

# 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.
16. Shogan, B., Smith, D., Packman, A., Kelley, S., Landon, E., Bhargar, S., Vora, G., Jones, R., Keegan, K., Stephens, B., Ramos, T., Kirkup, B., Levin, H., Rosenthal, M., Foxman, B., Chang, E., Siegel, J., Cobey, S., An, G., Alverdy, J., Olsiewski, P., Martin, M., Marrs, R., Hernandez, M., Christley, S., Morowitz, M., Weber, S. The Hospital Microbiome Project: Meeting Report for the 2nd Hospital Microbiome Project, Chicago, USA, January 15th, 2013. Standards in Genomic Sciences, North America, 8, Jul. 2013. Available at: <<http://www.standardsingenomics.org/index.php/sigen/article/view/sigs.4187859/946>>
17. Tseng, B.S., Zhang, W., Quach, T.P., Harrison, J.J., Song, J.L., Chopp, D.L., Packman, A.I., Parsek, M.R., 2013, The extracellular matrix protects *Pseudomonas aeruginosa* biofilms by limiting the penetration of tobramycin, *Environmental Microbiology*, 15(10), 2865-2878, DOI:10.1111/1462-2920.12155.
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19. Zhang, W., Sileika, T., Packman, A.I., 2013, Effects of fluid flow conditions on interactions between species in biofilms, *FEMS Microbiology Ecology*, 84(2), 344-354, DOI: 10.1111/1574-6941.12066.
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
23. Zhang, Y., Meerschaert, M.M., and Packman, A.I., 2012, Linking fluvial bed sediment transport across scales, *Geophysical Research Letters*, 39, L20404, DOI:10.1029/2012GL053476.
24. Stonedahl, S.H., Harvey, J.W., Detty, J., Aubeneau, A., and Packman, A.I., 2012, Physical controls and predictability of stream hyporheic flow evaluated with a multi-scale model, *Water Resources Research*, 48, W10513, DOI:10.1029/2011WR011582.
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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:

1. Urban Water Resources Research Council Pathogens in Wet Weather Flows Technical Committee, 2014, *Pathogens in Urban Stormwater Systems*, ASCE Technical Committee Report, 268 pp.
2. Packman, A.I., Larned, S., Plew, D., and Vopel, K., 2008, Modification of river hydraulics by the invasive diatom *Didymosphenia geminata*, *Proceedings of the ASCE/EWRI World Water and Environmental Resources Congress, Honolulu, May, 2008*.
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The templates for chapters in edited books are shown below, for print books, electronic books, and books with DOIs (either print or electronic), respectively: Author, A. A. (Year). Title of chapter. In B. B. Editor (Ed.), Title of book (pp. xxx–xxx). Location: Publisher. Author, A. A. (Year). Title of chapter. In B. B. Editor (Ed.), Title of book [E-reader version, if applicable] (pp. xxx–xxx). Retrieved from <http://xxxxx>. Author, A. A. (Year). Title of chapter. In B. B. Editor (Ed.), Title of book [E-reader version, if applicable] (pp. xxx–xxx). doi:xxxxx. A chapter is one of the main divisions of a piece of writing of relative length, such as a book of prose, poetry, or law. A chapter book may have multiple chapters and these can be referred to by the things that may be the main topic of that specific chapter. In each case, chapters can be numbered or titled or both. An example of a chapter that has become well known is "Down the Rabbit-Hole", which is the first chapter from Alice's Adventures in Wonderland. "How many chapters should go in my book?" "Should I have parts and chapters?" I was kinda stumped as to why there were so many questions about chapters, and then an author made it all clear: "I'm just confused and looking for some rules to follow." Ahh yes. When anxiety strikes, people just starve for certainty. Here's the problem: there are no "rules" for book chapters.