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C U R R I C U L U M V I T A E

Murugesu Sivapalan

Chester and Helen Siess Professor of Civil and Environmental Engineering
Professor of Geography and Geographic Information Science

Date of Birth: April 19, 1953. Puttur, Sri Lanka **Nationality:** Australia & United States of America

Marital Status: Married to *Banumathy*; **Sons:** *Mayuran* and *Kavin*

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Educational Qualifications

***Doctor Honoris Causa* (Honorary Doctorate),** *Delft University of Technology, The Netherlands*	2012
Ph.D., Civil Engineering (major in Hydrology). *Princeton University, New Jersey, U. S. A.*	1986
M. A., Civil Engineering (major in Hydrology). *Princeton University, New Jersey, U. S. A.*	1983
M. Eng., Water Resources Engineering, *Asian Institute of Technology, Bangkok, Thailand*	1977
B. Sc. Eng. (Hons), Civil Engineering. *University of Ceylon, Peradeniya, Sri Lanka*	1975

Prizes, Awards and Honors

Tau Beta Pi Daniel C Drucker Eminent Faculty Award, *Grainger College of Engineering, UIUC*	2022
Fellow, *American Association for the Advancement of Science (AAAS)*	2021
Prince Sultan Bin AbdulAziz International Prize for Water (Creativity Prize)	2018
Alfred Wegener Medal & Honorary Membership: *European Geosciences Union (EGU)*	2017
Chester and Helen Siess Endowed Professor: *University of Illinois at Urbana-Champaign*	2014–now
***Doctor Honoris Causa* (Honorary Doctorate):** *Delft University of Technology, The Netherlands*	2012
Robert E. Horton Medal: *American Geophysical Union (AGU)*	2011
Hydrological Sciences Award: *American Geophysical Union (AGU)*	2010
International Hydrology Prize: *International Association of Hydrological Sciences/UNESCO/WMO*	2010
Borland Lecturer: *AGU Hydrology Days, Colorado State University, Fort Collins, Colorado*	2007
Centenary Medal: *Commonwealth Government of Australia*	2003
John Dalton Medal: *European Geosciences Union (EGU, formerly EGS)*	2003
Fellow: *American Geophysical Union (AGU)*	2003
Fellow: *Australian Academy of Technological Sciences and Engineering (ATSE)*	2001
Fellow: *Modelling and Simulation Society of Australia and New Zealand (MSSANZ)*	2001
Biennial Medal (Natural Systems): *Modelling and Simulation Society of Australia and New Zealand*	2001
Life Member/Fellow: *The International Water Academy (TIWA), Oslo, Norway*	2000
Lise Meitner Fellow: *Austrian Science Foundation*	1995

Other Recognition

Honorary Professor, *Tsinghua University, Beijing, China*	2021-now
Sigma Xi, *Scientific Research Honor Society, USA*	2020-now
Academic Council Member, Ramaiah University of Applied Sciences, *Bengaluru, India*	2019-2020
Satish Dhawan Visiting Chair Professor, *Indian Institute of Science, Bengaluru, India*	2019-2020
Sivapalan Young Scientists Travel Award, *International Association of Hydrological Sciences*	2019-now
Distinguished Visiting Professor, *Tsinghua University, Beijing, China*	2017-2019
***Water Resources Research* Editor's Citation for Excellence in Refereeing,** *American Geophysical Union*	2019
***Water Resources Research* Editor's Choice Award** (Apurv et al.), *American Geophysical Union*	2018
***Water Resources Research* Editor's Choice Award** (Elshafei et al.), *American Geophysical Union*	2016
CAS President's International Visiting Fellow (PIFI), *Chinese Academy of Sciences*	2015
International Visiting Research Scholar: *Peter Wall Institute, University of British Columbia, Canada*	2015
Visiting Professor: *Tsinghua University, Beijing, China*	2012
Distinguished Alumni Award: *Asian Institute of Technology Alumni Association (AITAA), Thailand*	2011
Distinguished Visiting Professor: *University of Technology Sydney, Australia*	2011

Founding Section Editor (Hydrology and Water Resources): *Geography Compass* (John Wiley) 2006-2009
Executive Editor: *Hydrology and Earth System Sciences Journal* (European Geosciences Union) 2004–2012
Founding Chair: *IAHS Decade on Predictions in Ungauged Basins* 2002–2005
Winner, WA Water Industry Awards (along with Matthew Hipsey and Iain Laing) 2002
Visiting Professor: *Delft University of Technology, The Netherlands* 2000-2001/2008-2010
Visiting Professor: *Vienna University of Technology, Austria* 1995/1996, 2001, 2012-2014
Commendation Certificate, ***Achievement in Postgraduate Supervision***, *University of Western Australia* 1994

Employment Record

DATES	DETAILS OF APPOINTMENT
From August 2014 – to present	**Chester and Helen Siess Professor of Civil and Environmental Engineering,** University of Illinois, Urbana-Champaign
From August 16, 2005 – to present	**Professor of Civil and Environmental Engineering** **Professor of Geography** and **Geographic Information Science**
From April 2020 – to present	**Honorary Professor, Department of Hydraulic Engineering** Tsinghua University, Beijing, China
From May 21, 2020 – December 21, 2020	**Visiting Professor** Vienna University of Technology, Austria
From October 1, 2019-March 31, 2020	**Satish Dhawan Endowed Visiting Professor** Indian Institute of Science, Bangalore, India
From January 1, 2017-December 31, 2019	**Distinguished Visiting Professor** Dept of Hydraulic Engineering, Tsinghua University, Beijing, China
January 1, 2016 – July 31, 2016	**Visiting Professor** Vienna University of Technology, Austria
From June-August 2011	**Distinguished Visiting Professor** University of Technology Sydney, Australia
From May 1, 2008 – June 30, 2010	**Visiting Professor**, Delft University of Technology, The Netherlands
From January 1, 2006 – December 31, 2008	**Adjunct Professor of Environmental Systems Engineering** University of Western Australia
June 1, 2001 – July 15, 2001	**Visiting Professor** Vienna University of Technology, Austria
December 1, 2000 – May 31, 2001	**Visiting Professor** Delft University of Technology, The Netherlands
November 23, 1999 – August 15, 2005	**Professor of Environmental Engineering** Centre for Water Research, University of Western Australia
June 1, 1996 – June 30, 1997	**Head, Department of Environmental Engineering** Centre for Water Research, University of Western Australia
July 15, 1995 – February 10, 1996	**Visiting Professor/Lise Meitner Fellow** Vienna University of Technology, Austria
August 15, 1995 – November 22, 1999	**Associate Professor (with tenure) of Environmental Engineering** Centre for Water Research, University of Western Australia
September 1, 1988 – August 15, 1995	**Lecturer and Senior Lecturer** Centre for Water Research, University of Western Australia
July 1, 1986 to August 31, 1988	**Research Associate/Research Staff Member** Department of Civil Engineering, Princeton University
September 1981 – June 1986	**Assistant in Research/Instruction & Graduate Student** Department of Civil Engineering, Princeton University
July 1978 – June 1981	**Civil Engineer/Senior Consultant** Rocks & Stones (Nig) Ltd., Ibadan, Nigeria
August 1975 – December 1977	**Graduate Student/Research Associate:** Division of Water Resources Engineering, Asian Institute of Technology, Thailand
February 1975 – August 1975	**Instructor in Civil Engineering**, University of Sri Lanka, Peradeniya

Research Activities

Research Interests

My research is aimed at advancing hydrologic predictions (i.e., streamflow, including extremes, and stream water quality), at catchment scale through overcoming three major challenges to extrapolation: (i) across space (i.e., from small to large space scales); (ii) across places (i.e., across regional gradients of climate and topography); and, (iii) across time (e.g., in changing physical and/or social environments).

With these in mind, the thrust of my fundamental research is to gain understanding of observed space-time variability of rainfall-streamflow-water quality processes, including extremes, at a range of time and space scales, and across places (i.e., across climatic, topographic and socio-economic gradients, both regionally and globally), and interpret these in terms of underlying climate-soil-vegetation-topography-human interactions and feedbacks.

Advances in hydrological understanding are then used to develop hydrological models, both top-down and bottom-up, that can be used to make predictions of water quantity and water quality at the catchment scale, regionally across places, and in the future under human-induced climatic and land use and land cover changes and other human interferences in the hydrologic cycle.

Major Research Themes

- Effects of Spatial Heterogeneity and Scale
- Predictions in Ungauged Basins & Hydrologic Similarity
- Catchment Co-evolution & Ecohydrology
- Coupled Human-Water Interactions & Socio-hydrology
- Modeling of Catchment Water Balance & Water Quality

People: Summary of Research Collaboration and Supervision

Visiting Professors/Scientists	16
Postdoctoral fellows/research staff supervised	13
PhD students supervised	20
M.Eng.Sc students supervised	9
M.Eng.Sc (preliminary) students supervised	1
Visiting postgraduate students supervised	15
Undergraduate students (pass + honours) supervised	34

National/International Collaboration

Professor Hafzullah Aksoy Istanbul Technical University	Modeling of drought propagation across socio-hydrologic systems
Dr Laijiao Chen Chinese Academy of Sciences	Ecohydrological modeling in Loess Plateau, China
Dr Guangyao Gao Chinese Academy of Sciences	Understanding Process Controls on Space-Time Patterns of Sediment Delivery in the Loess Plateau, China
Dr Suxia Liu Chinese Academy of Sciences	Predictions under Change and Socio-hydrology: China August 2015 – to present
Dr Younes Alila University of British Columbia	Effects of Forest Cover Change on Flood Frequency October 2014-to present
Dr Saket Pande TU Delft	Meta-analysis of Socio-hydrology: Challenges and Opportunities
Dr Veena Srinivasan ATREE, Bangalore, India	Predictions in Socio-hydrology for Water Security Assessments
Dr Alberto Viglione	Flood Frequency at River Confluences: Copula Based Approach

