CURRICULUM VITAE Marc F.P. Bierkens

Last update: May 28, 2018

Personal information

Family name:	Bierkens
First names:	Marinus Franciscus Petrus
Profession:	Hydrologist
Date of birth	November 1 1965
Nationality:	Netherlands
Civil status:	Married, three children

Employer

Name:	Department of Physical Geography, Utrecht University
Address:	Vening Meinesz Building A - Room 4.68 Princetonlaan 8a 3584 CB Utrecht, The Netherlands
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URL:	https://www.uu.nl/staff/MFPBierkens
Name:	Deltares
Address:	Daltonlaan 600, 3584 BK Utrecht, The Netherlands
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Education

Institution		Wageningen University	
From	**To**	**Degree**	**Major subjects**
1984	1990	MSc	Stochastic hydrology, catchment hydrology, Geohydrology
Institution		Utrecht University	
From	**To**	**Degree**	**Major subjects**
1990	1994	PhD	Stochastic hydrology, geohydrology, Geostatistics

Languages

Dutch	Excellent
English	Excellent
French	Slight
German	Fair/slight

Key qualifications

- Research experience in stochastic hydrology, geostatistics, statistical methods and monitoring, land surface hydrology, geohydrology, soil physics, ecohydrology, water management, global scale hydrology and water resources, hydrology and climate.
- Experience in consulting water managers, soil scientists, hydrologists and geographers on issues of hydrology, geostatistics, uncertainty analysis, upscaling and downscaling
- Experience in acquisition and management of research projects and consultancy projects
- Experience in management of research teams and departments

Training received (relevant to hydrology)

At Wageningen University:

- Soil science and geology
- Soil physics
- Surface water hydrology (catchment hydrology and rainfall-runoff modelling)
- Hydrometrics
- Fluid mechanics
- Flood routing (Saint-Venant equations)
- Stochastic hydrology en hydrological statistics
- Agrohydrology and water management
- Geohydrology and groundwater modelling
- Micrometeorology
- Subsidiary topics in mathematics: calculus, statistics, ordinary and partial differential equations, numerical mathematics, informatics and programming (Fortran, Pascal), simulation techniques.

Postgraduate:

- Courses in statistics for researchers
- GIS courses
- Courses in groundwater flow and transport

Teaching experience

- MSc Course on Stochastic Hydrology
- MSc Course on Hydrology and Climate
- MSc Course on Unsaturated Zone Hydrology
- MSc Course on Climate systems and adaptation
- Professional Lectures on geostatistics for researchers (Wageningen, TU Delft)
- Professional lectures on error analysis in water balance calculations (PHLO Wageningen)
- Student lectures on hydrology for environmental science (Utrecht)
- Student field work Quaternary fluvial geology (Utrecht)
- Student lectures on hydrology for engineers (Davis, CA USA)
- Student lectures in Physical Hydrology (Utrecht)

Experience record

July 1988-April 1989	Research Assistant, Department of Land, Air and Water Resources, University of California at Davis (July 1988 - April 1989)
July 1989 - December 1989	Internship at TNO Institute of Applied Geoscience, Delft, Netherlands
January 1990 - July 1994	Research Assistant, Department of Physical Geography, Utrecht University, Netherlands Responsibilities: research (including field work), teaching a course in hydrology, assisting a student field work in Quaternary fluvial geology
July 1994 – July 2002	Senior Researcher, Alterra, Wageningen University and Research Centre, Wageningen, Netherlands. Responsibilities: Consultancy and collaborative work on the application of stochastic theory and geostatistical methods in hydrology, soil science, water management and natural resources inventory and monitoring. Management of research and consultancy projects
November 2000 - December 2001	team leader of team Geo-Information, Statistics and Applications. Responsibilities: Resource planning (people and workload), acquisition, human resource management (result and development)
July 2002 – Present	Professor of Geographic Hydrology Utrecht University, Utrecht, Netherlands (0.8). Senior Hydrologist Deltares Netherlands (0.2)
March 2009 - April 2015	Head of department Physical Geography Utrecht University
May 2015 – July 2017	Coordinator Water, Climate and Ecosystems of UU-wide theme Sustainability

