SCIENTIFIC PUBLICATIONS of VALERIE G. ZARTARIAN, Ph.D.

Peer Reviewed Journal Publications:

1. Wood, E.F., Lettenmaier, D.P., Zartarian, V.G., 1992, "A Land Surface Hydrology Parametrization with Subgrid Variability for General Circulation Models," *Journal of Geophysical Research*, 97(D3): 2717-2728.
2. Zartarian, V.G., Streicker, J., Rivera, A., Cornejo, C., Molina, S., Valadez, O., Leckie, J.O., 1995, "A Pilot Study to Collect Micro-Activity Data of Two- to Four-Year Old Farm Labor Children in the Salinas Valley, California," *Journal of Exposure Analysis and Environmental Epidemiology*, 5(1): 21-34.
3. Zartarian, V.G., Ong, C.G., Ferguson, A.C., Leckie, J.O., 1997, "Quantifying Videotaped Activity Patterns: Video Translation Software and Training Methodologies," *Journal of Exposure Analysis and Environmental Epidemiology*, 7(4): 535-542.
4. Zartarian, V.G., Ferguson, A.C., Leckie, J.O., 1997, "Quantified Dermal Activity Data from a Four-Child Pilot Field Study," *Journal of Exposure Analysis and Environmental Epidemiology*, 7(4): 543-552.
5. Zartarian, V.G., Ott, W.R., Duan, N., 1997, "Feature Article: A Quantitative Definition of Exposure and Related Concepts," *Journal of Exposure Analysis and Environmental Epidemiology*, 7(4): 411-438.
6. Zartarian, V.G., Ferguson, A.C., Leckie, J.O., 1998, "Quantified Mouthing Activity Data from a Four-Child Pilot Field Study," *Journal of Exposure Analysis and Environmental Epidemiology*, 8(4): 543-553.
7. Zartarian, V.G. and Leckie, J.O., 1998, "Feature Article - Dermal Exposure: The Missing Link," *Environmental Science and Technology*, 3(3): 134A-137A.
8. Zartarian V.G., Özkaynak H., Burke J.M., Zufall M.J., Rigas M.L., Furtaw Jr. E.J., 2000, "A Modeling Framework For Estimating Children's Residential Exposure and Dose to Chlorpyrifos Via Dermal Residue Contact and Non-Dietary Ingestion," *Environmental Health Perspectives*, 108(6): 505-514.
9. Cohen Hubal E.A., Sheldon L.S., Burke J.M., McCurdy T.R., Berry M.R., Rigas M.L., Zartarian, V.G., Freeman, N.C.G., 2000, "Children's Exposure Assessment: A Review of Factors Influencing Children's Exposure, and the Data Available to Characterize and Assess that Exposure," *Environmental Health Perspectives*, 108(6):475-486.
10. Buck R., Özkaynak H., Xue J., Zartarian V.G., Hammerstrom K., 2001, "Modeled Estimates of Chlorpyrifos Exposure and Dose for Minnesota and Arizona NHEXAS Populations," *Journal of Exposure Analysis and Environmental Epidemiology*, 11(3): 253-268.
11. Needham L.L., Ozkaynak H., Whyatt R.M., Barr D.B., Wang R.Y. , Naeher L., Akland G., Bahadori T., Bradman A., Fortmann R., Liu S., Morandi M., O'Rourke M.K., Thomas K., Quackenboss J., Ryan P.B., Zartarian V., 2005, Exposure assessment in the National Children's Study: introduction. *Environ Health Perspect.* 113:1076-82.
12. Zartarian V., Bahadori T., McKone T., 2005, Feature Article: Adoption of an Official ISEA glossary, *Journal of Exposure Analysis and Environmental Epidemiology*, 15(1).