Technical University of Vienna	January-May 2011
Dr Sally Thompson University of California, Berkeley	Catchment ecohydrology: the role of vegetation in catchment water balance June 2009-present
Prof. Peter Troch University of Arizona	Catchment Ecohydrology and Catchment Classification June 2007-present
Dr Thorsten Wagener Penn State University, Bristol University	Catchment Classification and Hydrologic Change
Dr Cao Yu Zhejiang University, China.	Interactions of Landscape Patterns and Ecohydrological Processes in Human-dominated Watersheds. 2009/2010
Dr Wouter Buytaert University of Bristol, U.K.	REW Based Distributed Watershed Modeling on GIS (WUN Visiting Fellow) 2008
Prof. Keisuke Nakayama Kitami Institute of Technology, Japan.	Pattern Dynamics Analysis of Dissolved Oxygen (DO) in Tokyo Bay 2008, 2009, 2010
Dr Fuqiang Tian Tsinghua University, Beijing, China	Extensions of the REW Theory to Reflect Cold Regions Hydrology 2007-2008
Dr Patricia Saco University of Newcastle, Australia	Vegetation Impacts on Land Surface Evolution 2006 Sabbatical Visitor, University of Illinois, Urbana-Champaign
Prof. Hubert Savenije Delft University of Technology, Holland	Predictions in Ungauged Basins and Salt Intrusion in Tidal Rivers *(2004-2005 sabbatical visitor, Gledden Senior Fellow)*
Prof. Jeff McDonnell Oregon State University, Corvallis, USA	Dialogue Between Theoretical and Observational Hydrology *(2003 sabbatical visitor, Gledden Senior Fellow)*
Dr Stewart Franks University of Newcastle, Australia	Effects of Climate Variability and Climate Change on Flood Frequency in NSW and WA
Dr Erwin Zehe University of Potsdam, Germany	Distributed Physically Based Modeling Based on the Representative Elementary Approach
Dr. Tim Ellsworth University of Illinois, Urbana, USA	Catchment Scale Water Quality Modelling and Geographical Information Systems *(2002-2003 Sabbatical Visitor)*
Dr Roger E. Smith USDA, Fort Collins	Infiltration into Spatially Variable Soils *(2000 – sabbatical visitor – Gledden Senior Fellow)*
Dr Ross Woods NIWA, Christchurch	Investigation of Space-Time Variability of Runoff Processes (MARVEX Experiment)
Prof. William G. Gray University of Notre Dame, USA	A New Theoretical Framework for Watershed Hydrology *(1998/1999 – sabbatical visitor – Gledden Senior Fellow)*
Prof. S. Majid Hassanizadeh Delft University of Technology	Development of a Catchment-Scale Hydrologic Theory Based on the Averaging Approach
Prof. Hartmut Wittenberg University of Applied Technology Suderburg, Germany	Regionalisation of Flow Duration Curves *(sabbatical visitor – 1998)*
Prof. Vijay K. Gupta University of Colorado, Boulder	Scale Invariance and Scale Dependence in Hydrology *(1997 – sabbatical visitor – Gledden Senior Fellow)*
Dr Yasuhisa Kuzuha Institute for Earth Sciences and Disaster Prevention, Japan	Land Surface - Atmospheric Boundary Layer Interactions & Scaling Behaviour of Flood Frequency *(sabbatical visitor – 1997)*
Dr Jumpei Kubota Tokyo Univ. of Technology & Agriculture, Japan	Up-scaling of Hydrologic Conceptualisations of Subsurface Flow in Steep Forested Catchments

Prof. Tony Jakeman Australian National University	Performance Comparisons of Conceptual Rainfall-Runoff Models in Low-Yielding Catchments in Western Australia *(sabbatical visitor – 1991)*
Prof. Günter Blöschl Technical University of Vienna	Process Controls on Flood Frequency Regionalisation *(host of my 1995/96 and 2001 sabbatical visits to Austria)*

Supervision of Research Staff/Postdoctoral Fellows

Dr Cynthia Castro 2022-2023 UIUC	Green Infrastructure Scaling from Local Observations to Regional Applications as a Coupled Human-Water System (NSF Postdoctoral Fellow)
Dr Darren Drewry (2007-2010), UIUC with P. Kumar	Coupled Water and Carbon Cycle Processes: Optimality, Adaptability, Complexity
Dr Bettina Schaefli October-December 2006, UIUC	Catchments as Nonlinear Filters: Understanding Catchment Similarity for Regionalisation of Rainfall-Runoff Transformations Using Wavelets
Dr Gaku Tanaka (2006 – 2007) UIUC	Approaches Catchment Classification and a Unification of Empirical Theories for Data Analysis
Dr Iain Struthers (2005 – 2006)	Effects of Climate Change and Long-Term Climate Variability on Annual Water Balances
Dr Yutaka Ichikawa (2003-2004)	Global hydrology: Climate, Soil and Vegetation Interactions on Mean Annual Water Balance and the Budyko Curve
Dr Yoshiyuki Yokoo (2002-2003)	Ecohydrology: Climate, Soil, Vegetation Interactions on Mean Annual Water Balance and the Budyko Curve
Dr Christian Zammit (2000-2002)	Effects of Bauxite Mining: Development of Improved Process Descriptions for a Large Scale Catchment Model
Dr Merab Menabde (1999-2001)	A Theory Linking Space-Time Variability of Runoff Fields in a River Basin
Dr Hua Sun (April-November, 1999)	Extension and Application of LASCAM Water Quality Model to Rural and Urban Subcatchments of Swan River
Dr. Aloys Hooijer (1996-1997)	Water Balance Modelling of Peatswamp Catchments, Sarawak, Malaysia
Dr. Neil Viney (1992-1998)	1) Large-Scale Catchment Modelling Project 2) Water Quality Modelling of the Swan-Avon River Basin
Dr. Maarten Waterloo (1995)	Environmental Impact Assessment for Bakun Dam
Jens E. Larsen (1993-1995)	1) Environmental Impact Assessment for Bakun Dam 2) Hydraulics-Based Modelling of Flood Routing

Supervision of Student Research

Ph.D Students

Felipe Augusto Arguello de Souza (with Prof. Mario Mendiondo)	Socio-hydrologic Modeling of Urban Water Supply Management for Sao Paulo City, Brazil. University of Sao Paulo
Iolanda Borzi (Univ of Calabria, Italy) (with Dr Brunella Bonaccorso) 2020	Socio-hydrologic Modeling in a Complex Aquifer System for Improving Water Management Under Climate and Human Induced Environmental Changes
Dr Roobavannan Mahendran (UTS Syd) (with Prof. Jaya Kandasamy) 2017	Socio-hydrologic Modeling of the Murrumbidgee River Basin, Australia: Trajectories of Human-Water Interactions under Climate Change
Dr Adanech Yared (Univ. Addis Ababa) (with S. S. Demissie) 2017	The Impacts of Water Infrastructure development and Climate Changes on Eco-hydrology of Omo-Ghibe River Basin, Ethiopia
Dr. Hasnein Bin Tareque (U. West. Aust.) (with Dr Matt Hipsey) 2016)	An integrated eco-hydrological approach for assessing critical wetland habitats and conservation reserves in a changing climate

Dr. Yasmina Elshafei (Univ. West. Aust.) (with Dr Matt Hipsey) 2016	The Co-Evolution of People and Water: A Modelling Framework for Coupled Socio-Hydrology Systems and Insights for Water Resource Management
Dr. Mary Yaeger (UIUC, CEE), 2014 (with Prof. Ximing Cai)	Striking a Balance between Water for Food, Energy, and the Environment: A Quantitative Framework to Guide Sustainable Water management for a Changing Future. Now Research Associate, University of Arkansas
Dr Sheng Ye (UIUC, GEOG.), 2014 (with Prof. Shaowen Wang)	Effect of Seasonality on Dissolved Nutrient Transport and Transformation over Hillslope to River Basin Scales. Now at *Zhejiang University, Hangzhou, China*
Dr Evan Coopersmith (UIUC, CEE) 2013 (with Prof. Barbara Minsker)	Data-Driven Modeling of Hydrologic Behavioral Trends: Decision Support via Integration of Multiple Spatial & Temporal Scales. Now Research Scientist at *US Department of Agriculture, Agriculture Research Service*
Dr Ciaran Harman (UIUC, CEE), 2011 (with Prof. P. Kumar)	Landscape Structure, Regimes, and the Co-evolution of Hydrologic Systems Now Assistant Professor at *Johns Hopkins University, Baltimore, Maryland*
Dr Hongyi Li (UIUC, CEE), 2010	Diagnostic Analysis of Runoff Partitioning at the Catchment Scale Now Assistant Professor at: *University of Houston*
Dr Jos M. Samuel, 2008	Effects of Multi-scale Rainfall Variability on Flood Frequency: A Comparative Study of Catchments in Perth, Newcastle and Darwin, Australia Now Research Associate: *at McMaster University, Canada*
Dr Gavan McGrath, 2007 (with Dr C. Hinz)	Pattern Dynamics Approach to the Exploration of Climate Controls on the Frequency and Magnitude of Pesticide Transport Now Research Associate: *University of Western Australia*
Dr Dyah Indriana Kusumastuti, 2007 (with Dr D. Reynolds)	Effects of Threshold Nonlinearities on the Transformation of Rainfall to Runoff to Floods in a Lake Dominated Catchment System Now Associate Professor: *University of Lumpung, Sumatra, Indonesia.*
Dr Stanislav J. Schymanski, 2007 (with Dr M. Roderick)	Transpiration as the Leak in a Carbon Factory: A Model of Self-Optimising Vegetation. Now Research Scientist: *ETH, Zurich, Switzerland*
Dr Haksu Lee, 2007 (with Dr E. Zehe)	Development and Reliability Analysis of a Physically Based Hydrological Model Considering the Effects of Sub-Grid Heterogeneity. Now Research Scientist: *Hydrological Sciences Branch, NOAA, Colorado*
Dr Carlos Ocampo, 2005 (with Dr C. Oldham)	Hydrological and Biogeochemical Controls on Catchment Nutrient Response. Now Assistant Professor at: *University of Western Australia*
Dr Iain Struthers, 2004 (with Dr C. Hinz)	Climate and Soil Controls on the Water Balance of Disturbed Landscapes Rehabilitation: Boddington Gold Mine. Now: Consultant Engineer, *Edinburgh, U.K.*
Dr Chatchai Jothityangkoon, 2001	Space-Time Variability and Scaling of Hydrologic Responses and the Role of Catchment Water Balance. Now Associate Professor: *Suranaree University of Technology, Thailand*
Dr Clare Taylor, 2000 (with Drs. K.-H. Wyrwoll and A. George)	Flood Geomorphology of the Fitzroy River, North-Western Australia: Controls and Implications for Paleo-Climate Reconstruction *PhD with Distinction.* Now at: *National Water Commission, Canberra*
Dr Paolo Reggiani, 1999 (with Prof. M. Hassanizadeh)	A Unifying Framework for Watershed Thermodynamics *PhD with Distinction.* Now Professor: *University of Siegen, Germany*
Dr Ross Woods, 1997	A Search for Fundamental Scales in Runoff Generation: Combined Field and Modelling Approach. Now Senior Lecturer in Civil and Environmental Engineering: *Bristol University, U. K.*
Dr Richard Silberstein, 1997	An Investigation of Water and Energy Balances at Small Catchment Scales: Modelling and Validation. Now at *Edith Cowan University, Australia*
Dr John Snell, 1996	A Physically-Based Representation of Channel Network Response: An Integration of Geomorphology, Hydraulic Geometry, and Channel

	Hydraulics. Now a Consultant Engineer: *Tasmania, Australia*
Dr Neil Coles, 1993 (with Prof. G. Aylmore)	Soil Factors Affecting Runoff Generation in Agricultural Catchments in South Western Australia. Now Professor: *University of Western Australia*