Awards

- ISSS Working Group on Pedometrics Best Paper Award of 1994 for the paper "Application of indicator simulation to modelling the lithological properties of a complex confining layer" published in Geoderma 62.
- The hydrology Prize for the years 1994 to 1997 of the Netherlands Hydrological Society for the best publication entitled "Modeling hydraulic conductivity of a complex confining layer at various spatial scales" published in Water Resources Research 32(8).
- IUSS committe on Pedometrics best paper award for the year 2004 for the paper entitled: Finke, P.A., Brus, D.J., Bierkens, M.F.P., Hoogland, T. and Knotters, M., 2004. Mapping groundwater dynamics using multiple sources of exhaustive high resolution data. Geoderma 123(1-2), 23-39.
- Environmental Modelling & Software Best paper Award 2010: Software and Decision Support for the paper entitled "A sofwater framework for construction of process-based stochastic spatio-temporal models and data-assimilation" by D. Karssenberg, O Schmitz, P. Salamon, K. de Jong and M.F.P. Bierkens.
- EGU Union Keynote entitled "Water of the Earth" as part of the Union Keynote series "Faces of the Earth". April 29, 2014:http://client.cntv.at/EGU2014/?play=38
- Fellow of the American Geophysical Union (2016)

Memberships, additional experience and activities

- Membership Netherlands Hydrological Society, European Geophysical Union (programming committee on groundwater 2002-2007), American Geophysical Union (Elected Fellow), International Association of Hydrological Sciences (Vice-president of the International Committee on Ground Water 2001-2003).
- Member of Science Advisory Board of Geoenv 1997 (Valencia), accuracy 2000 (Amsterdam), HydroEco 2006 (Karlsbad), ModelCARE 2007 (2007), HydroPredict 2008 (Pargue), HydroEco 2009 (Karlsbad), 8th Leonardo Conference 2016 (Spain).

Editorships and reviewing

- Associate editor: Journal of Hydrology" (2003-2010), Hydrology and Earth System Science (2005-2007), Geoderma (2007-2012), Water Resources Research (2009-2016)
- Editor Water Resources Research (Since 2017)
- Reviewing papers for international journals, e.g. Water Resources Research, Journal of Hydrology, Hydrology and Earth System Science, Advances in Water Resources, Groundwater, Stochastic Environmental Research and Risk Assessment, Mathematical Geology, Geoderma, European Journal of Soil Science, Catena, Engineering Geology, Environmental and Ecological Statistics, Journal of Environmental Quality, Environmetrics, Journal of Hydrometeorology, Geophysical Research Letters, Nature Geoscience, Nature Climate Change, Earth System Dynamics, PNAS, Nature, Science.
- Reviewing research proposals for NWO-ALW/STW, the United States National Science Foundation (NSF) and the UK National Environmental Research Council (NERC).

Organizing workshops and conferences

- Member of the local organising committee of ModelCARE 2005, the Fifth International Conference on Calibration and Reliability in Groundwater Modelling held June 6-9 2005 in The Hague (http://modelcare2005.nitg.tno.nl); chairmain of the scientific advisory board.
- Chief organiser of the summer course "Climate and the Hydrological Cycle", jointly organised with Wageningen University and Vrije Universiteit Amsterdam, to be held July 4 – July 15 in Utrecht (http://hydroclimate.geog.uu.nl).
- Chief organizer of the workshop "Hyper-resolution global hydrological modelling: the next step" (214) and organizing the associated network organization HyperHydro.org. Follow-up workshop in 2015 and AGU/EGU splinter meetings in 2014 and 2015.
- EGU General Assembly Vienna 2004-2010 (Session organizer and Session Chair).
- Member of the Scientific Advisory Board of ModelCARE 2007, the Fifth International Conference on Calibration and Reliability in Groundwater Modelling, held at Copenhagen, September 9-13 2007.

