

## Curriculum Vitae

Name: Peter Reichert  
 Address: Eawag: Swiss Federal Institute  
 of Aquatic Science and Technology  
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Date of Birth: June 12, 1957 in Basel, Switzerland; Swiss Citizen

### Education/Titles

1981: M.Sc. in theoretical physics, University of Basel, Switzerland.  
 1985: Ph.D. in theoretical solid state physics, University of Basel, Switzerland.  
 Title of thesis: “Amorphy as Spatial Chaos “ (in German).  
 1995: Habilitation thesis at the Environmental Sciences Department of the Swiss  
 Federal Institute of Technology (ETH), Zürich, Switzerland. Title: “Concepts  
 Underlying a Computer Program for the Identification and Simulation of  
 Aquatic Systems”.  
 2002: Adjunct Professor at the Department of Environmental Sciences of the Swiss  
 Federal Institute of Technology (ETH), Zürich, Switzerland.

### Professional Experience

1981 - 1985: Research and teaching assistant in theoretical physics at the University of Basel,  
 Switzerland, and Ph.D. dissertation on the application of the theory of chaotic  
 systems to improve the understanding of amorphous solids.  
 Since 1985: Research scientist at the Swiss Federal Institute of Aquatic Science and  
 Technology (Eawag), Dübendorf, Switzerland:  
 1985 – 1993: Research associate at the department of computer and systems  
 sciences.  
 1994 – 1999: Member of the management committee of the department of  
 Computer and Systems Sciences (1997-1999 department head).  
 1999/2000: Sabbatical at the Department of Engineering and Public Policy,  
 Carnegie Mellon University, Pittsburgh, PA, USA.  
 Since 2000: Head of the department of Systems Analysis, Integrated Assess-  
 ment and Modelling (SIAM).  
 2005 – 2015: Member of the directorate of Eawag.  
 2006/2007: Sabbatical at the Statistical and Applied Mathematical Sciences  
 Institute (SAMSI), Research Triangle Park, NC, USA.  
 Since 1991: Teaching at the department of Environmental Sciences of the Swiss Federal  
 Institute of Technology (ETH), Zürich, Switzerland (1991-1995 as lecturer, 1995-  
 2002 as “Privatdozent”, since 2002 as adjunct professor). Courses:  
 1991 - 2004: Mathematical Modelling of Aquatic Systems

- (formulation of continuous conservation laws; properties of solutions; analytical solutions; numerical solution techniques; application to advective-dispersive substance transport, open-channel flow, and transport of nonlinearly sorbing substances in porous media).
- 1995 - 2007: Environmental Systems Analysis  
(Role and types of models; sensitivity analysis; parameter estimation (frequentist and Bayesian techniques); identifiability analysis; model structure selection and model weighting; model tests; uncertainty of model predictions).
- 1997: Introduction to Systems Analysis (for students from various departments).
- 2002/2003: Contribution of environmental aspects to the course “Risk and Safety” of Prof. W. Kröger.  
(legal aspects; estimation of transport processes in rivers, lakes, soil and groundwater; effects of substance dispersal on ecosystems and their valuation).
- 2002 - 2005: Introduction to Decision Analysis (with Mark Borsuk)  
(structuring decisions; decisions under certainty; modelling uncertainty; decisions under uncertainty; practical considerations; examples).
- Since 2006: Modelling Aquatic Ecosystems (since 2015 with Nele Schuwirth)  
(basic concepts; formulation of ecosystem processes; didactic models of aquatic ecosystems; research models of aquatic ecosystems).
- Since 2009: Eawag Summer School on Environmental Systems Analysis  
(summer school for PhD students and researchers interested in model-based statistical data analysis with an emphasis on Bayesian techniques).