Masters Students

Charlotte Cherry (UIUC, CEE) With Ximing Cai	Evaluating Effectiveness of Irrigation Technification, Using a Calibrated Optimization Model, in the Primary Irrigation District of Guanajuato, Mexico.
Zheng Li (UIUC, CEE), 2014	Socio-hydrological Modeling of Coupled Human-Water System Dynamics in the Murrumbidgee River Basin, Australia
Ciaran Harman (UIUC, Geog.), 2007	Effects of Heterogeneity on Subsurface Flow in Hillslopes and Approaches to Closure
Kyongho Son, 2006	Improving Model Structure and Reducing Parameter Uncertainty in Conceptual Water Balance Models
Matthew Hipsey, 2003	Improving Rural Dam Efficiency in Semi-Arid Western Australia
Stuart Atkinson, 2002 (with Dr R. Woods)	Climate, Soil, Vegetation Controls on Streamflow Variability with Changing Time Scales and Implications for Model Complexity.
Seth Johnson, 2000 (with P. Commander)	Hydrogeological Investigation of the Northern Goldfields Region, Western Australia
Justin Robinson, 1997	Role of Time Scales in Catchment Storm Response and Flood Frequency
Jens E. Larsen, 1993	Hydraulics-Based Modelling of Flood Routing External from: Technical University of Denmark, Lyngby
John Ruprecht, 1991	Water and Salt Transport Modelling in Small Experimental Catchments in South-West Western Australia

Masters Preliminary Students

Justin Robinson, 1993	Catchment-Scale Runoff Prediction Based on Concepts of Similarity

Visiting Research Students

Shuyue Wu	Tsinghua University, Beijing, China Controls on Regional Patterns of Punoff Reneration across the United States
Bin Li	Beijing Normal University, China Socio-hydrologic Modeling of Beijing Water Supply Management
Fei Xu	Nanjing University, Nanjing, China Hydrological modeling of the Heifei Basin, Western China
Yifan Cheng	Tsinghua University, Beijing, China Reconciliation of Evaporation Estimates for MOPEX Basins
Ye Liu	Tsinghua University, Beijing, China Socio-hydrologic Modeling of Efficiency Paradox, Tarim Basin
Zhi Zhang	Tsinghua University, Beijing, China Salt Transport in Agricultural Fields in Tarim Basin, Western China
Tim H.M. van Emmerik, 2013	Delft University of Technology, The Netherlands Coupled Socio-Hydrological Modeling of the Murrumbidgee Basin, Australia
Alejandra Carmona	Universidad Nacional de Colombia, Medellin, Colombia Mean annual water balance, and the Budyko hypothesis
Wouter Berghuijs, 2013	Delft University of Technology, The Netherlands Mapping of Landscape Structure to Model Structure across Continental USA

Melkamu Ali, 2012-2013	Università degli Studi – Roma Tre, Scienze dell'Ingegneria Civile, Italy Analysis of the nonlinear storage - discharge relationship at the catchment scale
Pedro Guilherme de Lara, 2011	Engenharia Sanitária e Ambiental, Universidade Federal de Santa Catarina Top-down Modelling of Multi-scale Water Balance Variability
Danielle Bressiani, 2010	Engineering School of São Carlos, University of São Paulo Prediction of Combined Sewer Overflows in Large Urban Watersheds
Xiangyu Xu, 2009-2010	Tsinghua University, Beijing, China Process Controls on Inter-Annual Variability of Annual Water Balance
Dengfeng Liu, 2007-2008	Tsinghua University, Beijing, China Coupled Modeling of Water, Sediments and Nutrients at Watershed Scale
Huemin Lei, 2007-2008	Tsinghua University, Beijing, China Application of Vegetation Optimality Model in Agricultural Landscapes
Ellen Tromp, 2005	Delft Technical University, The Netherlands Application of the REW Approach to Spatially Distributed Modelling of the Collie River Basin, Western Australia
Sergio Contreras López, 2004	Consejo Superior De Investigaciones Cientificas, Almeria, Spain Predicting Inter-Annual Variability of Runoff from Semi-Arid Mediterranean Catchments: A Top-Down Approach
Laura Montanari, 2004	University of Bologna, Italy Identification of Dominant Processes in a Tropical Catchment via Physically Based Hydrological Modelling
Matteo Marzani, 2004	University of Firenze, Italy Comparative study of the nature of hydrological variability of three catchments in Perth, Newcastle and Darwin
Ivan Portoghese, 2003-2004	Technical University of Bari, Italy Modelling of the Water Balance in Semi-Arid Regions: Southern Italy
Charline Nennig, 2003	University of Strasbourg, France Comparative Hydrology of Catchments in Australia and France
Arnout van Soesbergen, 2002	Vrije Universiteit Amsterdam, The Netherlands Water Balance Modelling of Lake Warden, Esperance, Western Australia
Blanca Berganza Lopez, 2000	Universidad Politecnica de Madrid, Spain Water Balance of Small Catchments for Rural Water Supply
Gerald Eder, 1999	University of Agricultural Science (BOKU), Vienna, Austria Process Controls on Spatial Patterns of Water Balance
Andreas Morhard, 1998	Univ. of Freiburg, Germany: Regional variations of Subsurface Runoff Generation Across South-West Western Australia
Simon Hoeg, 1996	Univ. of Freiburg, Germany: Space-time Averaging of Rainfall From a Catchment's Perspective
Antonio Gomez Plaza, 1994	Consejo Superior De Investigaciones Cientificas, Spain: Runoff Processes in Semi-Arid Environments: Hydrological Heterogeneity and Similarity, and Scale Effects
Jens Larsen & Per Linnet, 1992	Technical University of Denmark: Heterogeneity and Similarity of Catchment Responses in Small Agricultural Catchments

Undergraduate Students

Ashley Kirvan, 2004/2005 (joint with Dr Ray Steedman)	Quantification of Wildfire Risk in South-West Western Australia *Honours Thesis, Univ. of WA*

Melinda Burton, 2005	Application of LASCAM to South West Forested Catchments: Understanding the Uncertainty in Water Yield and Stream Salinity Modelling and Potential Applicability of Regional Parameters (a CEED project) *Honours Thesis, Univ. of WA*
Mark Wittwer, 2004/2005	Daisyworld Modelling and Feedback Mechanisms *Honours Thesis, Univ. of WA*
Sam Nicol, 2004 (joint with Dr Ray Steedman)	Probabilistic Assessment of Fire Spreading and Management in South-West Western Australia. *Honours Thesis, Univ. of WA*
Christina Young, 2003	Effect of Climate Change and Natural Climate Variability on Streamflows in the South-West of Western Australia *Honours Thesis, Univ. of WA*
Dina Rahmah, 2003	Effect of Climate Change and Natural Climate Variability on Annual and Monthly Flood Frequency Curves in Western Australia *Honours Thesis, Univ. of WA*
Cameron Hanush, 2003	Effect of Climate Change and Natural Climate Variability on Intensity-Duration-Frequency (IDF) Curves in Western Australia *Honours Thesis, Univ. of WA*
Thaddeus Chew, 2003	Effect of Climate Change on Groundwater Recharge in the South-West of Western Australia. *Honours Thesis, Univ. of WA*
Mary-ann Berti, 2002	Effect of Rising Water Tables on Flooding in the Blackwood Catchment *Honours Thesis, Univ. of WA.* (a CEED Project)
Jacqueline Schöpf, 2002 (joint with Dr Michael Burton)	An Economic Assessment of the Effect of Rising Water Tables on Flooding in the Blackwood Catchment *Honours Thesis, Univ. of WA.* (a CEED Project)
Gajan Sivandran, 2002	Effect of Rising Water Tables and Climate Change on Annual and Monthly Flood Frequencies. *Honours Thesis, Univ. of WA.*
Palenque Blair, 2000	Urbanisation Effects on Stream Hydrology and Nutrient Loads *Honours Thesis, Univ. of WA.*
Elonn Tyl, 2000	Water Balance Modelling of Water Pollution Control Ponds *Honours Thesis, Univ. of WA.*
Michelle Donnelly, 2000 (joint with Dr Simon Toze)	Biological Clogging During Artificial Recharge in Albany *Honours Thesis, Univ. of WA.*
Sivan Sivanathan, 1999 (joint with Dr Jim Davies)	The Role of Compensating Basin in Reducing Peak Flow, Velocity and Erosion, *Honours Thesis, Univ. of WA*
Kala Senathirajah, 1999 (joint with Judy Eastham)	Examination of the Effect of Deep Rooted Vegetation on the Water Balance of a Bauxite Residue Impoundment *Honours Thesis, Univ. of WA.* (a CEED Project)
Chris Gwynne, 1998	Stormwater Modelling for Mineral Sands Site, North Capel, Using the RAFTS model. *Honours Thesis, Univ. of WA.*
Danielle Hanns, 1998	Monitoring and Modelling of the Water Balance of Bauxite Residue Impoundment: Area A, Kwinana. *Honours Thesis, Univ. of WA.*
Kerrie Hawkes, 1998	Spatial Distribution of Annual Water Balance in the South-West of WA *Honours Thesis, Univ. of WA.*
Gavan McGrath, 1998 (joint with C. Pattiaratchi)	Bunbury Coastal Stormwater Drainage Scheme *Honours Thesis, Univ. of WA.*
Leanne Phillips, 1998	Effects of Mining and Rehabilitation on Water and Salt Yield from ALCOA's Del Park Catchment. *Honours Thesis, Univ. of WA.*
Stuart Atkinson, 1997	Water Balance of the Ucarro Plot, Katanning: A Study of the Mechanics of Soil Water Transport. *Honours Thesis, Univ. of WA.*

Andrew King, 1997	Investigating Effects of Climate Variability on WA's Surface Water Resources. *Honours Thesis, Univ. of WA.* *Awarded the Keulegan Prize for best honours thesis (CWR)*
Joseph Scholz, 1997	A Modelling Study of the Effects of Deforestation on Sediment Yield from Small Catchments. *Honours Thesis, Univ. of WA.*
Matthew Bowman, 1996	The Flow Duration Curve and the Flood Frequency Curve: Statistical Characterisation of Catchment Response.
Chris Deshon, 1994	Improved Characterisation of River Channel Hydraulics for Flood Estimation. *Honours Thesis, Univ. of WA.*
Brad Harris, 1994	A Simple Loss Model for Western Australian Catchments Based on Field Measured Soils Data. *Honours Thesis, Univ. of WA.*
Sally Stewart-Wynne, 1994	Evaluation of the Effects of Different Land Use Treatments on the Water Balances of the Conjurunup Catchment. *Honours Thesis, Univ. of WA.*
Brett Wallace, 1994	Energetics of an Evaporation Pan. *Pass Thesis, Univ. of WA*
Alex Rogers, 1992	The Development of a Simple Infiltration Capacity Equation for Spatially Variable Soils. *Honours Thesis, Univ. of WA.*
Michael Dufty, 1992	Hydrology and Drainage for the Newman to Port Hedland Railroad *Honours Thesis, Univ. of WA.*
Stephanie Gorman, 1992	Extreme Flood Estimation for the Conjurunup Catchment in the South-West of Western Australia *Pass Thesis, Univ. of WA*
Justin Robinson, 1992	A Geomorphic Model for the Catchment-Stream Problem *Pass Thesis, Univ. of WA*
Sean Tonkin, 1992	Application of a Large Catchment Water Balance Model to Upper Denmark Catchment. *Pass Thesis, Univ. of WA*
Rashid Mukri, 1990	Hydraulic Models of Runoff Routing Based on Geomorphology *Pass Thesis, Univ. of WA*