Boards, committees and community service

- Secretary National Study Group on the Application of Statistics in the Earth Sciences (LASSA) (1994-1998), chairman (2001-2003)
- Co-ordinator of the Hydr(geo)logy theme for the 5-year research program of the Utrecht Centre for Geosciences (UCG) (2002-2007)

- Member of the Foresight committee on hydrological research in the Netherlands established by the Royal Netherlands Academy of Arts and Sciences (KNAW). We wrote the report “Turning the Water Wheel Inside Out” Foresight Study on Hydrological Science in the Netherlands”. Based on its recommendations “The Boussinesq Centre for Hydrological Research “ has been established.
- Chairman of The Boussinesq Centre for Hydrological Research (2007-2011)
- Chairman of the Netherlands Hydrology Society (April 2012-2017).
- Member of the Scientific Counsel of ITC - International Institute for Geo-Information Science and Earth Observation (2005-2010);
- Member of the Scientific Council of Deltares (2005-present)
- Member of the Scientific Evaluation panel for the Dutch Delta Program (2013, 2014)
- Member of Program Committee for the TKI Deltatechnology Topsector Water (2014-present)
- Member of the Scientific Advisory Committee of the Dutch National Water Model (2016-present)
- Chairman of the Jury of the 2007-2009 Hydrology prize awarded by the Netherlands Hydrology Society (NHV).
- Member of the Jury for the AGU Langbein Lecture (2014-present).
- Member and chair of open NWO-ALW (NWO: Netherlands Organization for Scientific Research) open competition committee (several times between 2002-present), Chair Programming and evaluation committee NWO-Water (2003), member NWO VICI-committee 2007-2008, Chair program committee New Delta (2014), Chair Water Technology Program 2017-2018

Promotorships, PhD-committees and Appointment committees

- Advisor (co-promotor) on the following finished PhD projects: Martin Knotters (PhD at Wageningen University, 2001), Derk Jan Karssenberg (PhD at Utrecht University, november 2002), Cees Vink (PhD at Utrecht University, juni 2006), Daniel Mourad (January 2008), Hanneke Schuurmans (November 2008), Ate Visser (May 2009; cum laude), Arnaut van Loon (March 2010), Reinder Brolsma (June, 2010), Joachim Rozenmeijer (October, 2011), Frederiek Sperna-Weiland (December, 2011), Jos von Asmuth (March, 2012), Edwin Sutanudjaja (2012), Yoshihide Wada (2013; cum laude), Oliver Schmitz (2014), Ekkamol Vannamatee (2014), Brian Dermody (2014), Niko Wanders (2015), Yasmijn van der Knaap (2016, VU), Inge de Graaf (2016), Arthur Lutz (2016), Patricia Lopez Lopez (2018)
- Advisor (promotor) on ongoing PhD projects: Sibren Loos, Naze-Candogan Yossef, Aris Lourens, Sebastian Huizer, Lucie babel, Jannis Hoch, Wiecher Bakx, Hung Phan, Daniel Zamrsky, Joeri van Engelen, Jude King, Emmy Stigter, Jacob Steiner, Pleun Bonekamp, René Wijngaard, Jarno Verkaik
- Member of promotion (PhD) committee of Joost Herweijer (VU University, Amsterdam, 1997) and Hans Gehrels (Free University, Amsterdam, 1999), Rens van Beek (Utrecht University, May 2002), Rutger Dankers (Utrecht University, September, 2002), Sandra van der Linden (Utrecht University, December 2002), Patrick Bogaert (Free University, Amsterdam, March 18, 2003), Marek Gielczweski (Utrecht University), Kim Cohen (Utrecht University), Pieter-Jan Helvoort (Utrecht University, September 2003), Elmer van de Berg (Free University of Amsterdam), Lies Peters (Wageningen University), Wilbert Berendrecht (Delft University of Technology, 2004), Job Spijker (Utrecht University, 2005), Marc Vissers (Utrecht University, 2006), Peter Vermeulen (Delft University of Technology, 2006), Mirko Ballarini (Delft University of Technology, 2006), Nusin Yenigül (Delft University of Technology, 2006), Arno Hilberts (Wageningen University, 2006), Christiaan van der Tol (Vrije Universiteit, 2007), Guping Zhang (Delft University of Technology, 2007), Egon Dumont (Wageningen University, 2007), Dinand Alkema (Utrecht University, 2007), Marc Gouw (Utrecht University, 2007), Wiebe Borren (Utrecht University, 2007), Ryan Teuling (Wageningen University, 2007), Arjen Terwissscha van Scheltinga (UU/IMAU, 2007), Jef Neal (external examiner at VIVA; University of Southampton, School of Geography, 2008), Walter Immerzeel (Utrecht University, 2008), Justin Sheffield (Wageningen University/Princeton University, 2008), Kaka Shahedi (Wageningen University, 2008), Jan Wesseling (Wageningen University, 2009), Shakeel Hasan (Wageningen University, 2009), Maarten Eppinga (Utrecht University, 2009), Julius Sumihar (Delft University of Technology, 2009), Roxanne Petrescu (Vrije Universiteit Amsterdam, 2009), Aart Overeem (Wageningen University, 2009), Mxolisi Shongwe (Utrecht University, 2010), Ingwer Bos (Utrecht University, 2010), Ouyang Wei (ITC Enschede, 2011), Lukas Gudmundsson (University of Oslo, Norway, 2011), Berny