13. Hore P, Zartarian V, Xue J, Ozkaynak H, Wang SW, Yang YC, Chu PL, Sheldon L, Robson M, Needham L, Barr D, Freeman N, Georgopoulos P, Lioy PJ., 2006. Children's residential exposure to chlorpyrifos: Application of CPPAES field measurements of chlorpyrifos and TCPy within MENTOR/SHEDS-Pesticides model. Sci Total Environ. 366:525-537
14. Zartarian V., Xue J., Ozkaynak H., Dang W., Glen G., Smith L., Stallings C., 2006. A Probabilistic Arsenic Exposure Assessment for Children Who Contact Chromated Copper Arsenate (CCA)-Treated Playsets and Decks, Part 1: Model Methodology, Variability Results, and Model Evaluation. *Risk Analysis*, 26(2): 515-531.
15. Xue J., Zartarian V., Ozkaynak H., Dang W., Glen G., Smith L., Stallings C., 2006. A Probabilistic Arsenic Exposure Assessment for Children Who Contact CCA-Treated Playsets and Decks, Part 2: Sensitivity and Uncertainty Analyses. *Risk Analysis* , 26(2): 533-541.
16. Xue J., Zartarian V., Moya J., Freeman N., Beamer P., Black K., Tulve N., Shalat S., 2007. A meta-analysis of children's hand-to-mouth frequency data for estimating nondietary ingestion exposure. *Risk Analysis*. 27(2):411-20.
17. Firestone M., Moya J., Cohen-Hubal E., Zartarian V., Xue J., 2007, Identifying childhood age groups for exposure assessments and monitoring. *Risk Analysis* (3):701-14.
18. Georgopoulos P.G., Wang, S., Yang, Y., Xue J., Zartarian V., McCurdy T., Özkaynak H., 2008, Biologically based modeling of multimedia, multipathway, multiroute population exposures to arsenic, *Journal of Exposure Science and Environmental Epidemiology* 18, 462–476.
19. Xue J, Zartarian V., Wang S, Georgopoulos P., 2009, Probabilistic Modeled Estimates of Dietary Arsenic Exposure and Dose and Evaluation with 2003 NHANES Data. *Environ Health Perspect* 118:345-350.

20. Barzyk T.M., Conlon K.C., Hammond D.M., Chahine T., Zartarian V.G., Schultz B.D., 2009. Tools Available to Communities for Conducting Cumulative Exposure and Risk Assessments. *J Expo Sci Environ Epidemiol*. (2010) 20, 371–384;
21. Zartarian V.G. and Schultz B.D., 2010, The EPA's Human Exposure Research Program for Assessing Cumulative Risk in Communities, *J Expo Sci Environ Epidemiol*. 20(4): 351–358.
22. Xue J., Zartarian V., Tulve N., Moya J., Freeman N., AuYeung W., Beamer P., 2010, A meta-analysis of children's object-to-mouth frequency data for estimating non-dietary ingestion exposure. *Journal of Exposure Science and Environmental Epidemiology*. 20**,** 536–545
23. Ozkaynak H., Xue J., Zartarian V., Glen G., Smith L. Modeling Estimates of Soil and Dust Ingestion Rates for Children, 2011, *Risk Analysis*. (31) 4: 592–608.
24. Chahine T., Schultz B., Zartarian V., Subramanian S., Spengler J., Hammitt J., Levy J.. 2011. Modeling geographic and demographic variability in residential concentrations of environmental tobacco smoke using national datasets. *Journal of Exposure Science & Environmental Epidemiology.* (16 March 2011) | doi:10.1038/jes.2011.12
25. Chahine T., Schultz B., Zartarian V., Xue J., Subramanian S., Levy J. 2011. Modeling geographic and demographic variability in residential radon exposure and lung cancer risk in the United States. *Int. J. Environ. Res. Public Health* 8(9), 3688-3711.
26. Zartarian V.G., Schultz B.D., Barzyk T., Smuts M., Hammond D., Geller A.M., 2011, The EPA's Community-Focused Exposure and Risk Screening Tool (C-FERST) and Its Potential Use for Environmental Justice Efforts. *American Journal of Public Health.* https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2010.300087
27. Hammond D., Conlon K., Barzyk T., Chahine T., Zartarian V., Schultz B. 2011. Assessment and Application of National Environmental Databases and Mapping Tools at the Local Level to Two Community Case Studies. *Risk Analysis*, 31 (3): 475-487.