## Awards

- 2007 Best paper award in “Integrated Systems” by the Environmental Modelling & Software Society for the paper: P. Reichert, M. Borsuk, M. Hostmann, S. Schweizer, C. Spörri, K. Tockner, B. Truffer. Concepts of decision support for river rehabilitation. *Environmental Modelling & Software*, 22(2), 188-201, 2007.
- 2012 Biennial Medal by the International Environmental Modelling & Software society for “outstanding, insightful and rigorous contributions to environmental modelling and software” [...].
- 2012 Our paper “Reichert, P. and Schuwirth, N. Linking statistical description of bias to multi-objective model calibration, *Water Resources Research*, 48, W09543, doi:10.1029/2011WR011391, 2012.” was selected by AGU as a “research spotlight” to be announced on the back page of *Eos*, AGU's weekly newspaper.
- 2013 Integrated Environmental Assessment and Management Best Paper Award 2012 for the paper “Borsuk, M.E., Schweizer, S. and Reichert, P. A probability network model for integrative river rehabilitation planning and management. *Integrated Environmental Assessment and Management* 8(3), 462-472, 2012”.

## Research Fields

### *Systems Analysis Methodology*

Development of techniques for statistical inference of model states and parameters that account for the need of using prior information and of considering input and model structure uncertainty and intrinsic stochasticity. 5 Key contributions in this field:

- Kattwinkel, M. and Reichert, P. Bayesian parameter inference for Individual-Based Models using Particle Markov Chain Monte Carlo (PMCMC). *Environmental Modelling & Software* 87, 110-119, 2017. <http://dx.doi.org/10.1016/j.envsoft.2016.11.001>
- Reichert, P. and Schuwirth, N. Linking statistical description of bias to multi-objective model calibration. *Water Resources Research*, 48, W09543, 2012. <http://dx.doi.org/10.1029/2011WR011391> (open acc.)
- Reichert, P., White, G., Bayarri, M.J. and Pitman, E.B., Mechanism-based emulation of dynamic simulation models: Concept and application in hydrology. *Computational Statistics and Data Analysis*, 55, 1638–1655, 2011. <http://dx.doi.org/10.1016/j.csda.2010.10.011>
- Reichert, P., and Mieleitner, J., Analyzing input and structural uncertainty of nonlinear dynamic models with stochastic, time-dependent parameters, *Water Resources Research*, 45, W10402, 2009. <http://dx.doi.org/10.1029/2009WR007814> (open access)
- Yang, J., Reichert, P., Abbaspour, K.C. and Yang, H., Hydrological modelling of the Chaohe Basin in China: Statistical model formulation and Bayesian inference, *Journal of Hydrology* 340, 167-182, 2007. <http://dx.doi.org/10.1016/j.jhydrol.2007.04.006>

### *Biogeochemical and Ecological Modelling*

Development and application of hydrological, biogeochemical and ecological models of river and lake systems to quantitatively describe scientific knowledge and predict effects of changes in driving forces and of management measures. 5 Key contributions in this field:

- Schuwirth, N. and Reichert, P. Bridging the gap between theoretical ecology and real ecosystems: modeling invertebrate community composition in streams, *Ecology* 94(2), 368-379, 2013. <http://dx.doi.org/10.1890/12-0591.1>
- Reichert, P. and Schuwirth, N., A generic framework for deriving process stoichiometry in environmental models, *Environmental Modelling & Software*, 25, 1241-1251, 2010. <http://dx.doi.org/10.1016/j.envsoft.2010.03.002>
- Reichert, P., Uehlinger, U. and Acuña V., Estimating stream metabolism from oxygen concentrations: The effect of spatial heterogeneity, *Journal of Geophysical Research* 114, G03016, 2009. <http://dx.doi.org/10.1029/2008JG000917> (open access)
- Reichert, P., Borchardt, D., Henze, M., Rauch, W., Shanahan, P., Somlyódy, L. and Vanrolleghem, P., River Water Quality Model no. 1 (RWQM1): II. Biochemical process equations, *Water Sci. Tech.* 43(5), 11-30, 2001. <http://wst.iwaponline.com/content/43/5/11> (open access)
- Omlin, M., Reichert, P. and Forster, R., Biogeochemical model of lake Zürich: Model equations and results, *Ecological Modelling* 141(1-3), 77-103, 2001. [http://dx.doi.org/10.1016/S0304-3800\(01\)00256-3](http://dx.doi.org/10.1016/S0304-3800(01)00256-3)