Bisselink (Vrije Universiteit Amsterdam, 2012), Yijian Zeng (ITC Technical University Twente, 2012), Gerben de Jager (Techical University Delft, 2012), Floor van Hilst (Utrecht University, 2012), Claudia Marcela Agudelo Vera (Wageningen University, 2012), Maria C. Loinaz (Technical University of Denmark, Lynby, 2012), Hugo de Boer (Utrecht University, 2012), Hans de Moel (VU University, Amsterdam, 2012), Dominika Krzeminska (Technical University Delft, 2012), Aimee Slangen (Utrecht University, 2012), Michelle van Vliet (Wageningen University, 2012), Jan Decleir (Utrecht University, 2013), Jan Lenaerts (Utrecht University, 2013), Remco van Beek (Wageningen University, 2013), Wietse van de Lageweg (Utrecht University, 2013), Hylke Beck (Vrije Universiteit Amsterdam, 2014), Poolad Karimi (TU Delft, UNESCO-IHE, 2014), Stefan Ligtenberg (Utrecht, 2014), Olda Rakovec (Wageningen, 2014), Gijsbert Cirkel (Wageningen, 2014), Marjolein van Huijgevoort (Wageningen, 2014), Chandra Prasad Ghimere (VU University, 2014), Christiana Photiadou (Utrecht University, 2018), Hangkai Goa (TU Delft, 2015), Joost Delsman (VU University, 2015), Patricia Trambauer (TU Delft, 2015), Alain Pascal Frances (Twente University, 2015), Arthur Beusen (Utrecht University, 2015), Markus Enenkel (TU Vienna, Austria, 2105), Christiane Photadiadu (Utrecht University, 2015), Hongkai Gao (Delft University of Technology, 2015), Wouter Marra (Utrecht University, 2015), Samuel Sutanto (Utrecht University, 2015), Koen Hilgersom (Delft University of Technology, 2017 Tanja de Boer-Reuser (Delft University of Technology, 2017), Amandine Pastor (Wageningen Univesrity, 2017), Bas van der Grift (Utrecht University, 2017), Lan Wang-Erlandson (Delft University of Technology, 2017), Kay Koster (Utrecht University, 2017), Dan Yan (Wageningen University, 2017), Brice Noël (Utrecht University, 2018), David Bijl (Utrecht University, 2018), Christain Steger (Utrecht University, 2018).

