

PUBLICATIONS

Refereed Articles (* ISI Web of Science)

1. **Friedel, M.J.**, Esfahani, A., Iwashita, F., 2015, Toward real-time 3D mapping of surficial aquifers using a hybrid modeling approach, *Hydrogeology Journal*, 24(1), 211-229. (DOI) 10.1007/s10040-015-1318-2 [IF: 2.0] *
2. Esfahani, A.A., **Friedel, M.J.**, 2014, Forecasting conditional climate-change using a hybrid approach, *Environmental Modelling & Software*, 52, 83-97. [IF: 4.4] *
3. **Friedel, M.J.**, 2014, Data-driven modeling of background and mine-related acidity and metals in river basins, *Environmental Pollution*, 184, 530-539. [IF: 4.1] *
4. Moreira, L.P., **Friedel, M.J.**, França G.S., 2013, Uncertainty analysis in the joint inversion of receiver function and surface-wave dispersion, Paraná Basin, southeast Brazil. *Bulletin of Seismological Society of America*, 103 (3), 1981-1992. [IF: 1.9] *
5. **Friedel, M.J.**, Iwashita, F., 2013, Hybrid modeling of spatial continuity for applications to environmental inverse problems, *Environmental Modelling & Software*, 43, 60-79 [IF: 4.4] *
6. **Friedel, M.J.**, 2012, Hybrid modeling to predict the economic feasibility of mining undiscovered porphyry copper deposits. *Applied Soft Computing* 13, 1016-1032. [IF: 2.8] *
7. **Friedel, M.J.**, Asch, T., Oden, C. 2012, Hybrid analysis of multiaxis electromagnetic data for discrimination of munitions and explosives of concern. *Geophysical Journal International*, 190(2), 960–980. [IF: 2.9] *
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13. Iwashita, F., **Friedel, M.J.**, Souza-Filho, C.R., Fraser, S.J., 2011. Hillslope chemical weathering across Paraná, Brazil: A data mining-GIS hybrid approach. *Geomorphology* 132(3-4), 167-175. [IF: 2.8] *
14. **Friedel, M.J.**, 2008, Regularized Joint Inverse Estimation of extreme rainfall events in ungaged coastal basins of El Salvador, *Natural Hazards Journal*, 46(1), 15-34. [IF: 1.6] *
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Invited Book Chapters

35. **Friedel, M.J.**, 2011, Climate change effects on ecosystem services in the United States – issues of national and global security. In: Baba, A., Tayfur, G., Howard, K.W.F., Friedel, M.J., Chambel, A., 2011, Climate Change and its Effect on Water Resources – Issues of National and Global Security, NATO Science for Peace and Security Science Series C. Environmental Security, vol. 3, Springer, Dordrecht, The Netherlands, 318 p.
36. **Friedel, M.J.**, 2006. Reliability in estimating urban groundwater recharge through the vadose zone: managing sustainable development in arid and semiarid regions. In: Tellam, J.H., Rivett, M.O., and Israfilov, R.G. (eds), Urban groundwater management and sustainability. NATO Science Series, IV. Earth and Environmental Sciences, Springer, Dordrecht, The Netherlands, vol. 74, 169-182.
37. **Friedel, M.J.**, 2006, Urbanization effects on ecological integrity in the Upper Illinois River Basin, USA. In: Baba, A., Howard, K.W.F., and Gunduz, O. (eds), 2006, Groundwater and Ecosystems, NATO Science Series, IV. Earth and Environmental Sciences – vol. 70, Springer, Dordrecht, The Netherlands, 71-92
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41. **Friedel, M.J.**, Finn, C.A., and Horton, J.D., 2015, Hydrogeologic map of the Islamic Republic of Mauritania, Synthesis of hydrologic data, and chemical hydrologic map of the Islamic Republic of

Mauritania: Phase V, deliverables 56, 57, and Added Value), chap. C of Taylor, C.D., ed., Second projet de renforcement institutionnel du secteur minier de la République Islamique de Mauritanie (PRISM-II): U.S. Geological Survey Open-File Report 2013–1280-C, 23 p., 2 pl., scale 1:1,000,000, <http://dx.doi.org/10.3133/ofr20131280>. [In English and French.] (100% of investigation design, 0% of field work, 0% of laboratory work, 775% of modeling, 75% of analysis and manuscript preparation)

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47. **Friedel, M.J.**, 2008, Environmental stratification and water-quality monitoring design, Mauritania, Africa, USGS Open File Report, 2008 -1137, 13 pp.
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Submitted for Publication

103. **Friedel, M.J.**, *in review*, Estimation and scaling of hydrostratigraphic units: application of machine learning and multivariate statistical techniques to hydrogeophysical data, Hydrogeology Journal.
104. **Friedel, M.J.**, Vicente, E., Iwashita, F., Koga-Vicente, A., Franceschini, M.H.D, *in review*, An ensemble training scheme for unsupervised landscape classification of Hyperion satellite imagery with independent hyperspectral libraries, Applied Soft Computing.
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106. **Friedel, M.J.**, *in review*, Hydrogeophysical Modeling of Geothermal Field Data. GNS Science Report, 10 pp.
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Reports Unpublished

108. Moreira, L.P., **Friedel, M.J.**, França G.S., 2013, Joint inversion of receiver function, surface wave dispersion, and magnetotelluric data for 2D crustal modeling.
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