

Aaron I. Packman

Publications

Invited Commentaries and Articles in Popular Press:

1. Packman, A.I., 2013, Building bacterial bridges, *Nature Geoscience*, 6, 682-683, DOI:10.1038/ngeo1938.
2. Wuebbles, D., and Packman, A., June 6 2012, Extraordinary extremes: Climate scientists explain our crazy weather, *Chicago Tribune*.

Book chapters:

1. Medina, M.A., Doneker, R.L., Grosso, N., Johns, D.M., Lung, W., Mohsen, M.F.N., Packman, A.I., and Roberts, P.J. 2004, Surface water-ground water interactions and modeling applications. In *Contaminated Ground Water and Sediment: Modeling for Management and Remediation*, C.C. Chien, M.A. Medina, Jr., G.F.Pinder, D.D. Reible, B.E. Sleep; and C. Zheng (eds.), CRC Press, 1-62.
2. Packman, A.I., and Bencala, K.E. 2000, Modeling methods in the study of surface-subsurface hydrologic interactions, in *Streams and Ground Waters*, J.B. Jones and P.J. Mulholland (eds.), Academic Press, 45-80.

Papers in peer-reviewed journals:

1. Stonedahl, S.H., Roche, K.R., Stonedahl, F., and Packman, A.I., Visualizing hyporheic flow through bedforms using dye experiments and simulation, *Journal of Visualized Experiments*, in review.
2. Culotti, A., and Packman, A.I., *Pseudomonas aeruginosa* facilitates *Campylobacter jejuni* growth in biofilms under oxic flow conditions, *FEMS Microbiology Ecology*, in review.
3. Xie, M., Jarrett, B.A., Cadoux, C., Fetters, K.J., Burton Jr., G.A., Gaillard, J-F, Packman, A.I., Coupled effects of hydrodynamics and biogeochemistry on the mobility and bioavailability of Zn in contaminated sediments, *Environmental Science and Technology*, in review.
4. Drummond, J.D., Davies-Colley, R.J.; Stott, R., Sukias, J.P., Nagels, J.W., Sharp, A., and Packman, A.I., Microbial transport, retention, and inactivation in streams – a combined experimental and stochastic modeling approach, *Environmental Science and Technology*, in review.
5. Li, J., Song, J.L., Culotti A., Zhang, W., Chopp, D.L. Packman, A.I., 2015, Methods for characterizing the co-development of biofilm and habitat heterogeneity, *Journal of Visualized Experiments*, in press.
6. Aubeneau, A.F., Drummond, J.D., Schumer, R., Bolster, D., Tank, J.L., Packman, A.I., 2015, Effects of benthic and hyporheic reactive transport on breakthrough curves, *Freshwater Science*, 34(1), DOI: 10.1086/680037.
7. Larned, S.T., Gooseff, M.N, Packman, A.I., Rugel, K., and Wondzell, S.M., 2015, Surface water-groundwater interactions: Current research directions, *Freshwater Science*, 34(1), 10.1086/679491.
8. Fan, Y., Richard, S., Bristol, S., Peters, S., Ingebritsen, S., Moosdorf, N., Packman, A., Gleeson, T., Zaslavsky, I., Peckham, S., Murdoch, L. Fienen, M., Cardiff, M., Tarboton, D., Jones, N., Hooper, R., Arrigo, J., Gochis, D., Olson, J., Wolock, D., 2015, DigitalCrust: A 4D data system of material properties for transforming research on crustal fluid flow, *Geofluids*, 15(1-2), 372-379, DOI:10.1111/gfl.12114.
9. Drummond, J. D., Davies-Colley, R. J., Stott, R., Sukias, J. P., Nagels, J. W., Sharp, A., Packman, A.I., 2014, Retention and remobilization dynamics of fine particles and microorganisms in pastoral streams, *Water Research*, 66, 459-472, DOI:10.1016/j.watres.2014.08.025.
10. Culotti, A.C., Packman, A.I., 2014, *Pseudomonas aeruginosa* promotes *Escherichia coli* biofilm formation in nutrient-limited medium, *PLoS One*, 9(9):e107186. DOI:10.1371/journal.pone.0107186.
11. Boano, F., Harvey, J.W., Marion, A., Packman, A.I., Revelli, R., Ridolfi, L., and Wörman, A, 2014, Hyporheic flow and transport processes: Mechanisms, models, and biogeochemical implications, *Reviews of Geophysics*, 52, DOI:10.1002/2012RG000417.
12. Drummond, J.D., Aubeneau, A.F., Packman, A.I., 2014, Stochastic modeling of fine particle dynamics in rivers, *Water Resources Research*, 50(5), 4341–4356, DOI:10.1002/2013WR014665.

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13. Kelly, J.J., Minalt, N., Culotti, A., Pryor, M. and Packman, A., 2014, Temporal variations in the abundance and composition of biofilm communities colonizing drinking water distribution pipes, *PLoS One*, 9(5): e98542. DOI:10.1371/journal.pone.0098542.
14. Song, J.L., Au, K.H., Huynh, K.T., Zhang, W., Packman, A.I., 2013, Biofilm responses to smooth flow fields and chemical gradients in novel microfluidic flow cells, *Biotechnology and Bioengineering*, 111(3), 597-607.
15. Stonedahl, S.H., Harvey, J.W., and Packman, A.I., 2013, Interactions between hyporheic flow produced by stream meanders, bars, and dunes, *Water Resources Research*, 9, 5450–5461, DOI:10.1002/wrcr.20400.
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20. Bradford, S.A., Morales, V.L., Zhang, W., Harvey, R.W., Packman, A.I., Mohanram, A., and Welty, C., 2013, Transport and fate of microbial pathogens in agricultural settings, *Critical Reviews in Environmental Science and Technology*, 43, 775–893.
21. Harvey, J.W., Drummond, J.D., Martin, R.L., McPhillips, L.E., Packman, A.I., Jerolmack, D.J., Stonedahl, S.H., Aubeneau, A.F., Sawyer, A.H., Larsen, L.G., and Tobias, C.R., 2012, Hydrogeomorphology of the hyporheic zone: Stream solute and fine particle interactions with mobile bedforms and floods, *Journal of Geophysical Research-Biogeosciences*, 117, G00N11, DOI:10.1029/2012JG002043.
22. Park, Y., Atwill, E.R., Lingling, H., Packman, A., and Harter, T., 2012, Deposition of *Cryptosporidium parvum* oocysts in porous media: A synthesis of attachment efficiencies measured under varying environmental conditions, *Environmental Science and Technology*, 46(17), 9491-9500, DOI 10.1021/es300564w
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26. Cullis, J., Gillis, C., Bothwell, M., Kilroy, C., Packman, A.I., and Hassan, M., 2012, A conceptual model for the growth, persistence, and blooming behavior of the benthic mat-forming diatom *Didymosphenia geminata* in oligotrophic streams, *Journal of Geophysical Research-Biogeosciences*, 117, art. no. G00N03, DOI: 10.1029/2011JG001891.

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31. Larned, S.T., Packman, A.I., Plew, D.R., and Vopel, K., 2011, Interactions between the mat-forming alga *Didymosphenia geminata* and its hydrodynamic environment, *Limnology and Oceanography: Fluids and Environments*, 1, 4–22, DOI: 10.1215/21573698-1152081 [selected as lead article for new journal.]
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Conference Proceedings and Other Publications:

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