- Member of Appointment committees for the following professorship positions: Professor of Hydrogeology (Free University of Amsterdam, 2004), Professor of Hydrogeology (Utrecht University, 2003), Professor of Agrohydrology, Soil Physics and groundwater management (Wageningen University, 2005), Professor of Hydrology (UNESCO-IHE, 2005), Professor of Environmental Science (Utrecht University, 2007; chairman), Professor of Water Quality Management (Utrecht University, 2011), Professor of Nutrient Transport from Land to Sea (Utrecht, 2011), Professor of Integrated Assessment Modelling of Global Environmental Change (Utrecht, 2011), Professor of Palaeophysiology of Plants in the Context of Environmental Change (Utrecht, 2012), Professor Water Use and Risk Mitigation (Utrecht, 2012), Professor of Process sedimentology and River Morphology (Utrecht, 2014), Professor of Water and Climate (VU University Amsterdam, 2015), Professor of Chemical Hydrogeology (TU Delft, 2015), Professor of Water Systems and Global Change (Wageningen University, 2016), Professor of Computational Hydrogeology (TU Delft, 2017), Professor of Sea-level change and Coastal Impact (Utrecht University, 2018).

Invited or keynote speaker

- Workshop called “Testable stochastic features of subsurface structures, flow, and transport” held at Monte Verita, Ascona (Switserland) on October 24-29, 1999. Invited lecture called “Space-time modelling of water table depth using a regionalized time series model and the Kalman filter”.
- Workshop called “Environmental flows: are there key scales for solute and pollutant transport?” held at Westpark Centre, Dundee (Scotland) on March 26-27, 2001. Keynote lecture called “Appropriate scales and appropriate upscaling and downscaling methods for environmental research”.
- Workshop called “Integration of Scales in Landscape Ecology” held on June 13, 2002 at Utrecht University. Invited Lecture called “Appropriate scales and appropriate upscaling and downscaling methods for landscape ecological research”.
- “Toekomstbespiegelingen over waterbeheer in 2030”. Plenaire lezing bij het synmposium “Zicht op Water” bij de Provincie Noord-Brabant ter ere van het opleveren van de GD-kaart.
- Keynote lecture “Methods that span the soil, water and agricultural interface”, given on September 12, 2003 at the fifth international conference on Pedometrics in Reading, England.
- Speaker at the first Boussinesq Lecture given by Rafael Bras (MIT) at the Royal Netherlands Academy of Arts and Sciences (KNAW), lecture entitled: “Spatio-temporal dynamics of soil, water and vegetation in groundwater dependent ecosystems”, October 2005.