Publications Summary

Summary

Published in refereed journals (incl. in press)	270
Edited books	4
Book chapters (incl. in press)	19
Published in refereed conference proceedings	43
Edited journal special issues & conference proceedings	17
Non-refereed journal contributions and published reports	18
Published as research reports	27
Conference presentations (abstract only)	327
Invited lectures and seminars	110

List of Publications

Refereed Journal Articles by Year

2022

1. Chen, Xi, Dingbao Wang and M. Sivapalan (2022). Data-guided exploration of energy partitioning at the land surface in the contiguous United States. *Water Resources Research* (in re-review).
2. Ghoreishi, S., A. Elshorgaby, S. Razavi, G. Bloschl, M. Sivapalan and A. Abdelkhader (2022). Cooperation in a transboundary river basin: a large-scale socio-hydrological model of the Eastern Nile. *Hydrology and Earth System Sciences* (in re-review).
3. Yu, D. J., M. Haeffner, Hanseok Jeong, S. Pande, J. Dame, G. Di Baldassarre, G. Garcia-Santos, L. Hermans, R. Muneepeerakul, F. Nardi, and M. Sanderson, Fuqiang Tian, Yongping Wei, J. Wessels and M. Sivapalan (2022). On

capturing human agency and methodological interdisciplinarity in sociohydrology research. *Hydrological Sciences Journal* (in re-review).
4. Wei, Yongping, Jing Wei, Gen Li, Shuanglei Wu, David J. Yu, M. Ghoreishi, M. Sivapalan and Fuqiang Tian (2022). A socio-hydrologic framework for understanding conflict and cooperation with respect to transboundary rivers. *Hydrology and Earth System Sciences*, 26, 2131–2146, https://doi.org/10.5194/hess-26-2131-2022.
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Quality of Journals

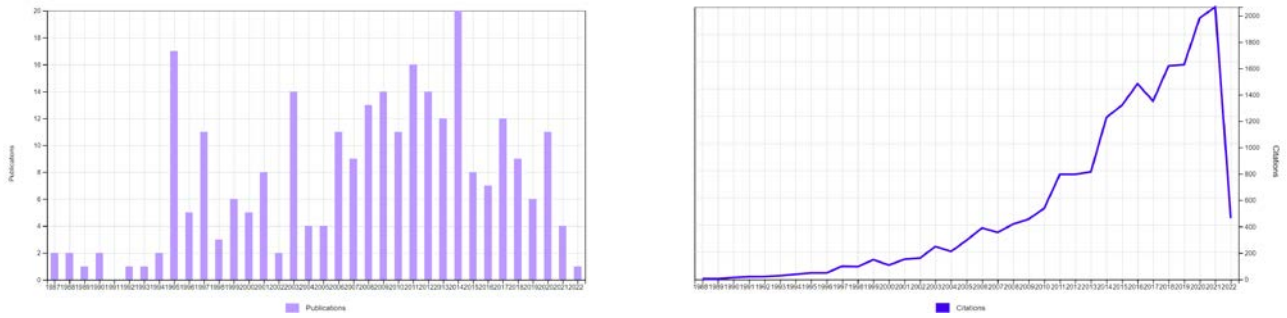
Table below lists the journals in which I have published papers. The Impact Factors (IF) and the ranking of the journal relative to the total number in its group have been taken from the Science Citations Index, Citation Reports. The number of papers I have published in each journal is also shown.

Journal	IF	Rank	Group	No.
Water Resources Research	4.309	9/94	Water Resources	93
Hydrology and Earth System Sciences	5.153	3/94	Water Resources	44
Hydrological Processes	3.256	18/94	Water Resources	35
Journal of Hydrology	4.500	6/94	Water Resources	17
Advances in Water Resources	4.016	11/94	Water Resources	15
Hydrological Sciences Journal	2.186	42/94	Water Resources	4
Plant, Cell and Environment	6.364	11/234	Plant Sciences	2
Ecological Modeling	2.321	62/145	Ecology	2
Agricultural and Forest Meteorology	3.821	9/67	Met. & Atmosph. Sciences	2
J. Geophysical Research/Biogeosciences	3.406	19/175	Geosciences & Multidiscip.	3
Journal of Geophysical Research/Atmospheres	3.426	19/175	Geosciences & Multidiscip.	1
J. Geophysical Research/Earth Surface	3.556	19/175	Geosciences & Multidiscip.	1
Geophysical Research Letters	4.497	22/275		1
Geography Compass			Geography	1
Environmental Fluid Dynamics	1.297	70/137		1
European Journal of Soil Science				1
Trans. Japanese Geomorphological Union				1
Proceedings of the Royal Society (Series A):	n/a	n/a	Eng. & Math. Sciences	1
Reviews of Geophysics	14.800	1/79	Geochem./Geophys.	1

Quality of Publications: ISI Citations Summary

Total number of publications	268
Publications per year (1986-present):	7.56
Total number of citations	19,795
Citations per article	73.86
Citations per year (1986-present):	556.13
H Index	72

Record of ISI recognized publications (left panel, max 22) and citations (right panel, max 2070)



Journal Articles (in review)

1. Brasil, P. P., P. H. A. Medeiros, F. Arraes, and M. Sivapalan (2022). Operational criteria for non-strategic reservoirs in drylands to maximize farmer income from irrigation: role of the hydrologic regime. Submitted to *Water Resources Management*.
2. Dey, P., Mathai, J., M. Sivapalan and P. P. Mujumdar (2022). Climatic and landscape controls of regional streamflow variability across Peninsular India via the flow duration curve. Submitted to *Water Resources Research*.

3. Ma, Zewei, Kaiyu Guan, M. Sivapalan, Bin Peng, Li Li, Ming Pan, Wang Zhou and Jingwen Zhang (2022). Agricultural nitrate export patterns dominated by crop rotation and tile drainage. Submitted to *Nature Geoscience.*

Journal Articles (in preparation)

1. Ghotbi, S., Dingbao Wang, A. Singh and M. Sivapalan (2022). Process-based exploration of climate controls of flow duration curves: Role of timescale interactions of fast and slow flows. In preparation, to be submitted to *Water Resources Research.*
2. Zhang, Jingwen, Kaiyu Guan and M. Sivapalan (2022). An upscaling approach for field-scale irrigation water use quantification. In preparation, to be submitted to *Water Resources Research.*
3. Castro, C. V. and M. Sivapalan (2022). Exploring the network properties of nature-based solutions: power dynamics and cohesive action. In preparation, to be submitted to *Water Resources Research.*
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6. Meira Neto, A. A., P. Medeiros, J. Araujo and M. Sivapalan (2022). Hydrologic modeling of human-impacted catchments in a dry environment: Ceara Province, Brazil. In preparation, to be submitted to *Water Resources Research.*
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8. Meira Neto, A. A., P. Medeiros, J. Araujo and M. Sivapalan (2022). Drought propagation through reservoir networks: example of the Upper Jaguaribe basin, Brazil. In preparation, to be submitted to *Water Resources Research.*
9. Iravanloo, B. M., Garcia, M., and M. Sivapalan (2022). Characterizing anthropogenic changes in coupled human-water systems: hybrid application of top-down hydrological modeling and data analysis. In preparation, to be submitted to *Water Resources Research.*
10. Chen, Xi, P. H. A. Medeiros, H. Kreibich, Fuqian Tian, Dengfeng Liu, M. Roobavannan, P. Pouladi, A. AghaKouchak, L. Schoppa, Erhu Du, A. Alborzi, and M. Sivapalan (2022). A data-guided exploration of sustainability in socio-hydrological systems. To be submitted to *Hydrological Sciences Journal*
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12. Kreibich, H., H. H. G. Savenije, G. Bloeschl, B. Arheimer, A. Montanari, C. Cudennec, M. Sivapalan, D. P. Loucks, A. Castellarin, V. Srinivasan, S. E. Thompson, A. Viglione, H. McMillan, G. Di Baldassarre, Junguo Liu, Fuqiang Tian, A. F. van Loon and E. M. Mendiondo (2023). A decade of Panta Rhei: Change in Hydrology and Society: A review. In preparation, to be submitted to *Hydrological Sciences Journal*.
13. Ma, Zewei, C. Bruhn, J. Andrade Ramos, L. Fouts, Diming Liao, C. V. Castro and M. Sivapalan (2022). Regional pattern of seasonal water balance dynamics across the conterminous United States: 1. Modeling investigation. In preparation, to be submitted to *Water Resources Research*.
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Research Reports

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15. Sivapalan, M. and G. Blöschl (1996). Scaling and regionalisation of runoff response based on the derived flood frequency - Final Report to the FWF (Lise Meitner Fellowship), Research Report ED 1111 MS, Centre for Water Research, University of Western Australia.
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22. Sivapalan, M., J. K. Ruprecht, C. G. Jeevaraj and N. R. Viney (1993). Water and salt balance modeling to predict the effects of land use changes in forested catchments. CWR Research Report WP 811 MS.
23. Larsen, J. E., M. Sivapalan and B. C. Bates (1993). Hydraulic Models of Flood Routing. CWR Research Report No. WP 794 MS.
24. Larsen, J. E., P. E. Linnet, N. A. Coles and M. Sivapalan (1993). Heterogeneity and similarity of catchment responses in small agricultural catchments in the south-west of Western Australia. CWR Research Report No. WP 503 MS.
25. Short, D. A. and Sivapalan, M. (1992). Strategies for modelling the hydrology of large catchments: Discussion paper. CWR Research Report WP 738 MS.
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27. Sivapalan, M. (1990). Extreme flood investigation in the south-west of Western Australia. CWR Research Land and Water Research News, West Australian Water Resources Council, Perth, Vol. 8, pp. 14-21, 1991. Report WP 686 MS.