### *Environmental Decision Support*

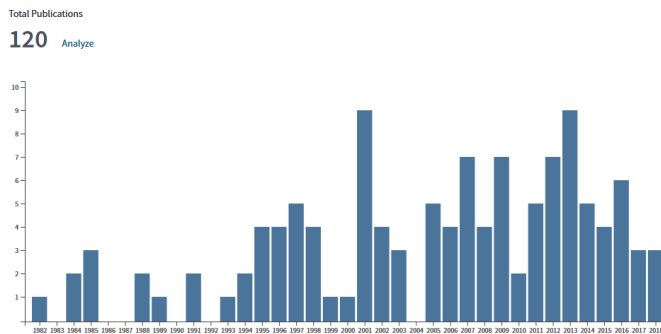
Design and apply decision analytical procedures to quantify societal preferences and apply them jointly with scientific predictions of outcomes of management alternatives in environmental decision support. 5 Key contributions in this field:

- Reichert, P., Langhans, S., Lienert, J. and Schuwirth, N. The Conceptual Foundation of Environmental Decision Support. *Journal of Environmental Management* 154, 316-332, 2015. <http://dx.doi.org/10.1016/j.jenvman.2015.01.053> (open access)
- Rinderknecht, S. L., Borsuk, M. E. and Reichert, P. Bridging Uncertain and Ambiguous Knowledge with Imprecise Probabilities, *Environmental Modelling & Software* 36, 122-130, 2012. <http://dx.doi.org/10.1016/j.envsoft.2011.07.022>
- Rinderknecht, S.L., Borsuk, M.E. and Reichert, P. Eliciting Density Ratio Classes. *International Journal of Approximate Reasoning* 52, 792-804, 2011. <http://dx.doi.org/10.1016/j.ijar.2011.02.002> (open acc.)
- Reichert, P., Borsuk, M., Hostmann, M., Schweizer, S., Spörri, C., Tockner, K. and Truffer, B., Concepts of decision support for river rehabilitation, *Environmental Modelling and Software* 22, 188-201, 2007. <http://dx.doi.org/10.1016/j.envsoft.2005.07.017>
- Reichert, P. and Borsuk, M.E., Does high forecast uncertainty preclude effective decision support?, *Environmental Modelling and Software* 20(8), 991-1001, 2005. <http://dx.doi.org/10.1016/j.envsoft.2004.10.005>

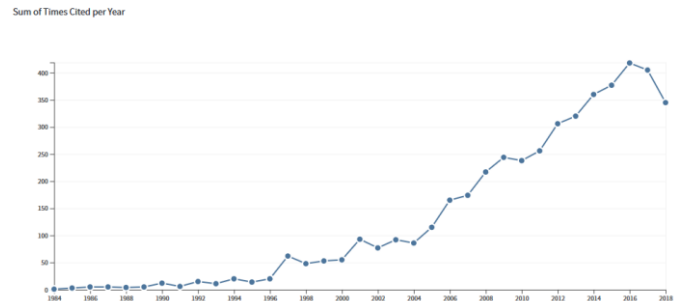
## Publication Overview

### Citation Analysis ISI Web of Knowledge (Oct 17, 2018)

Published items in each year



Citations in each year



Total number of citations 4627, average citations per paper 38.6, h-index 36.