28. Xue, J., Zartarian V.G., Liu S.V., Geller A., 2012, Methyl Mercury Exposure from Fish Consumption in Vulnerable Racial/Ethnic Populations: Probabilistic SHEDS-Dietary Model Analyses Using 1999-2006 NHANES and 1990-2002 TDS Data. *Science of the Total Environment*. Elsevier BV, AMSTERDAM, Netherlands, 414(1):373-379.
29. Zartarian, V. G., J. Xue, G. Glen, L. Smith, N. S. Tulve, R. Tornero-Velez, 2012, Quantifying Children's Aggregate (Dietary and Residential) Exposure and Dose to Permethrin: Application and Evaluation of EPA's Probabilistic SHEDS-Multimedia Model. *Journal of Exposure Science and Environmental Epidemiology*. Nature Publishing Group, London, UK, 22(3):267-273.
30. Tornero-Velez, R., J. Davis, E. Scollon, J. Starr, M. Goldsmith, W. Setzer, J. Xue, V. Zartarian, M. DeVito, and M. Hughes, 2012, A pharmacokinetic model of cis- and trans-permethrin disposition in rats and humans with aggregate exposure application. *Toxicological Sciences*. Society of Toxicology, 130(1):33-47.
31. Young B.M., N.S. Tulve, P.P. Egeghy, J. Driver, V.G. Zartarian, J. Johnston, C. Delmaar, J. Evans, L.A. Smith, G. Glen, C. Lunchick, J.H. Ross, J. Xue, D. Barnekow, 2012, Exposure Route Comparison of Four Probabilistic Aggregate Residential Exposure Models (CARES®, Calendex™, ConsExpo, SHEDS), J Expo Sci Environ Epidemiol..22: 522-532.
32. Xue J., Liu S.V., Zartarian V.G., Geller A.M., Schultz B.D., 2014, Analysis of NHANES measured blood PCBs in the general US population and application of SHEDS model to identify key exposure factors, *Journal of Exposure Science and Environmental Epidemiology* 24, 615–621; doi:10.1038/jes.2013.91; published online 15 January 2014.
33. Xue J., Zartarian V., Tornero-Velez R., Tulve N., 2014, EPA's SHEDS-Multimedia Model: Children's Cumulative Pyrethroid Exposure Estimates and Evaluation against NHANES Biomarker Data, *Environment International*. Volume 73, December 2014, 304–311.
34. Xue J., Zartarian V., Mintz B., Weber M., Bailey K., Geller A. "Modeling Tribal Exposures to Methyl Mercury from Fish Consumption," *Sci Total Environ* 2015 Nov 4;533:102-9. Epub 2015 Jul 4.
35. Burke T., Cascio, W., Costa, D., Deener, K., Fulk F., Jackson L., Munns W., Fontaine T., Orme-Zavaleta, Munns W., Zartarian V., 2017, "Rethinking Environmental Protection: Meeting the Challenges of a Changing World." *Environ Health Perspect* 2017 03;125(3):A43-A49
36. Zartarian V., Xue J., Tornero-Velez R., Brown J., 2017. "Children's Lead Exposure: A Multimedia Modeling Analysis to Guide Public Health Decision-Making." *Environ Health Perspect* 09 12;125(9):097009. Epub 2017 Sep 12.
37. Stanek LW, Xue J, Lay CR, Helm EC, Schock M, Lytle DA, Speth TF, Zartarian VG. Modeled Impacts of Drinking Water Pb Reduction Scenarios on Children's Exposures and Blood Lead Levels. Environ Sci Technol. 2020 Aug

4;54(15):9474-9482. doi: 10.1021/acs.est.0c00479. Epub 2020 Jul 22. PMID: 32638591; PMCID: PMC10251739.
38. Cheng B., Alapaty K., Zartarian V., Poulakos A., Strynar M., Buckley T. Per- and polyfluoroalkyl substances exposure science: current knowledge, information needs, future directions. *Int J Environ Sci Technol*. 2021 Nov 3;0:1-16. doi: 10.1007/s13762-021-03710-7.