Papers Presented at Meetings: Abstract Only

1. Sivapalan, M. (2022). Historical Socio-hydrology: Slow-Fast Dynamics and Emergent Phenomena in the Hydro-social Cycle. Hydrologic Cycle and Historical Societies Workshop. Duke University, February 18-19, 2022.
2. Samuel Park, Peyman Yousefi, Behshad Mohajer, David J. Yu, Margaret Ellen Garcia and Murugesu Sivapalan (2021). On modeling the interdependency among adaptive reservoir operation, floodplain land-use, and agricultural production: a socio-hydrological approach. AGU Fall Meeting, Session H45V, December 13-17, 2021. New Orleans.
3. Zewei Ma, Kaiyu Guan, Murugesu Sivapalan, Bin Peng, Ming Pan and Wang Zhou (2021). Interaction of hydrological and anthropogenic processes controls the relationship between streamflow discharge and nitrogen concentration in the U.S. Midwestern watersheds. AGU Fall Meeting, Session H45L, December 13-17, 2021. New Orleans.
4. Fuqiang Tian, Jing Wei, Murugesu Sivapalan and Guenter Bloeschl (2021). Coevolution and Prediction of Coupled Human-Water Systems: A Synthesis of Change in Hydrology and Society. AGU Fall Meeting, Session H55V, December 13-17, 2021. New Orleans.
5. Parsa Pouladi, Amir Reza Nazemi, Mehrsa Pouladi, Zahir Nikraftar, Mohammadreza Mohammadi, Peyman Yousefi, David J. Yu, Abbas Afshar, Antoine Aubeneau, and Murugesu Sivapalan (2021). Adaptative System of Interconnected Loops Emerged from People Coping with Degrading Environment. AGU Fall Meeting, Session SY55D, December 13-17, 2021. New Orleans.
6. Bruno Pereira, Antonio Alves Meira Neto, Pedro Medeiros, José Carlos de Araújo and Murugesu Sivapalan (2021). Drought propagation in the water-scarce northeast of Brazil: societal response to spatio-temporal dynamics of water storage. AGU Fall Meeting, Session SY55D, December 13-17, 2021. New Orleans.
7. Mohammad Ghoreishi, Amin A Elshorbagy, Saman Razavi, Ahmed Abdelkader, Murugesu Sivapalan, and Guenter Bloeschl (2021). Conflict and Cooperation Phenomenon: the Eastern Nile River Basin. AGU Fall Meeting, Session SY35A, December 13-17, 2021. New Orleans.
8. Xi Chen, Pedro Medeiros, Heidi Kreibich, Amir AghaKouchak, Liu Dengfeng, Erhu Du, Lukas Schoppa,, Parsa Pouladi, Mahendran Roobavannan, Fuqiang Tian and Murugesu Sivapalan (2021). Panta Rhei benchmark dataset project: A data-guided exploration of sustainability in socio-hydrological systems. AGU Fall Meeting, Session H51F, December 13-17, 2021. New Orleans.
9. Lu, You, Fuqiang Tian, I. Borzi, R. J. Patil, Jing Wei, Dengfeng Wi, Yongping Wei, D. J. Yu and M. Sivapalan (2020). Socio-Hydrologic Modeling of the Dynamics of Cooperation in the Transboundary Lancang-Mekong River. AGU Fall Meeting, Session H139, December 1-17, 2020. San Francisco.
10. Mohajer, B. M. Sivapalan and M. E. Garcia (2020) Top-Down Approach for Time-Variant Anthropogenic Signature Attribution in Socio-Hydrological Systems. AGU Fall Meeting, Session H004, December 1-17, 2019. San Francisco. Session H004-0008.
11. Chen, Xi and M. Sivapalan (2020). Hydrological Basis of the Budyko Curve: Data Guided Exploration of the Mediating Role of Soil Moisture. AGU Fall Meeting, December 1-17, 2019. San Francisco. Session H099-10.
12. Sivapalan, M. (2019). Top-down approach to modeling catchment hydrological processes in a changing environment. AGU Fall Meeting, Session H32E, December 9-13, 2019. San Francisco.
13. Cherry, C., S. Park, A. Shrestha, F. Arguello Souza, M. E. Garcia, D. J. Yu, and M. Sivapalan (2020). Behavioral Sciences Approach to Analyzing Cooperation Dynamics in Transboundary Water Management between the U.S. and Canada in the Columbia River Basin. AGU Fall Meeting, December 1-17, 2019. San Francisco. Session H145-0004.
14. Yousefi, P., P. Pouladi, S. Badiezadeh, M. Pouladi, H. Farahmand, Z. Kalantari, D. J. Yu, and Sivapalan (2020). Socio-hydrological Issues Preventing Restoration of the Urmia Lake in Iran. AGU Fall Meeting, December 1-17, 2020. San Francisco. Session H171-0023.
15. Felipe A A Souza, Ana Carolina Sarmento Buarque, Gabriela Chiquito Gesualdo, Marcos Roberto Benso, Margaret Ellen Garcia, Murugesu Sivapalan and Eduardo Mario Mendiondo (2020). Water conservation policies under drought conditions: the Sao Paulo Metropolitan Area case study. AGU Fall Meeting, December 1-17, 2020. San Francisco. Session H171-0023
16. Borzi, I., B. Bonaccorso, A. Viglione and M. Sivapalan (2020). Impacts of Droughts on Water Resources System From the Perspective of Mutual Interactions Between Society and Environment. AGU Fall Meeting, December 1-17, 2019. San Francisco. Session NH043-0007.
17. Borzi, I., M. Sivapalan and B. Bonacorso (2019). Exploring interactions between society and the environment for sustainable water resources management under natural and human-induced shocks. AGU Fall Meeting, Session H11O, December 9-13, 2019. San Francisco.
18. Ghotbi, S., Dingbao Wang, A. Singh and M. Sivapalan (2019). A new framework for exploring process controls of flow duration curves. AGU Fall Meeting, Session H53O, December 9-13, 2019. San Francisco.

19. Liu, Dengfeng, Fuqiang Tian, Hongyi Li, Hui Lu, Mu Lin, and M. Sivapalan (2019). Temporal and spatial signatures of sediment transport at the watershed scale: an approach to understand the watershed. AGU Fall Meeting, Session H33Q, December 9-13, 2019. San Francisco.
20. Gleeson, T., L. Wang-Erlandsson, S. C. Zipper et al. (2019). Water cycle modifications and Earth System resilience: roadmap to a new planetary boundary. AGU Fall Meeting, Session H11J, December 9-13, 2019. San Francisco.
21. Di Baldassarre, G., M. Sivapalan, M. Rusca, C. Cudennec, M. Garcia et al. (2019). How sociohydrology can help address the global water crisis. AGU Fall Meeting, Session H13D, December 9-13, 2019. San Francisco.
22. Sivapalan, M. (2019). Water Crisis: Need "Imagineering" Not Just Engineering to Solve Water Security Challenges. Presented at the International Congress of Civil Engineering and IXX Technical Week "Engineering for Sustainable Development, Pontificia Bolivariana University, Bucaramanga, Colombia, October 1-5, 2019. INVITED
23. Sivapalan, M. (2019). Progress in Socio-hydrology: A Meta-analysis of Challenges and Opportunities. Presented at the International Congress of Civil Engineering and IXX Technical Week "Engineering for Sustainable Development, Pontificia Bolivariana University, Bucaramanga, Colombia, October 1-5, 2019. INVITED
24. Sivapalan, M. (2018). Co-evolutionary Perspective of Water Management in a Changing World. Presented at the *AGU Fall Meeting*, Session H13F-04, December 10-14, Washington DC. INVITED
25. Borzì, I., A. Viglione, M. Sivapalan, B. Bonaccorso and M. Barendrecht (2018). Investigating short and long-term effects of Natural and Human-Induced Shocks on a Water Resources System in Sicily (Italy) through Socio-Hydrological Modeling. Presented at the *AGU Fall Meeting*, H53D-05, December 10-14, Washington DC.
26. Gao, G., J. Zhang, B. Fu, and M. Sivapalan (2018). Quantifying the effects of climate variability and land use/cover change on sediment discharge in the Loess Plateau of China. H11J-1599, Presented at the *AGU Fall Meeting*, December 10-14, Washington DC.
27. Wu, S., J. Zhao and M. Sivapalan (2018). Interpretation of the division between surface flow and groundwater recharge at the monthly scale based on the generalized proportionality hypothesis. H41N-2304, Presented at the *AGU Fall Meeting*, December 10-14, Washington DC.
28. Ghotbi, S., D. Wang and A. Singh, G. Böschl and M. Sivapalan (2018). A New Theoretical Framework for Modeling Flow Duration Curves Presented at the *AGU Fall Meeting*, Session H43F-2431, December 10-14, Washington DC.
29. Sivapalan, M. (2018). Towards a Safer Water Future: Need for Longer-term, Broader, Holistic (Inclusive) and "Softer" Solution Approaches. KEYNOTE LECTURE. Presented at the *Jaffna University International Research Conference (JUICE 2018): Towards a Safe Future*, Jaffna, Sri Lanka. September 27-28, 2018.
30. Sivapalan, M. (2017). Socio-hydrology: Use-inspired Basic Science in the Age of the Anthropocene. Presented at the Symposium on Hydrology and Earth System Science for Society-IV. Tokyo, Japan, May 19, 2017. INVITED
31. Sivapalan, M. (2017). From Engineering Hydrology to Earth System Science: Milestones in the Transformation of Hydrologic Science. Presented at the *European Geosciences Union General Assembly*, April 26, Vienna, Austria. ALFRED WEGENER MEDAL LECTURE
32. Dingbao Wang, Jianshi Zhao, Yin Tang, and M. Sivapalan (2015). Thermodynamic Basis of Budyko Curve for Annual Water Balance: Proportionality Hypothesis and Maximum Entropy Production. Presented at the *European Geosciences Union General Assembly*, April 12-17, Vienna, Austria.
33. Schymanski, S. J., M. L. Roderick and M. Sivapalan (2015). Modelling long-term responses of vegetation water use to elevated atmospheric CO_2. Presented at the *European Geosciences Union General Assembly*, April 12-17, Vienna, Austria.
34. Sivapalan, M., G. Blöschl and V. Srinivasan (2014). Socio-Hydrologic Modeling: Characterizing the Dynamics of Coupled Human-Water Systems Using Natural Science Methods. Presented at the *AGU Fall Meeting*, Session GC53D, December 15-19, San Francisco, California. INVITED.
35. Sivapalan, M. and G. Blöschl (2014). Water and the Earth System in the Anthropocene: Evolution of Socio-Hydrology. Presented at the *AGU Fall Meeting*, Session H24B, December 15-19, San Francisco, California. INVITED.
36. Blöschl, G. and M. Sivapalan (2014). New Student-Centered and Data-Based Approaches to Hydrology Education. Presented at the *AGU Fall Meeting*, Session ED44C, December 15-19, San Francisco, California. INVITED.
37. Schymanski, S. J., M. L. Roderick and M. Sivapalan (2014). Predicting long-term responses of vegetation water use to elevated atmospheric CO_2. Presented at the *AGU Fall Meeting*, Session B23F, December 15-19, San Francisco, California. INVITED.
38. Berghuijs, W. J., M. Sivapalan, H. H. G. Savenije and R. Woods (2014). Simplicity of Monthly Climate and Its Implications for Hydrologic Signatures at Various Time-Scales, Presented at the *AGU Fall Meeting*, Session H43I, December 15-19, San Francisco, California.
39. Liu, Dengfeng, Fuqiang Tian, Mu Lin and M. Sivapalan (2014). A Coupled Modeling Framework of the Co-evolution of Humans and Water: Case Study of Tarim River Basin, Western China. Presented at the *AGU Fall Meeting*, Session H41D, December 15-19, San Francisco, California.