Publications with more than 100 citations: 9

Cit. Publication

- 401 Reichert P., AQUASIM - A tool for simulation and data analysis of aquatic systems, *Water Sci. Tech.* 30(2), 21-30, 1994. <http://wst.iwaponline.com/content/30/2/21> (open access)
- 289 Yang, J., Reichert, P., Abbaspour, K.C., Xia, J. and Yang, H., Comparing uncertainty analysis techniques for a SWAT application to the Chaohe Basin in China, *Journal of Hydrology* 258, 1-23, 2008. <http://dx.doi.org/10.1016/j.jhydrol.2008.05.012>
- 280 Brun, R., Reichert, P. and Künsch, H.R., Practical identifiability analysis of large environmental simulation models, *Water Resources Research* 37(4), 1015-1030, 2001. <http://dx.doi.org/10.1029/2000WR900350> (open access)
- 228 Wanner O. and Reichert P., Mathematical modeling of mixed-culture biofilms, *Biotechnology & Bioengineering* 49, 172-184, 1996. [http://dx.doi.org/10.1002/\(SICI\)1097-0290\(19960120\)49:2<172::AID-BIT6>3.0.CO;2-N](http://dx.doi.org/10.1002/(SICI)1097-0290(19960120)49:2<172::AID-BIT6>3.0.CO;2-N)
- 193 Brun, R., Kühni, M., Siegrist, H.R., Gujer, W. and Reichert, P., Practical identifiability of ASM2d parameters – systematic selection and tuning of parameter subsets, *Water Research* 36(16), 4113-4127, 2002. [http://dx.doi.org/10.1016/S0043-1354\(02\)00104-5](http://dx.doi.org/10.1016/S0043-1354(02)00104-5)
- 132 Yang, J., Reichert, P., Abbaspour, K.C. and Yang, H., Hydrological modelling of the Chaohe Basin in China: Statistical model formulation and Bayesian inference, *Journal of Hydrology* 340, 167-182, 2007. <http://dx.doi.org/10.1016/j.jhydrol.2007.04.006>
- 128 Omlin, M. and Reichert, P., A comparison of techniques for the estimation of model prediction uncertainty, *Ecological Modelling* 115(1), 45-59, 1999. [http://dx.doi.org/10.1016/S0304-3800\(98\)00174-4](http://dx.doi.org/10.1016/S0304-3800(98)00174-4)
- 126 Lehmann, M.F., Reichert, P., Bernasconi, F.M., Barbieri, A. and McKenzie, J.A., Modelling nitrogen and oxygen isotope fractionation during nitrate reduction in a hypolimnetic redox-transition zone, *Geochimica et Cosmochimica Acta* 67(14), 2529-2542, 2003. [http://dx.doi.org/10.1016/S0016-7037\(03\)00085-1](http://dx.doi.org/10.1016/S0016-7037(03)00085-1)
- 101 Omlin, M., Brun, R. and Reichert, P., Biogeochemical model of lake Zürich: Sensitivity, identifiability and uncertainty analysis, *Ecological Modelling* 141(1-3), 105-123, 2001. [http://dx.doi.org/10.1016/S0304-3800\(01\)00257-5](http://dx.doi.org/10.1016/S0304-3800(01)00257-5)

## Publications

### Publications for Practice

- Känel, B., Michel, C. and Reichert, P. Methoden zur Untersuchung und Beurteilung der Fließgewässer. Makrophyten - Stufe F (flächendeckend) und Stufe S (systembezogen). Entwurf. Bundesamt für Umwelt, Bern. Umwelt-Vollzug, 119 S. 2017.
- Niederberger K., Rey P., Reichert P., Schlosser J., Helg, U., Haertel-Borer S., Binderheim E. *Methoden zur Untersuchung und Beurteilung der Seen. Modul: Ökomorphologie Seeufer*. Bundesamt für Umwelt, Bern. Umwelt-Vollzug Nr. 1632: 73 S. 2016. <http://www.bafu.admin.ch/uv-1632-d>
- Schlosser J. A., Haertel-Borer S., Liechti P. and Reichert P. *Konzept für die Untersuchung und Beurteilung der Seen in der Schweiz*. Anleitung zur Entwicklung und Anwendung von Beurteilungsmethoden. Bundesamt für Umwelt, Bern. Umwelt-Wissen Nr. 1326: 38 S. 2013. <http://www.bafu.admin.ch/uw-1326-d>
- Baumgartner, S., Peter, A., Reichert, P., Robinson, C., Siegenthaler-Le Drian, C., Thomas, G. *Priorisierung von Flussrevitalisierungsprojekten – ökologische Aspekte der Priorisierung und Revitalisierungspotential*. Eawag, 2013.
- Langhans, S. D. and Reichert, P., Einbettung von Verfahren zur Fließgewässerbewertung in ein übergeordnetes Gewässermanagementkonzept – Vorschläge am Beispiel des Modustufenkonzepts. *Wasser Energie Luft* 103(3), 204-214, 2011.
- Reichert, P., Schuwirth, N. und Langhans, S.D. MCWM – Ein Konzept für multikriterielle Entscheidungsunterstützung im Wassermanagement. *Wasser Energie Luft* 103(2), 139-148, 2011.