39. Xue J, Zartarian V, Tornero-Velez R, Stanek LW, Poulakos A, Walts A, Triantafillou K, Suero M, Grokhowsky N. A Generalizable Evaluated Approach, Applying Advanced Geospatial Statistical Methods, to Identify High Lead Exposure Locations at Census Tract Scale: Michigan Case Study. Environ Health Perspect. 2022 Jul;130(7):77004. doi: 10.1289/EHP9705. Epub 2022 Jul 27. PMID: 35894594; PMCID: PMC9327739.
40. Zartarian V, Poulakos A, Helms Garrison V, Spalt N, Tornero-Velez R, Xue J, Egan K, Courtney J, 2022. Lead Data Mapping to Prioritize US Locations for Whole-of-Government Exposure Prevention Efforts: State of the Science, Federal Collaborations, and Remaining Challenges. *American Journal of Public Health* 112, S658_S669, https://doi.org/10.2105/AJPH.2022.307051
41. Zartarian, V.G., Xue, J., Gibb-Synder, E., Frank, J.J., Tornero-Velez, R., Stanek, L.W. 2023. Children's lead exposure in the U.S.: Application of a national-scale, probabilistic aggregate model with a focus on residential soil and dust lead (Pb) scenarios. *Science of the Total Environment*. https://doi.org/10.1016/j.scitotenv.2023.167132
42. Stanek, L.W., Xue, J., Zartarian, V.G. Poulakos A.G., Tornero-Velez R., Snyder E.G., Walts A., Triantafillou K. Identification of high lead exposure locations in Ohio at the census tract scale using a generalizable geospatial hotspot approach. J Expo Sci Environ Epidemiol 34, 718–726 (2024). https://doi.org/10.1038/s41370-024-00666-x
43. Zartarian V.G., Xue J., Poulakos A.G., Tornero-Velez R., Stanek L.W., Snyder E., Helms Garrison V., Egan K, Courtney J.K. A U.S. Lead Exposure Hotspots Analysis. *Environmental Science & Technology.* 2024;58(7):3311-3321.
44. Tornero-Velez R., Spalt, N. Buckley, T., Deflorio-Barker, S., Goldberg, M., Zartarian, V., Stanek, L., "The Association between Children's Elevated Blood-Pb Levels and Lead Service Lines: A Census Tract Level Analysis for two Midwest Cities", *Environ Sci. Technol.* Nov 4;59(43):23069-23080. doi: 10.1021/acs.est.5c06429. Epub 2025 Oct 21.
45. Dietrich, M., Tornero-Velez, R., Zartarian, V., Stanek, L., "Modeling elevated children's blood lead levels across five states: a statistical approach to improve predictions and understand key drivers", *Environmental Research,* 2026. *DOI:10.1021/acsenvironau.5c00104*.
46. Zartarian V.G., Walts A., Gross-Davis C.A., Poulakos A., Triantafillou K., Rea Simoneau K., Spalt N., Durand C., Sellars S., Kromer M., Burnett A., Taylor R., Neely C., Speth T., Kulikowski N., Helms Garrison V., Han P., Tornero-Velez R., Stanek L.W., "Protecting U.S. Children from Lead Exposures: Applications of a Data Mapping Blueprint for Focusing High-Impact Interventions" *American Journal of Public Health,* Accepted for Publication.

Technical Reports, Book Chapters, Websites, Dissertations:

1. EPA Website. Data Mapping to Identify High Lead Exposure Risk Locations in the U.S.; https://www.epa.gov/lead/mapping
2. EPA Website. Stochastic Human Exposure and Dose Simulation (SHEDS) models: https://www.epa.gov/chemical-research/stochastic-human-exposure-and-dose-simulation-sheds
3. EPA Website. Advancing Lead Exposure and Biokinetic Models. https://www.epa.gov/land-research/advancing-lead-exposure-and-biokinetic-models
4. V. Zartarian, J. Xue, E. Snyder, J. Frank, R. Tornero-Velez, L. Stanek. Application of EPA/ORD's National-Scale, Probabilistic Multimedia Aggregate Exposure-Blood Lead Level Model (SHEDS-IEUBK) with a focus on Soil and Dust Lead (Pb) Scenarios, EPA/600/H-22/200. April 2023.