40. Chen, Xi, Dingbao Wang, Fuqiang Tian and M. Sivapalan (2014). Understanding Socio-Hydrology System in the Kissimmee River Basin. Presented at *AGU Fall Meeting*, Session H41D, December 15-19, San Francisco, California.
41. Schnier, S., Ximing Cai and M. Sivapalan (2014). Weekly Hydrometeorological Signatures – Characterization of Urban-Induced Streamflow and Rainfall Variability**.** Presented at the *AGU Fall Meeting*, Session H41D, December 15-19, San Francisco, California.
42. Sivapalan, M. (2014). Regional patterns of seasonal water balance variability: Catchments Marching to a Different Drummer, *Second International Congress on Hydrology of Flatlands*, Universidad Nacional del Litoral, Santa Fe, Argentina, September 23-26, 2014. INVITED
43. Yared, A., S. S. Demissie, M. Sivapalan, A. Viglione and C. MacAlister (2014). Characterization of the regional variability of flood regimes within the Omo-Gibe River Basin, Ethiopia. Presented at the *European Geosciences Union General Assembly*, April 27- May 2, Vienna, Austria.
44. van Emmerik, T., M. Sivapalan, Zheng Li, S. Pande and H. H. G. Savenije (2014). Socio-hydrologic modeling to understand and mediate the competition for water between humans and ecosystems: Murrumbidgee River Basin, Australia. Presented at the *European Geosciences Union General Assembly*, April 27- May 2, Vienna, Austria.
45. Pande, S., M. Ertsen and M. Sivapalan (2014). Endogenous technological and demographic change under increasing water scarcity. Presented at the *European Geosciences Union General Assembly*, April 27- May 2, Vienna, Austria.
46. Sivapalan, M. (2014). Predictability of arid zone hydrology: challenges and opportunities. Presented at the *Workshop on Arid Zone Hydrology under Climate Change Scenarios for the 21st Century*, February 27-28, 2014, Texas A & M University, College Station, Texas, USA. INVITED
47. Sivapalan, M. (2014). Socio-hydrologic modeling to understand and mediate the competition for water between humans and ecosystems: Murrumbidgee River Basin, Australia. Presented at the *LOOPS 2014 Workshop: Closing the Loop – Towards Co-evolutionary Modeling of Global Society-Environment Interactions*, 16-18 February 2014, Chorin Monastery, Berlin, Germany. INVITED.
48. Sivapalan, M. (2013). Socio-hydrologic modeling to understand and mediate the competition for water between humans and ecosystems: Murrumbidgee River Basin, Australia. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California. INVITED.
49. Guo, Jiali, Hong-Yi Li; Shenglian Guo, L. R. Leung; Pan Liu and M. Sivapalan (2013). Exploring the linkage between flood frequency and annual water balance over the contiguous United States based on data-analysis. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California.
50. Troch, P. A., G. A. Carrillo, M. Sivapalan, K. A. Sawicz, T. Wagener (2013). Climate-vegetation-soil interactions and long-term hydrologic partitioning: Signatures of catchment co-evolution. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California. INVITED.
51. Woods, R. A., W. R. Berghuijs, M. Sivapalan and H. H. G. Savenije (2013). The unreasonable effectiveness of the Budyko hypothesis for water balance. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California. INVITED.
52. Sivapalan, M., T. H. van Emmerik; H. H. G. Savenije and S. Pande (2013). A socio-hydrological model to explain the "pendulum swing" in human-water system dynamics in the Murrumbidgee catchment, Australia. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California.
53. Thompson, S. E., M. Sivapalan, C. J. Harman, P. A. Troch, P. D. Brooks (2013). Spatial scale dependence of ecohydrologically mediated water balance partitioning. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California. INVITED.
54. Yaeger, M. A., M. Housh, P. Noël, Ximing Cai, and M. Sivapalan (2013). Understanding and Quantifying Hydrological Alteration Caused by Biofuels-Related Land Use Change in the Midwestern US. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California.
55. Pande, S., M. Ertsen and M. Sivapalan (2013). Endogenous technological and demographic change under increasing water scarcity. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California.
56. Coopersmith, E. J., B. S. Minsker and M. Sivapalan (2013). Remotely sensed soil moisture for agricultural decision support: An integration of national-scale hydroclimatic classification and ground-based sensors. Presented at the *AGU Fall Meeting*, December 9-13, San Francisco, California.
57. Sivapalan, M. (2013). New approaches and concepts of socio-hydrology. Presented at the Joint Meeting on *"Communicating Science to Society: Coping with Climate Extremes for Resilient Ecological-Societal Systems"*, August 21-24, Seoul National University, Seoul, Korea. INVITED
58. Berghuijs, W., M. Sivapalan and H. H. G. Savenije (2013). On the search for dominant processes at the catchment scale: a modeling perspective. Presented at the *European Geosciences Union General Assembly*, April 8-12, Vienna, Austria.
59. Sivapalan, M., J. Kandasamy and F.-Q. Tian (2013). Hydrologic predictions in the Anthropocene: Exploration with co-evolutionary socio-hydrologic models. Presented at the *European Geosciences Union General Assembly*, April 8-12, Vienna, Austria.

60. Yaeger, M. A., M. Housh, X. Cai and M. Sivapalan (2013). Catchments under change: Assessing impacts and feedbacks from new biomass crops in the agricultural Mid-western USA. Presented at the *European Geosciences Union General Assembly*, April 8-12, Vienna, Austria.
61. Parajka, J. et al. (2013). Hydrograph prediction in ungauged basins - a comparative assessment of studies. Presented at the *European Geosciences Union General Assembly*, April 8-12, Vienna, Austria.
62. Viglione, A. et al. (2013). Runoff signatures prediction in ungauged basins - a comparative assessment in Austria. Presented at the *European Geosciences Union General Assembly*, April 8-12, Vienna, Austria.
63. Salinas, J. L. et al. (2013). Floods and low flows prediction in ungauged basins - a comparative assessment of studies. Presented at the *European Geosciences Union General Assembly*, April 8-12, Vienna, Austria.
64. Ye, Sheng, M. Ali and M. Sivapalan (2013). Parameterization of the Effects of Landscape Heterogeneity on Integrated Subsurface Runoff Response: A Reconciliation of Newtonian and Darwinian Approaches. SESE Research Review. School of Earth, Society and the Environment, University of Illinois at Urbana-Champaign, March 1, 2013.
65. Wagener, T., K. A. Sawicz, M. Sivapalan, P. A. Troch, G. A. Carrillo and C. Kelleher (2012). Catchment classification as a learning framework. Presented at the *AGU Fall Meeting*, December 2-7, San Francisco, California. INVITED.
66. Coopersmith, E. J., B. M. Minsker, and M. Sivapalan (2012). National-scale hydrologic classification and agricultural decision support: A multi-scale approach. Presented at the *AGU Fall Meeting*, December 2-7, San Francisco, California.
67. Sheng Ye, Sheng, Hongyi Li, M. Ali, Maoyi Huang, Lai-Yung Leung and M. Sivapalan (2012). Regional patterns of recession curves and their relationships with climate, soil, vegetation and topography across the continental United States. Presented at the *AGU Fall Meeting*, December 2-7, San Francisco, California.
68. Alberto Viglione, A., J. Parajka, J. L. Salinas, M. Rogger, M. Sivapalan and G. Blöschl (2012). Predictions of runoff signatures in ungauged basins: Austrian case study. Presented at the *AGU Fall Meeting*, December 2-7, San Francisco, California.
69. Harman, C. J., K. A. Lohse, P. A. Troch, and M. Sivapalan (2012). Connections between transport in events and transport at landscape-structuring timescales. Presented at the *AGU Fall Meeting*, December 2-7, San Francisco, California. INVITED
70. Sivapalan, M. and G. Blöschl (2012). Hydrologic predictions in the Anthropocene: A research framework based on a co-evolutionary socio-hydrologic perspective. Presented at the *AGU Fall Meeting*, December 2-7, San Francisco, California.
71. Yaeger, M. A., M. Housh, Tze Ling Ng, Ximing Cai and M. Sivapalan (2012). Water for food, energy, and the environment: Assessing streamflow impacts of increasing cellulosic biofuel crop production in the Corn Belt. Presented at the *AGU Fall Meeting*, December 2-7, San Francisco, California.
72. Sivapalan, M. (2012). IAHS PUB Initiative: A historical perspective and a report card. Presented at the *PUB Symposium: Completion of the IAHS Decade on Predictions in Ungauged Basins and the Way Ahead*. Delft, October 23-25. INVITED KEYNOTE TALK.
73. Sivapalan, M. (2012). Water, water everywhere, not a drop to drink. Invited GIFT Talk. Presented at the *European Geosciences Union General Assembly*, April 23-28, 2012, Vienna, Austria.
74. Berhanu, B., M. Terefe, A. Viglione, C. Fant, Y. Gebretsadik, J. Cullis, G. Mekonnen, T. Alamirew, and M. Sivapalan (2012). Comparative hydrology in Ethiopia: a learning experience. Presented at the *European Geosciences Union General Assembly*, April 23-28, 2012, Vienna, Austria.
75. Sawicz, K., T. Wagener, M. Sivapalan, P. Troch, and G. Carrillo (2012). A top-down modelling approach to understand hydrologic similarity. Presented at the *European Geosciences Union General Assembly*, April 23-28, 2012, Vienna, Austria.
76. Schymanski, S. J., D. Or, M. L. Roderick, and M. Sivapalan (2012). Prediction under change: invariant model parameters in a varying environment. Presented at the *European Geosciences Union General Assembly*, April 23-28, 2012, Vienna, Austria.
77. Schymanski, S. J., D. Or, M. Sivapalan and M. L. Roderick (2011). Prediction under change: should we trust hydrologic models? Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California. INVITED
78. Troch, P. A., G. A. Carrillo, M. Sivapalan, C. J. Harman, T. Wagener, and K. A. Sawicz (2011). Hydrological analysis of catchment behavior through process-based modeling along a climate gradient. Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California.
79. Sawicz, K. A, T. Wagener, M. Sivapalan, P. A. Troch, and G. A. Carrillo (2011). Top-down modeling and catchment classification: Insight into hydrologic processes/function and hydrologic similarity. Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California.
80. Yaeger, M. A., Sheng Ye; E. J. Coopersmith, Lei Cheng, and M. Sivapalan (2011). Functional signatures as the basis for hydrologic similarity: Regional analysis across the continental United States. Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California.

