professor, University of Texas-Austin)
- Schlautman, Dale, 2001, Laboratory evaluation of the dipole flow test, co-advised with D. Eisenhauer (E&A, environmental industry, USA)
- Huang, Huihua, 2000, Evaluation of stream-aquifer interaction considering streambed sediment and stream partial penetration effects (Chemnavigator, Environmental industry, USA)
- Zurbuchen, Brian, 1996, The dipole probe development and dipole flow test applications in sand and gravel aquifer (MSEA site, Shelton, Nebraska), *UNL Outstanding Thesis Honorable Mentioning*,
- Sun, Bei, 1996, Computation of analytical 3-D velocity near a partially penetrating well in an unconfined aquifer (Environmental industry, Canada)
- Ramold, Ron, 1996, Estimating vertical groundwater flow rates from transient temperature-depth profiles, *Student Research Award, 1996 Geological Society of America* (United Nations; currently with environmental industry, USA)
- McGuire, Virginia, 1994, Characterizing vertical distribution of horizontal hydraulic conductivity in an unconfined sand and gravel aquifer using double packer slug test (U.S. Geological Survey)
- Jie, Lin, 1994, Groundwater monitoring network design by geostatistics and Monte-Carlo simulations (Ph.D. program, University of Iowa, USA)
- Ferlin, Mark, 1993, Slug test in highly permeable formations (Management and Technical Resources, Inc., environmental industry, USA)

M.S. Theses in Preparation

- Moak, William, Application of numerical methods for managed aquifer recharge, 2013
- Paitz, Philip, Correlation between climate and lake area variability in the Nebraska Sand Hills, 2014
- Guira, Moussa, Numerical analysis of groundwater-surface water interactions in Republican River Basin, 2015

SERVICE (abbreviated)

Responsibilities for professional publications

2014-present Associate Editor, *Hydrogeology Journal*, published by International Association of Hydrogeologists (IAH),

2004-present Associate Editor, *Groundwater*, Natl. Assoc. Groundwater Scientists and Engineers

Other service to the profession not listed above

Scientific Committee for International Association of Hydrogeologists (IAH) 2016 Congress,

Reviewer for major journals in the field of hydrogeology and water resources: *Water Resources Research*, *J. of Hydrology*, *Groundwater*, *J. Hydraulic Engineering*, *J. Hydrologic Engineering*, *J. Contaminant Hydrology*, *Hydrogeology J.*, *Hydrology and Earth System Sciences*, *J. Geophys. Research*, *Geophys. Research Letters*. (Number of reviews varied between 20 and 30 manuscripts per year)

Reviewer for NSF Programs: Geosciences: Hydrological Sciences, and Education and other agencies (up to 3 proposals per year)

University level service duties

2014-2016 UNL Faculty Academic Senate, member

1998-present Chair of Advisory Committee, Graduate specialization "Hydrogeology"

Department of Earth & Atmospheric Sciences

2015-present Information committee

2016-present Mentorship and Information Committees

2017-present EAS Colloquium coordinator

2015- Hydrogeology search committee, member

1997-present Site maintenance for class GEOL 870 "Field Tech.in Hydrogeology"
(Fremont, Nebraska)