- Keynote Lecture “Spatio-temporal dynamics of soil, water and vegetation in groundwater dependent ecosystems”, given on September 2006 at HydroEco ‘2006 – International Multidisciplinary Conference on Hydrology and Ecology, the Groundwater/Ecology connection at Karlovy Vary, Czech Republic.
- Invited speaker at the mini-symposium “Excursions into ecohydrology” organised by UNESCO-IHE and the Boussinesq Centre for Hydrology on the occasion of the Darcy Lecture 2007 given by Jim Butler (Kansas Geological Survey) to be held June 1 2007.
- Invited lecture entitled “Land surface-atmosphere interactions featuring the role of vegetation and groundwater” to be held at ETH Zurich on May 25, 2007.
- Keynote Lecture entitled “Real-time forecasting and data-assimilation in groundwater modelling” held at ModelCARE 2007, the Fifth International Conference on Calibration and Reliability in Groundwater Modelling, Copenhagen, September 9-13 2007.
- Keynote Lecture entitled “Components of a real-time nowcasting and forecasting system for distributed hydrological models” held at geoENV 2008, the 7th International Conference on Geostatistics for Environmental Applications, Southampton (K), September 8-10, 2008.
- Keynote Lecture “The effect of climate change on groundwater dependent temperate forest ecosystems”, given in april 2009 at HydroEco ‘2009 – International Multidisciplinary Conference on Hydrology and Ecology connection in Vienna, Austria.
- Keynote lecture at 2014 Wetsus internal conference entitled: Water Scarcity: Global challenges and local solutions
- Keynote Lecture “Global Hydrology: state, trends and directions”, given at the 3rd Conference on Modelling Hydrology, Climate and Land Surface Processes, September 2015, Lillehammer, Norway.
- Invited Lecture entitled “Groundwater resources and environmental change” given at the Side Event on Isotope Hydrology at the 59th session of the IAEA General Conference, September 17 2015 , IAEA Headquarters, Vienna, Austria.
- Invited Lecture entitled “Modelling Global Groundwater Resources” given at the Water Event “Is my country running out of groundwater? New frontiers in groundwater assessments” organized by the Global water Practice at the World Bank Group, October 29 2015, Washington DC, USA.
- Invited lecture entitled “High-resolution global flood risk: the global flood risk analyzer and recent developments” at the Symposium in honour of Prof. Eric Wood at Princeton University (June 3, 2016)
- Invited lecture in CUASHI Cyber Seminar Series “Global Hydrology and Water Resources: Review, Challenges and Directions” (September 20, 2017)
- Solicited Lectures at EGU general assembly 2014 (1), AGU general assembly 2014 (2), AGU general assembly 2015 (2), AGU 2106 (1), AGU 2017 (1)

Funded Research projects (funding source / role / year started):

- PhD: On-line DA and ensemble forecasting groundwater and soil moisture (TNO/PI/2003): 180 k€
- PhD: Groundwater and climate (NWO-ALW/PI/2004): 200 k€
- PhD; AQUATERRA (European Union FP6/WP leader/2004): 220 k€
- Project Summerschool Climate and the hydrological Cycle (National Funding/project leader/2005): 40 k€
- PhD DYNAQUAL – Dynamics of groundwater and surface water quality (TNO/promotor/2006): 180 k€
- Small project: ESA Global Mass Distribution and Transport in the Earth System (ESA/collaborator/2007): 60 k€
- Postdoc: thermo-dynamical conspiracy of the Himalaya’s (NWO Casimir programme/advisor/2008) 100 k€
- PhD: Multi-satellite and multi-sensor application for large-scale groundwater assessment (NWO-GO/PI/2008): 200 k€
- PhD: Facility for global assessment of hydrological effects of climate change (Deltares/PI/2008): 180 k€
- PhD: Global seasonal forecasting of River discharge (Deltares/PI/2008): 180 k€
- PhD: Modelling past and future global water stress (UU F&M/PI/2009): 180 k€
- PhD: Climate and vegetation shifts the during Roman Classical period (UU F&M/promotor/2009): 90 k€
- PhD: Limits to global groundwater consumption (NWO-ALW/PI/2011): 220 k€
- Postdoc: Quantifying the Water Tower of the Third Pole (NWO VENI-