5. US Environmental Protection Agency. EPA strategy to reduce lead exposures and disparities in US communities. 2021. https://www.epa.gov/lead/final-strategy-reduce-lead-exposures-and-disparities-us-communities. Coauthor.
6. President's Task Force on Environmental Health Risks and Safety Risks to Children. Federal Action Plan to Reduce Childhood Lead Exposures and Associated Health Impacts. 2018. https://www.epa.gov/lead/federal-action-plan-reduce-childhood-lead-exposure. Coauthor of research section.
7. U.S. EPA Guidelines for Human Exposure Assessment. Risk Assessment Forum. EPA/100/B-19/001 October 2019 www.epa.gov/risk Coauthored modeling chapter.

8. U.S. EPA. Adkins, L., Frantz, G., Fulk, F., Rhodus, J.; Thompson, B.; Vesper, S.; Williams, R.; Zartarian, V.; Zimmerman, E. Health Impact Assessment (HIA) of Building Renovations at Gerena Community School, Springfield, Massachusetts. EPA/600/R-15/236 August 2015 www2.epa.gov/healthresearch/health-impact-assessments. https://www.epa.gov/sites/default/files/2015-10/documents/final_gerena_school_hia_report.updated.508compliant.pdf
9. Zartarian V., Geller A., Enhancements of C-FERST and T-FERST to support cumulative assessments about community and tribal health and ecosystem functions for use in environmental decision-making. September 2012, EPA/600/X/12/678.
10. Barzyk, T. M., B. White, L. Perlmutt, M. Millard, M. Martin, F. Harris, P. Nguyen, K. Memmos, F. Jenkins, D. Hammond, A. Walts, A. Geller, V. G. Zartarian, B. D. Schultz. Application of Tools and Databases to Community-Level Assessments of Exposure, Health and the Environment with Case Study Examples. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-11/120 (NTIS PB2013-102730), 2012.
11. Tan, Y., C. C. Dary, D. Chang, E. M. Ulrich, J. M. Van Emon, J. Xue, J. D. Pleil, J. F. Kenneke, J. Sobus, L. S. Sheldon, M. K. Morgan, M. Goldsmith, R. Tornero-Velez, R. Highsmith, R. C. Fortmann, T. W. Collette, V. G. Zartarian. Biomonitoring - An Exposure Science Tool for Exposure and Risk Assessment. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-12/039 (NTIS PB2012-112321), 2012.
12. Williams, P.R.D., Hubbell, B.J., Weber, E., Fehrenbacher, C., Hrdy, D., V. Zartarian. *An overview of exposure assessment models used by the U.S. Environmental Protection Agency*. (2011). In: Modelling of Pollutants in Complex Environmental Systems, Vol. 2. Grady Hanrahan (editor), Chapter 3. ILM Publications, UK.
13. Vallero, D. A., Isukapalli S., Zartarian V.G., McCurdy T.R., McKone T., Georgopoulos P., Dary C.C.. (2010) *Modeling and Predicting Pesticide Exposures*. Chapter 44, Robert Krieger (ed.), Hayes Handbook of Pesticide Toxicology. Elsevier Science, New York, NY, 1:995-1020.
14. Zartarian V.G., Ott W., Duan N., (2006). Chapter 2: Basic Concepts and Definitions of Exposure and Dose, in: *Exposure Analysis*, eds. Ott, Steineman, Wallace, CRC Press, ISBN: 1-56670-663-7.
15. Zartarian, V. G., Glen G., Smith L., and Xue J. (2008). SHEDS-Multimedia Model Version 3 Technical Manual. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/118.
16. Xue J., Zartarian V.G., and Nako S. The Stochastic Human Exposure and Dose Simulation (SHEDS)-Dietary Model Technical Manual. Prepared for the July 20-22, 2010 EPA FIFRA SAP, Crystal City, VA, 2010b.