### Articles in peer-reviewed journals and book chapters

- Ammann, L., Fenicia, F. and Reichert, P. A likelihood framework for deterministic hydrological models and the importance of non-stationary autocorrelation. *Hydrol. Earth Syst. Sci.* 2019. <http://doi.org/10.5194/hess-2018-406> (open access)
- Kuemmerlen, M., Reichert, P., Siber, R. and Schuwirth, N. Ecological assessment of river networks: From reach to catchment scale. *Science of the Total Environment* 650, 1613-1627, 2019. <http://dx.doi.org/10.1016/j.scitotenv.2018.09.019>
- Haag, F., Lienert, J., Schuwirth, N. and Reichert, P. Identifying non-additive multi-attribute value functions based on uncertain indifference statements. *Omega* 85, 49-67, 2019. <http://dx.doi.org/10.1016/j.omega.2018.05.011>
- Machac, D., Reichert, P., Rieckermann, J., Del Giudice, D. and Albert, C. Accelerating Bayesian inference in hydrological modeling with a mechanistic emulator. *Environmental Modelling and Software* 109, 66-79, 2018. <http://dx.doi.org/10.1016/j.envsoft.2018.07.016>
- Kavetski, D., Fenicia, F., Reichert, P. and Albert, C. Signature-domain calibration of hydrological models using approximate Bayesian computation: Theory and comparison to existing applications. *Water Resources Research* 54, 4059-4083, 2018. <http://dx.doi.org/10.1002/2017WR020528>
- Fenicia, F., Kavetski, D., Reichert, P. and Albert, C. Signature-domain calibration of hydrological models using approximate Bayesian computation: Empirical analysis of fundamental properties. *Water Resources Research* 54, 3958-3987, 2018. <http://dx.doi.org/10.1002/2017WR021616>
- Paillex, A., Reichert, P., Lorenz, A.W. and Schuwirth, N. Mechanistic modelling for predicting the effects of restoration, invasion and pollution on benthic macroinvertebrate communities in rivers. *Freshwater Biology* 62, 1083-1093, 2017. doi:10.1111/fwb.12927
- Kattwinkel, M. and Reichert, P. Bayesian parameter inference for Individual-Based Models using Particle Markov Chain Monte Carlo (PMCMC). *Environmental Modelling & Software* 87, 110-119, 2017. <http://dx.doi.org/10.1016/j.envsoft.2016.11.001>
- Paillex, A., Schuwirth, N., Lorenz, A.W., Januschke, K., Peter, A. and Reichert, P. Integrating and extending ecological river assessment: Concept and test with two restoration projects. *Ecological Indicators*. 72, 131-141, 2017. <http://dx.doi.org/10.1016/j.ecolind.2016.07.048>
- Del Giudice, D., Albert, C., Rieckermann, J. and Reichert, P. Describing the catchment-averaged precipitation as a stochastic process improves parameter and input estimation. *Water Resources Research* 2016. <http://dx.doi.org/10.1002/2015WR017871> (open access)
- Machac, D., Reichert, P. and Albert, C. Emulation of dynamic simulators with application to hydrology. *Journal of Computational Physics* 313, 352-366, 2016. <http://dx.doi.org/10.1016/j.jcp.2016.02.046>