scheme/advisor/2011): 250 k€
- Postdoc: GLOWASIS - (European Union FP7/WP leader/2011): 120 k€
- PhD: Monitoring Strategy for Hydrogeological parameters (TNO/promoter/2011): 240 k€.
- Postdoc: Water2Invest.com (European Institute of Technology Climate KIC/PI/2012): 190 k k€ (projectleider van totaal project 470 k€)
- Postdoc: Data-Intensive Modeling of the Global Water Cycle: Bringing the 4th Paradigm to Hydrology (NWO high-performance computing programme/advisor/2012): 135 k€
- Small projects for performing runs for ISI-MIP fast track (20 k€) and Water Futures and Solution (IIASA/UNESCO: 30 k€).
- PhD: Climate Cascades – Integrated catchment model and fate of pathogens and heavy metals (RIVM): 260 k€.
- PhD: The effect of mega-nourishments on freshwater reserves, salt water intrusion and fresh water outflow (NWO-STW Perspectieven project NatureCoast/PI and WP leader/2013): 250 k€.
- PhD1: Regional downscaling of global water resources models. Part of EU project EartH_2Observe (EU FP7/promotor/2014); PhD2: Global hydrology and water resources modeling and re-analysis. Part of EU project EartH_2Observe (EU FP7/PI/2014): 500 k€.
- Postdoc: Past and future impact of anthropogenic changes to the water cycle on regional and global climate (UU Sustainability/PI/2014): 150 k€
- Small project: Pilot Glob-wide water availability analysis around Shell assets (Shell global solutions/PI/2014): 60 k€.
- PhD: Global high-resolution database of current and future river flood hazard (EIT Climate KIC/PI/2014): 270 k€
- PhD: Fresh groundwater reserves in 40 major deltas under global change (NWO–The New Delta/PI/2015): 250 k€
- PhD1: Rapid regional mapping of salt-fresh water distributions; PhD 2: Rapid modelling and scenarios for strategic policy development (NWO/STW Perspectieven project Water Nexus/PI and WP leader/2015): 630 k€
- Postdoc: Global flood analyser (World Resources Institute/PI/2014): 120 k€
- Postdoc: Groundwater risk and update Aqueduct Atlas (World Resources Institute/PI/2015): 65 k€.
- Postdoc: Groundwater-related failure risks of river dikes (NWO/STW perspectieven project All Risk): 300 k€

Total: 5.9 M€

Web resources research group
www.earthsurfacehydrology.nl
www.globalhydrology.nl

Climate services supported by our group's work
Global flood analyser (WRI Aqueduct): http://floods.wri.org
Global streamflow forecasting: http://forecast.ewatercycle.org/
Global water scarcity analysis and investment: http://w2i.geo.uu.nl
Global water cycle integrator: https://wci.earth2observe.eu/portal/

Example Lectures and interviews
Interview *Water Scarcity* https://www.youtube.com/watch?v=KbQeIHMGvno (Dutch with subtitling – Utrecht University)
Lecture *Waters of the Earth* http://client.cntv.at/EGU2014/?play=38 (EGU Union Lecture 2014)
Lecture *De Druppel* https://www.sg.uu.nl/videos/de-druppel (In Dutch June 2014; Festival de Beschaving)
Lecture *Waarom stijgt de Zeespiegel als je een watermeloen eet?* https://www.youtube.com/watch?v=HN_YmGcApnQ (In Dutch; Universiteit van Nederland, December 2016)

Publications (Web of science: H=41; Scopus: H=42; Google Scholar: H=56)

PhD thesis

Bierkens, M.F.P., 1994 *Complex confining layers: a stochastic analysis of hydraulic properties at various scales.* Netherlands Geographical Studies 184, Utrecht University, 263 pp.

Books

1. Bierkens, M.F.P., P.A. Finke and P. de Willigen, 2000. *Upscaling and downscaling methods for environmental research*. Kluwer Academic Publishers, Dordrecht, 190 pp.
2. Bierkens, M.F.P., J.C. Gehrels and K. Kovar (Editors), 2006. *Calibration and Reliability in Groundwater Modelling: From Uncertainty to Decision Making.* Proceedings of ModelCARE 2005, the Hague. IAHS Publication 304, 316 pp.
3. De Gruijter, J.J., D.J. Brus, M.F.P. Bierkens and M. Knotters, 2006. *Sampling for Natural Resources Monitoring*. Spinger, Berlin, 332 pp.
4. Bierkens, M.F.P., A.J. Dolman and P.A. Troch (Editors), 2009. *Climate and the Hydrological Cycle*. IAHS Special Publication 8. IAHS Press UK, 343 pp.
5. NHV Werkgroep Verdamping. Verdamping in de Hydrologie. NHV special 8. Nederlandse Hydrologische Vereniging en STOWA, 204 pp. (In Dutch: Evaporation and Hydrology: special Dutch Hydrological Society; authorship: chapter 2 Evaporation processes, chapter 3 Calculation of evaporation, chapter 6 Remote sensing and evaporation).