81. Sivapalan, M. (2011). Evolution of Modeling Strategies for Operational Hydrologic Models with Changing Timescales. Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California. INVITED.
82. Ye, Sheng, M. Sivapalan, J. C. Quijano, and M. A. Yaeger (2011). Characterizing the dissolved nitrogen retention dynamics in hillslopes and river networks across a climate gradient. Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California.
83. Harman, C. J., P. A. Troch, K. A. Lohse, and M. Sivapalan (2011). Co-evolution of vegetation, sediment transport and infiltration on semi-arid hillslopes. Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California.
84. Sivapalan, M. (2011). Prediction under Change (PUC): Water, Earth and Biota in the Anthropocene. Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California. INVITED.
85. Basu, N. B., P. S. C. Rao, G. Botter; A. Rinaldo, M. Sivapalan, Sheng Ye and S. D. Donner (2011). Spatiotemporal averaging of instream solute removal dynamics. Presented at the *AGU Fall Meeting*, December 4-9, San Francisco, California. INVITED.
86. Harman, C. J., K. Lohse, P. A. Troch, and M. Sivapalan (2011). Do vegetated patches on hillslopes act like immobile zones with heavy-tailed residence times? To be presented at the Workshop on *Stochastic Transport and Emergent Scaling in Earth-Surface Processes (STRESS 3)*, November 2-6, Lake Tahoe, Nevada.
87. Sivapalan, M., L. Cheng, E. Cooper-Smith, M. A. Yaeger, Y. Yokoo, R. Zeng, and X. Zhang (2011). Flow duration curve and hydrologic similarity: Exploration of climate and landscape controls across continental United States. Presented at the *European Geosciences Union General Assembly*, April 4-8, 2011, Vienna, Austria.
88. Sivapalan, M., S. Patil, M. A. Hassan, S. Ye, and C. J. Harman (2011). Process controls on scaling behavior of sediment delivery: Exploration with a physically based network scale coupled flow and sediment model. Presented at the *European Geosciences Union General Assembly*, April 4-8, 2011, Vienna, Austria.
89. Viglione, A., G. Blöschl, M. Sivapalan, and B. L. Rhoads (2011). Estimation of flood peak frequencies at river confluences. Presented at the *European Geosciences Union General Assembly*, April 4-8, 2011, Vienna, Austria.
90. Harman, C. J., P. S. C. Rao, N. B. Basu, G. S. McGrath, P. Kumar, and M. Sivapalan (2011). Climate, soil and vegetation controls on the temporal variability of recharge and solute delivery to groundwater. Presented at the *European Geosciences Union General Assembly*, April 4-8, 2011, Vienna, Austria.
91. Harman, C. J., K. Lohse, P. A. Troch, and M. Sivapalan (2011). Vegetation controls on soil hydraulic properties and and co-evolution in semi-arid hillslopes: fieldwork and modelling. Presented at the *European Geosciences Union General Assembly*, April 4-8, 2011, Vienna, Austria.
92. Thompson, S. E., C. J. Harman, R. Schumer, J. S. Wilson and M. Sivapalan (2011). Hydrologic Science for a Changing World: A Learning Framework Based on Hydrologic Synthesis and Team Science. Presented at the *European Geosciences Union General Assembly*, April 4-8, 2011, Vienna, Austria.
93. Sivapalan, M. (2010). Watersheds "marching to a different drummer": Diagnostic analyses in search of appropriate model structures. Presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California. INVITED
94. Zanardo, S., C. J Harman, P. A Troch, P. S. C. Rao, M. Sivapalan, and Andrea Rinaldo (2010). Climatic and landscape controls on inter-annual variability of water balance and vegetation water use: a stochastic approach. To be presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
95. Basu, N. B., G. Destouni, J. W. Jawitz, S. E. Thompson, A. Rinaldo, M. Sivapalan, P. S. C. Rao (2010). Anthropogenic signatures in nutrient loads exported from managed catchments: Emergence of effective biogeochemical stationarity. Presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
96. Harman, C. J., K. A. Lohse, P. A. Troch, M. Sivapalan (2010). Vegetation controls on soil hydraulic properties and implications for the hydrologic variability of soils: observations and modelling. Presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
97. Sawicz, K. A., T. Wagener, M. Sivapalan, P. A. Troch, G. A Carrillo (2010). Catchment classification: Connecting climate, structure and function. Presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
98. Carrillo, G. A., P. A Troch, M. Sivapalan, T. Wagener, K. A Sawicz (2010). Analyzing catchment hydrologic function through process-based behavioral modelling. To be presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
99. Faran Ali, K. F., J. D. Cullis, Xiangyu Xu, M. More, M. A. Hassan, A. Simon, S. D. Donner, and M. Sivapalan (2010). Suspended sediment dynamics in the Mississippi River basin. To be presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
100. Lohse, K. A., J. E. T. McLain, C. J. Harman, M. Sivapalan, and P. A. Troch (2010). Role of vegetation and edaphic factors in controlling diversity and use of different carbon sources in semi-arid ecosystems. To be presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
101. Patil, S., S. Ye, Xiangyu Xu, C. J. Harman, M. Sivapalan, and M. A Hassan (2010). A network model for simulating sediment dynamics within a small watershed. To be presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.

102. Xu, Xiangyu, G. Wynn, M. A. Hassan, S. D. Donner, and M. Sivapalan (2010). Environmental change in the Mississippi River Basin. To be presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
103. Srinivasan, V., P. Kumar, M. Sivapalan (2010). Optimality versus resilience in patterns of carbon allocation within plants under climate change. Presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
104. Schymanski, S. J. M. Sivapalan, M. L. Roderick, and R. Leuning (2010). Does optimal adaptation allow prediction of water use by vegetation without calibration? Presented at the *AGU Fall Meeting*, December 13-17, San Francisco, California.
105. Yokoo, Y. And M. Sivapalan (2010). Effects of inter-annual and seasonal variability of climate on watershed water balance under different climate types. Presented at the *Hydrology Conference 2010: Changing Physical and Social Environment: Hydrologic Impacts and Feedbacks*, San Diego, California, October 11-13, 2010.
106. Sivapalan, M. (2010). Space-time symmetry of annual water balance variability and climate sensitivity: A functional model. Presented at the *Conference on Modelling Hydrology, Climate and Land Surface Processes*, Lillehammer, Norway, September 14-16, 2010. INVITED
107. Yokoo, Y. And M. Sivapalan (2010). Investigating the roles of climate and landscape characteristics on mean annual and monthly water balances. Presented at the *AGU 2010 Meeting of the Americas*, August 8-12, 2010, Foz de Iguassu, Brazil.
108. Sivapalan, M. (2010). Vegetation and hydrology: Non-linear filters as a fundamental modeling framework. To be presented at the Ecological Society of America (ESA) *Symposium on "Legacy Effects and Material Fluxes: Climatic and Human Forcing to the Landscape"*, Convenors: Dan Bain and Mark Green, August 1-6, 2010, Pittsburgh, Pennsylvania. INVITED
109. Sivapalan, M. (2010). Hydrologic change: A science plan for the 21st century. INVITED TALK. *International Hydrology Programme (IHP), 19th Session of the Intergovernmental Council, Scientific Segment*, UNESCO, Paris, July 7, 2010.
110. Sivapalan, M. (2010). Hydrologic change: A science plan for the 21st century. INVITED TALK. *Second Hydrology and Earth System Science delivering to Society (HESSS2) Conference*, Institute of Industrial Science, University of Tokyo, June 20, 2010.
111. Sivapalan, M. (2010). Hydrologic change: A science plan for the 21st century. INVITED TALK. *Vienna Catchment Science Symposium*, Vienna Institute of Technology, Vienna, Austria, May 8, 2010.
112. Sivapalan, M. and C. J. Harman (2010). Classification of recharge regimes based on measures of hydrologic similarity. Presented at the *European Geosciences Union General Assembly*, May 3-7, 2008, Vienna, Austria.
113. Sivapalan, M., M. A. Yaeger, C. J. Harman, Xiangyu Xu, and P. A. Troch (2010). A functional model of annual water balance variability and similarity for regionalization studies: Horton, Budyko and L'vovich revisited. Presented at the *European Geosciences Union General Assembly*, May 3-7, 2008, Vienna, Austria.
114. Sivapalan, M. (2010). Strategies for hydrology teaching for a changing world. Presented at the *European Geosciences Union General Assembly*, May 3-7, 2008, Vienna, Austria. INVITED
115. Troch, P. A., Sivapalan, M., B. L. Ruddell, P. D. Brooks, G. S. McGrath (2009). Inter-annual and inter-catchment variability of hydrologic partitioning: The importance of the Horton index to improve hydrologic predictions in a changing environment. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
116. Yaeger, M., C. J. Harman, P. A. Troch and M. Sivapalan (2009). A functional model of watershed-scale annual water balance partitioning: L'vovich, Ponce and Shetty revisited. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
117. Zanardo, S., C. J. Harman, P. D. Brooks, M. Durcik, M. Sivapalan and P. A. Troch (2009). A stochastic, analytical model of the Horton Index and implications for its physical controls. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
118. Thompson, S. E., K. Guan, C. J. Harman, A. Neal, P. A. Troch and M. Sivapalan (2009). Predicting Seasonal ET and NEE: Comparative Hydrology across FLUXNET sites. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
119. Basu, N.B., P. S. C. Rao, S. D. Donner, S. Zanardo, Sheng Ye and M. Sivapalan (2009). Spatio-temporal averaging of removal rate constants in river networks: Is there an emergent pattern? Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
120. Guan, K., C. J. Harman, N. B. Basu, P. S. C. Rao, M. Sivapalan and P. K. Kalita (2009). Biogeochemical signatures of contaminant transport at the watershed scale: Spectral and wavelet analysis. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
121. Ye, Sheng, S. Zanardo, N. B. Basu, M. Sivapalan and P. S. C. Rao (2009). Scaling of contaminant loads in fractal river networks: Hydrologic, geomorphic and biogeochemical controls. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.

122. Harman, C. J., N. Basu, P. S. C. Rao and M. Sivapalan (2009). HEIST: An event-scale model of cascading water and solute fronts through the vadose zone. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
123. Rao, P. S. C., M. Sivapalan, N.B. Basu, M. A. Hassan, A. I. Packman and G. C. McGrath (2009). Exploring emergent hydrologic and biogeochemical patterns in catchments at multiple scales. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
124. Srinivasan, V., D. T. Drewry, P. Kumar and M. Sivapalan (2009). Optimality based dynamic plant allocation model: Predicting acclimation response to climate change. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
125. Quijano, J. C., P. Kumar, Praveen, D. T. Drewry and M. Sivapalan (2009). Use of optimality hypothesis to understand root structure and its implications in water fluxes. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
126. Drewry, D. T., P. Kumar, S. Long, M. Sivapalan, C. Bernacchi and X.-Z. Liang (2009). The role of structural, biochemical and ecophysiological plant acclimation in the eco-hydrologic response of agro-ecosystems to global change in the Central US. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
127. Sawicz, K. A., T. Wagener, M. Sivapalan, P. A. Troch and G. A. Carrillo (2009). Process understading and hydrological modeling in ungauged catchments. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
128. Carrillo, G. A., P. A. Troch, M. Sivapalan, T. Wagener, K. Sawicz (2009). Understanding catchment hydrologic similarities through detailed modeling. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
129. Xu, Xiangyu, D. Yang and M. Sivapalan (2009). Comparing catchment evapotranspiration at different time scales through a bottom-up and top-down method. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
130. Li, Hongyi, M. Sivapalan, Fuqiang Tian and Dengfeng Liu (2009). Diagnostic analysis of multi-scale interactions between hydrological and biogeochemical processes in a mid-west agricultural catchment. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
131. Schymanski, S. J., M. Sivapalan, and M. L. Roderick (2009). Applicability of the vegetation optimality model across catchments and climates. Presented at the *AGU Fall Meeting*, December 14-18, San Francisco, California.
132. Sivapalan, M. (2009). The growth of hydrological understanding: Observations, theories and societal influences that have shaped the field. Presented at the *AGU Fall Meeting*, December 15-19, San Francisco, California.
133. Reeves, D. M., C. J. Harman, B. Baeumer and M. Sivapalan (2009). A subordinated kinematic wave equation for heterogeneous hillslopes: Saturated flow solutions to applied impulses and future incorporation of the vadose zone. Presented at the Workshop on *Stochastic Transport and Emergent Scaling in Earth-Surface Processes (STRESS 2)*, November 2-6, Lake Tahoe, Nevada.
134. Harman, C. J., P. S. C. Rao, N. B. Basu and M. Sivapalan (2009). Cascading water and solute transport through the vadose zone: advection, dispersion, and transformations in highly non-steady flow. Presented at the Workshop on *Stochastic Transport and Emergent Scaling in Earth-Surface Processes (STRESS 2)*, November 2-6, Lake Tahoe, Nevada.
135. Sivapalan, M. (2009). Benchmark Assessment: Progress at the Half Way Point of the PUB Decade. Presented at the *8th General IAHS Scientific Assembly, International Association of Hydrological Sciences*, September 6-12, 2009, Hyderabad, India.
136. Sivapalan, M. (2009). Nonlinear response of catchments to environmental change: An ecosystem function perspective and associated organizing principles. INVITED PAPER. Presented at the 10th Gordon Research Conference on Catchment Science: *Thresholds, Tipping Points, and Nonlinearity: Integrated Catchment Science for the 21st Century. July 12-16, 2009, Proctor Academy,* Andover, New Hampshire.
137. Sivapalan, M. (2009). New theories vs new measurement technologies: Which take precedence? Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
138. Harman, C. and M. Sivapalan (2009). Dimensionless classification of modes of hydrologic behavior based on characteristic rates and timescales of processes and inputs. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
139. Harman, C., M. Sivapalan and P. Kumar (2009). Emergent effects of heterogeneity on discharge at hillslope and catchment scales, and implications for prediction. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
140. Harman, C., D.M. Reeves, B. Baeumer and M. Sivapalan (2009). Time subordination: a way forward for the closure problem in hydrologic prediction? Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.