- Kattwinkel, M., Reichert, P., Rüegg, J., Liess, M. and Schuwirth, N. Modelling macroinvertebrate community dynamics in stream mesocosms contaminated with pesticide. *Environmental Science & Technology* 50, 3165–3173, 2016. <http://dx.doi.org/10.1021/acs.est.5b04068>
- Machac, D., Reichert, P., Rieckermann, J. and Albert, C. Fast mechanism-based emulator of a slow urban hydrodynamic drainage simulator. *Environmental Modelling & Software* 78, 54–67, 2016. <http://dx.doi.org/10.1016/j.envsoft.2015.12.007>
- Schuwirth, N., Dietzel, A. and Reichert, P. The importance of biotic interactions for the prediction of macroinvertebrate communities under multiple stressors. *Functional Ecology* 30, 974–984, 2015. <http://dx.doi.org/10.1111/1365-2435.12605> (open access)
- Scholten, L., Schuwirth, N., Reichert, P. and Lienert, J. Tackling uncertainty in multi-criteria decision analysis – An application to water supply infrastructure planning. *European Journal of Operational Research* 242(1), 243–260, 2015. <http://dx.doi.org/10.1016/j.ejor.2014.09.044>
- Reichert, P., Langhans, S., Lienert, J. and Schuwirth, N. The Conceptual Foundation of Environmental Decision Support. *Journal of Environmental Management* 154, 316–332, 2015. <http://dx.doi.org/10.1016/j.jenvman.2015.01.053> (open access)
- Del Giudice, D., Reichert, P., Bares, V., Albert, C. and Rieckermann, J. Model bias and complexity – Understanding the effects of structural deficits and input errors on runoff predictions. *Environmental Modelling & Software* 64, 205–214, 2015. <http://dx.doi.org/10.1016/j.envsoft.2014.11.006>
- Rinderknecht, S.L., Albert, C., Borsuk, M.E., Schuwirth, N., Künsch, H.R. and Reichert, P. The effect of ambiguous prior knowledge on Bayesian model parameter inference and prediction. *Environmental Modelling & Software* 62, 300–315, 2014. <http://dx.doi.org/10.1016/j.envsoft.2014.08.020>
- Dietzel, A. and Reichert, P. Bayesian inference of a lake water quality model by emulating its posterior density. *Water Resources Research* 50, 7626–7647, 2014. <http://dx.doi.org/10.1002/2012WR013086>
- Reichert, C., Reichert, P., Monnet-Tschudi, F., Kupferschmidt, H., Ceschi, A., and Rauber-Lüthy, C. Seizures after single-agent overdose with pharmaceuticals: Analysis of cases reported to a poison centre. *Clinical Toxicology* 52(6), 629–634, 2014. <http://dx.doi.org/10.3109/15563650.2014.918627>
- Langhans, S.D., Reichert, P. and Schuwirth, N. The method matters: A guide for indicator aggregation in ecological assessments. *Ecological Indicators* 45, 494–507, 2014. <http://dx.doi.org/10.1016/j.ecolind.2014.05.014>
- Scholten, L., Scheidegger, A., Reichert, P., Maurer, Max and Lienert, J. Strategic rehabilitation planning of piped water networks using multi-criteria decision analysis. *Water Research* 49, 124–143, 2014. <http://dx.doi.org/10.1016/j.watres.2013.11.017>
- Egger, C., Scheidegger, A., Reichert, P. and Maurer, M. Sewer deterioration modeling with condition data lacking historical records. *Water Research* 47, 6762–6779, 2013. <http://dx.doi.org/10.1016/j.watres.2013.09.010>
- Del Giudice, D., Honti, M., Scheidegger, A., Albert, C., Reichert, P. and Rieckermann, J. Improving uncertainty estimation in urban hydrological modeling by statistically describing bias. *Hydrol. Earth Syst. Sci.* 17, 4209–4225, 2013. <http://dx.doi.org/10.5194/hess-17-4209-2013> (open access)
- Honti, M., Stamm, C. and Reichert, P., Integrated uncertainty assessment of discharge predictions with a statistical error model, *Water Resources Research*, 49, 4866–4884, 2013. <http://dx.doi.org/10.1002/wrcr.20374>
- Reichert, P., Schuwirth, N. and Langhans, S. Constructing, evaluating and visualizing value and utility functions for decision support, *Environmental Modelling & Software* 46, 283–291, 2013. <http://dx.doi.org/10.1016/j.envsoft.2013.01.017>
- Scheidegger, A., Scholten, L., Maurer, M. and Reichert, P. Extension of pipe failure models to consider the absence of data from replaced pipes, *Water Research* 47, 3696–3705, 2013. <http://dx.doi.org/10.1016/j.watres.2013.04.017>
- Langhans, S.D., Lienert, J., Schuwirth, N. and Reichert, P. How to make river assessments comparable: A demonstration for hydromorphology, *Ecological Indicators* 32, 264–275, 2013. <http://dx.doi.org/10.1016/j.ecolind.2013.03.027>
- Scholten, L., Scheidegger, A., Reichert, P. and Maurer, M. Combining expert knowledge and local data for improved service life modeling of water supply networks. *Environmental Modelling & Software*, 42, 1–16, 2013. <http://dx.doi.org/10.1016/j.envsoft.2012.11.013>
- Schuwirth, N. and Reichert, P. Bridging the gap between theoretical ecology and real ecosystems: modeling invertebrate community composition in streams, *Ecology* 94(2), 368–379, 2013. <http://dx.doi.org/10.1890/12-0591.1>