Book Chapter

Geer, F. C. van, M. F. P. Bierkens and H. P. Broers, 2008. *Groundwater monitoring strategies*. In: Encyclopaedia of Hydrological Sciences. Hsa316.

Inaugural Lecture

Bierkens, M.F.P., 2003. Het Water en de Leer. Inaugurele rede uitgesproken op 5 maart 2003 bij de aanvaarding van het ambt van Hoogleraar “Geografische Hydrologie” aan de Universiteit Utrecht. Faculteit Ruimtelijke Wetenschappen, Utrecht (ISBN 90-6266-211-0).

International journals subject to peer review

1. Bierkens, M.F.P. and C.E. Puente, 1990. Analytically derived runoff models based on rainfall point processes. *Water Resources Research 26*(11), 2653-2659.
2. Bierkens, M.F.P. and P.A. Burrough, 1993. The indicator approach to categorical soil data; I. Theory. *Journal of Soil Science 44*, 361-368.
3. Bierkens, M.F.P. and P.A. Burrough, 1993. The indicator approach to categorical soil data; II. Application to mapping and land use suitability analysis. *Journal of Soil Science 44*, 369-381.
4. Bierkens, M.F.P. and H.J.T. Weerts, 1994. Application of indicator simulation to modelling the lithological properties of a complex confining layer. *Geoderma 62*, 265-284.
5. Bierkens, M.F.P. and H.J.T. Weerts, 1994. Block hydraulic conductivity of cross-bedded fluvial sediments. *Water Resources Research 30*(10), 2665-2678.
6. Bierkens, M.F.P., 1996. Modeling hydraulic conductivity of a complex confining layer at various spatial scales. *Water Resources Research 32*(8), 2369-2382.
7. Bierkens, M.F.P. and J.W.J. Van der Gaast, 1998. Upscaling hydraulic conductivity: theory and examples from geohydrological studies. *Nutrient Cycling in Agroecosystems 50*, 193-207.
8. Bierkens, M.F.P., 1998. Modeling water table fluctuations by means of a stochastic differential equation. *Water Resources Research 34*(10), 2485-2499.
9. Bierkens, M.F.P., M. Knotters and F.C. van Geer, 1999. Calibration of transfer-function noise models to sparsely or irregularly observed time series. *Water Resources Research 35*(6), 1741-1550.
10. Bierkens, M.F.P., P.J.T. Van Bakel and J.G. Wesseling, 1999. Comparison of two modes of surface water control using a soil water model and surface elevation data. *Geoderma 89*, 149-175.
11. Bierkens, M.F.P., 2001. Spatio-temporal modelling of the soil water balance using a stochastic model and soil profile descriptions. *Geoderma* 103, 27-50.

12. Bierkens, M.F.P., M. Knotters and T. Hoogland, 2001. Space-time modelling of water table depth using a regionalized time series model and the Kalman filter. *Water Resources Research 37(5)*, 1277-1290.
13. Bierkens, M.F.P., 2005. Designing a monitoring network for detecting groundwater pollution with stochastic simulation and a cost model. *Stochastic Environmental Research and Risk Assessment*. DOI: 10.1007/s00477-005-0025-2.
14. Bierkens, M.F.P. and C.B.M. te Stroet, 2006. Modelling non-linear water table dynamics and specific discharge through landscape analysis. *Journal of Hydrology* 332, 412-426.
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