17. Isaacs K., Stallings C., Zartarian V.G., Glen G. Stochastic Human Exposure and Dose Simulation (SHEDS) Model for Multimedia, Multipathway Chemicals: Version 4 Residential Module. User Guide. Prepared for the July 20-22, 2010 EPA FIFRA SAP, Crystal City, VA, 2010a.
18. Isaacs K., Xue J., Stallings C., Zartarian V.G. Stochastic Human Exposure and Dose
19. Simulation (SHEDS) Model for Multimedia, Multipathway Chemicals: Version 1 SHEDS-Dietary Module User Guide. Prepared for the July 20-22, 2010 EPA FIFRA SAP, Crystal City, VA, 2010b.
20. Glen G., Zartarian V.G., Smith L., Xue J. The Stochastic Human Exposure and Dose Simulation Model for Multimedia, Multipathway Chemicals (SHEDS-Multimedia): Residential Module. Draft Technical Manual, June 16, 2010. U.S. Environmental Protection Agency, 2010. http://www.epa.gov/heasd/products/sheds_multimedia/files/SHEDS_Residentialv4_Techmanual_06-16-2010.Final.pdf
21. Stallings C., Zartarian V. G., Glen G.. (2008). SHEDS-Multimedia Model Version 3 User Guide. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-08/118.
22. Zartarian V.G., Xue J., Ozkaynak H.A., Dang W., Glen G., Smith L., Stallings C., 2005. "A Probabilistic Exposure Assessment for Children Who Contact CCA-treated Playsets and Decks Using the Stochastic Human Exposure and Dose Simulation Model for the Wood Preservative Scenario (SHEDS-WOOD)" Final Report. U.S. EPA. Washington, DC, EPA/600/X-05/009.
23. U.S. EPA, 2005, Guidance on Selecting Age Groups for Monitoring and Assessing Childhood Exposures to Environmental Contaminants, Risk Assessment Forum, EPA/630/P-03/003F, NCEA, Washington, DC., coauthors M. Firestone, E. Hubal, J. Moya, V. Zartarian.
24. Zartarian,V.G., Xue J., Özkaynak H., Dang W., Glen G., Smith L., Stallings C., "Probabilistic Exposure Assessment for Children Who Contact CCA-Treated Playsets and Decks Using the Stochastic Human Exposure and Dose Simulation Model for the Wood Preservative Exposure Scenario (SHEDS-Wood)," Draft Preliminary Report, prepared for EPA Office of Pesticide Programs FIFRA (Federal Insecticide, Fungicide, Rodenticide Act) Science Advisory Panel (SAP) meeting, December 3-5, 2003.
25. Zartarian V.G., Xue J., Ozkaynak H., Glen G., Stallings C., Smith L., Dang W., Cook N., Aviado D., Mostaghimi S., Chen J., 2002, "Technical Manual: Using SHEDS-Wood (Stochastic Human Exposure and Dose Simulation Model

for a Wood Preservative Scenario) for the Assessment of Children's Exposure and Dose from Treated Wood Preservatives on Playsets and Residential Decks," prepared for EPA Office of Pesticide Programs FIFRA (Federal Insecticide, Fungicide, Rodenticide Act) Science Advisory Panel meeting, August 30, 2002.

26. Stallings C., Glen G., Smith L., Zartarian V.G., Xue J., Ozkaynak H., 2002, "SHEDS-Wood (Stochastic Human Exposure and Dose Simulation Model for a Wood Preservative Scenario) User's Manual, prepared for EPA, Office of Pesticide Programs FIFRA (Federal Insecticide, Fungicide, Rodenticide Act) Science Advisory Panel meeting, August 30, 2002.
27. WHO. (2002). IPCS *Risk Assessment Terminology. Harmonization Project Document No. 1*, ISBN 92 4 156267 6. Geneva:World Health Organization.
28. Zartarian, V.G., 1996, "A Physical-Stochastic Model for Understanding Dermal Exposure to Chemicals," Ph.D. Dissertation, Stanford University, Stanford, CA.
29. Zartarian, V.G., 1989, "A Comparison of Land Surface Parameterizations for General Circulation Models," Senior Thesis, Princeton University, Princeton, NJ.