- Dietzel, A., Mieleitner, J., Kardaetz, S. and Reichert, P. Effects of changes in the driving forces on water quality and plankton dynamics in three Swiss lakes - long-term simulations with BELAMO. *Freshwater Biology* 58, 10–35, 2013. <http://dx.doi.org/10.1111/fwb.12031>
- Dietzel, A. and Reichert, P. Calibration of computationally demanding and structurally uncertain models with an application to a lake water quality model. *Environmental Modelling & Software* 38, 129-146, 2012. <http://dx.doi.org/10.1016/j.envsoft.2012.05.007>
- Reichert, P. and Schuwirth, N. Linking statistical description of bias to multi-objective model calibration. *Water Resources Research*, 48, W09543, 2012. <http://dx.doi.org/10.1029/2011WR011391> (open access)
- Borsuk, M.E., Schweizer, S. and Reichert, P. A probability network model for integrative river rehabilitation planning and management. *Integrated Environmental Assessment and Management* 8(3), 462-472, 2012. <http://dx.doi.org/10.1002/ieam.233> (open access)
- Rinderknecht, S. L., Borsuk, M. E. and Reichert, P. Bridging Uncertain and Ambiguous Knowledge with Imprecise Probabilities, *Environmental Modelling & Software* 36, 122-130, 2012. <http://dx.doi.org/10.1016/j.envsoft.2011.07.022>
- Hering, J.G., Hoehn, E., Klinke, A., Maurer, M., Peter, A., Reichert, P., Robinson, C., Schirmer, K., Schirmer, M., Stamm, C. and Wehrli, B. Moving targets, long-lived infrastructure, and increasing needs for integration and adaptation in water management: An illustration from Switzerland. *Environmental Science & Technology* 46(1), 112-118, 2012. <http://dx.doi.org/10.1021/es202189s> (open access)
- Schuwirth, N., Reichert, P. and Lienert, J. Methodological aspects of multi-criteria decision analysis for policy support: A case study on pharmaceutical removal from hospital wastewater. *European Journal of Operational Research* 220, 472-483, 2012. <http://dx.doi.org/10.1016/j.ejor.2012.01.055>
- Albert, C., Ashauer, R., Künsch, H.R., Reichert, P., Bayesian experimental design for a toxicokinetic-toxicodynamic model. *Journal of Statistical Planning and Inference* 142, 263-275, 2012. <http://dx.doi.org/10.1016/j.jspi.2011.07.014>
- Frey, M.P., Stamm, C., Schneider, M.K. and Reichert, P. Using discharge data to reduce structural deficits in a hydrological model with a Bayesian inference approach and the implications for the prediction of critical source areas. *Water Resources Research* 47, W12529, 2011. <http://dx.doi.org/10.1029/2010WR009993> (open access)
- Trudel, D., Tlustos, C., von Götz, N., Scheringer, M., Reichert, P. and Hungerbühler, K.. Exposure of the Irish population to PBDEs in food: Consideration of parameter uncertainty and variability for risk assessment. *Food Additives and Contaminants* 28(7), 943-955, 2011. <http://dx.doi.org/10.1080/19440049.2011.572082>
- Rinderknecht, S.L., Borsuk, M.E. and Reichert, P. Eliciting Density Ratio Classes. *International Journal of Approximate Reasoning* 52, 792-804, 2011. <http://dx.doi.org/10.1016/j.ijar.2011.02.002> (open access)
- Reichert, P., White, G., Bayarri, M.J. and Pitman, E.B., Mechanism-based emulation of dynamic simulation models: Concept and application in hydrology. *Computational Statistics and Data Analysis*, 55, 1638–1655, 2011. <http://dx.doi.org/10.1016/j.csda.2010.10.011>
- Schuwirth, N., Acuña, V., Reichert, P., Development of a mechanistic model (ERIMO-I) for analyzing the temporal dynamics of the benthic community of an intermittent Mediterranean stream, *Ecological Modelling*, 222, 91-104, 2011. <http://dx.doi.org/10.1016/j.ecolmodel.2010.09.013>
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