141. Sivapalan, M. (2009). Sustainable Water Management in a Changing Environment: A Vibrant Research Agenda Centred on Ecosystem Services. INVITED PAPER. Presented at the *The Changing Water Cycle Programme Launch*, National Environmental Council (NERC), February 5, 2009, Royal Society of London, UK.
142. Kumar, P., Drewry, D., M. Sivapalan, S. P. Long, X.-Z. Liang (2008). Coupled water, energy, carbon and nutrient cycle dynamics in ecohydrologic response: Integration of modeling with Ameriflux and FACE observations. INVITED PAPER. To be presented at the *AGU Fall Meeting*, December 15-19, San Francisco, California.
143. Sawicz, K., T. Wagener, M. Sivapalan, P. A. Troch, G. Carrillo (2008). Understanding the joint probability of catchment form, climate and function. Presented at the *AGU Fall Meeting*, December 15-19, San Francisco, California
144. Barman, R., A. Jain, W. Post and M. Sivapalan, X. Yang (2008). Modeling nitrogen leaching with a biogeochemical model coupled with a soil hydrology model. Presented at the *AGU Fall Meeting*, December 15-19, San Francisco, California
145. Tian, F., D. Liu (1), H. Li, M. Sivapalan and H. Hu (2008). A coupling framework as a virtual hydrological laboratory for water, sediment and nutrients modeling at the catchment scale. Presented at the *AGU Fall Meeting*, December 15-19, San Francisco, California
146. Carrillo, G. A., P. A. Troch, M. Sivapalan, T. Wagener, K. Sawicz (2008). Understanding how Geomorphology and Climate Define the Hydrologic Catchment Response. Presented at the *AGU Fall Meeting*, December 15-19, San Francisco, California
147. Reeves, M.A., C. Harman, B. Baeumer and M. Sivapalan (2008). Subordinated kinematic subsurface flow in hillslopes. Presented at the *AGU Fall Meeting*, December 15-19, San Francisco, California
148. Ruiz, M. O., E. D. Walker, J. Messina, K. DeBaene, G. Hamer and M. Sivapalan (2008). Mosquitoes, catch basins, hydrology, and risk of West Nile virus in Illinois. Presented at *57-th Annual Meeting of the American Society of Tropical Medicine and Hygiene*, December 7-11, New Orleans, Lousiana.
149. Sivapalan, M. (2008). Response of floods to climate and/or land use changes: Is there a role for similarity concepts and catchment typology? INVITED PAPER. Presented at the Ninth Water-Net/WARFSA/GWP-SA Symposium, October 29-31, 2008, Johannesburg, South Africa.
150. Sivapalan, M. (2008). Response of floods to climate and/or land use changes: Is there a role for similarity concepts and catchment typology? INVITED PAPER. Presented at the *CUAHSI Biennial Colloquium on Hydrologic Science and Engineering: Resilience and Vulnerability of Natural and Managed Hydrologic Systems*, July 14-16, 2008, Boulder, Colorado.
151. Wagener, T., K. A. Sawicz, M. Sivapalan, Peter A. Troch and G. A. Carrillo (2008). A Framework for Catchment Classification to Understand and Predict Catchment Services. Presented at the *CUAHSI Biennial Colloquium on Hydrologic Science and Engineering: Resilience and Vulnerability of Natural and Managed Hydrologic Systems*, July 14-16, 2008, Boulder, Colorado.
152. Tian, F., H. Li and M. Sivapalan (2008). Process diagnostics with a physical distributed model and data analysis. Presented at the *AGU Spring Meeting*, May 27-30, Fort Lauderdale, Florida.
153. Li, H., F. Tian and M. Sivapalan (2008). A comparative diagnostic study of runoff generation processes in DMIP2 basins: Blue River and Illinois River. Presented at the *AGU Spring Meeting*, May 27-30, Fort Lauderdale, Florida.
154. Sivapalan, M. (2008). Response of floods and droughts to climate and/or land use changes: Is there a role for similarity concepts and catchment typology? KEYNOTE PAPER. Presented at the *UNESCO Workshop on Comparative Analysis of Floods and Droughts - Catchment and Aquifer Typology*, April 20-23, 2008, Smolenice near Bratislava, Slovakia.
155. Wagener, T., M. Sivapalan, P. A. Troch and R. A. Woods (2008). The search for a catchment classification system for hydrology. SOLICITED PAPER. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
156. Harman, C. and M. Sivapalan (2008). Classification and the role of topography, recharge and boundary conditions on the effects of heterogeneity on subsurface flow in hillslopes. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
157. Zehe, E. and M. Sivapalan, M. (2008). Threshold nonlinearities in hydrological and environmental systems: implications for observability and predictability. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
158. Hinz, C., I. Struthers and M. Sivapalan (2008). Water balance and growth relations of a pine stand in a large lysimeter in Eastern Germany. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
159. Sivapalan, M. (2008). A candidate model for PUB benchmark assessment based on cross-cutting themes. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.

160. Sivapalan, M. and J. M. Samuel (2008). Effects of multi-scale rainfall variability on flood frequency: a comparative multi-site analysis of dominant process controls. SOLICITED PAPER. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
161. McGrath, G.S., C. Hinz, and M. Sivapalan (2008). Threshold flow events: Interrelationships between the variability of their triggering, their magnitude and soil moisture. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
162. Drewry, D., P. Kumar, S. Long, M. Sivapalan and X. Liang (2008). Coupling soil-canopy processes to nitrogen dynamics: Impacts of root moisture uptake and hydraulic redistribution. Presented at the *European Geosciences Union General Assembly*, April 13-18, 2008, Vienna, Austria.
163. Sivapalan, M. and C. Harman (2008). Behavioral modeling: A new theoretical framework for hydrological predictions. INVITED PAPER. Presented at the Third Kirkham Conference of the Soil Science Society of America, February 24-26, 2008, Davis, California.
164. Sivapalan, M., P. Kumar, B. L. Rhoads, and D. Wuebbles (2007). Water cycle dynamics in a changing environment: Advancing hydrologic science through synthesis. Presented at the *AGU Fall Meeting*, December 10-14, San Francisco, California.
165. Troch, P. A., P. Brooks, J. Chorover, T. Huxman, J. J. McDonnell, C. Rasmussen and M. Sivapalan (2007). Evolution, structure and function of hydrologic subsystems in hillslopes. Presented at the *AGU Fall Meeting*, December 10-14, San Francisco, California.
166. Sawicz, K. A., T. Wagener, M. Sivapalan and P. A. Troch (2007). Is spatial proximity of watersheds a sufficient guide to hydrologic similarity? Presented at the *AGU Fall Meeting*, December 10-14, San Francisco, California.
167. Tian, F., M. Sivapalan, H. Li and H. Hu (2007). Diagnostic evaluation of distributed physically based model at the REW scale (THREW) using rainfall-runoff event analysis. Presented at the *AGU Fall Meeting*, December 10-14, San Francisco, California.
168. McDonnell, J. J., M. Sivapalan and G. Bloschl (2007). The IAHS Decade on Prediction in Ungauged Basins (PUB) as a key U.S. Contribution to International Hydrology. Presented at the *AGU Fall Meeting*, December 10-14, San Francisco, California.
169. Kumar, P. and M. Sivapalan (2007). Interaction between Hydrosphere and Biosphere: Challenges and Opportunities. Presented at the *AGU Fall Meeting*, December 10-14, San Francisco, California.
170. Sivapalan, M. (2007). Closure relations for hillslope subsurface flow response: Roles of internal heterogeneity, boundary conditions and climate. Presented at the *Workshop on Stochastic Transport and Emergent Scaling in Earth-Surface Processes*, November 5, 2007, Desert Research Institute, Lake Tahoe, Nevada. INVITED
171. Schymanski, S. J., M. L. Roderick, M. Sivapalan, L. B. Hutley, and J. Beringer (2007). A canopy scale test of the optimal water use hypothesis. International Scientific Conference on Bioclimatology and Natural Hazards, 18-21 September 2007, Slovakia.
172. Sivapalan, M., B. Schaefli and C. Harman (2007). Behavioral modeling: a new theoretical framework for hydrologic predictions at catchment scales. IUGG XXIV 2007 General Assembly, July 2-13, 2007, Perugia, Italy. INVITED PAPER
173. Wagener, T., P. A. Troch, M. Sivapalan and R. A. Woods (2007). On catchment classification, hydrologic similarity and predictions in ungauged basins. IUGG XXIV 2007 General Assembly, July 2-13, 2007, Perugia, Italy.
174. Sivapalan, M. and J. M. Samuel (2007). Design Flood Estimation in the Presence of Nonstationarity: Overcoming the Limitations of Traditional Flood Frequency Analysis. Presented at the *AGU Spring Meeting*, May 22-25, Acapulco, Mexico.
175. Somers, M., M. Sivapalan, P. Elvikis, B. Finnegan and B. Barnes (2007). Practical Water Supply Challenges: The Enugu State, Nigeria Water Development Project. Presented at the *National Groundwater Association: 2007 Groundwater Summit*, Albuquerque, New Mexico, April 29-May 3, 2007.
176. Sivapalan, M. (2007). Some thoughts on a community science agenda for watershed hydrology. Presented at a Panel Discussion on a Research Agenda for Water Resources Geography, *Annual Meeting of the American Association of Geographers*, San Francisco, California, April 17-21, 2007.
177. Schymanski, S. J., M. Sivapalan and M. L. Roderick (2007). Possible long-term effects of increased CO_2 on vegetation and the hydrological cycle. Presented at the *European Geosciences Union General Assembly*, April 17-21, 2007, Vienna, Austria.
178. McGrath, G., C. Hinz and M. Sivapalan (2007). Climate based risk of pesticide leaching by preferential flow: A regional assessment in the south-west of Western Australia. Presented at the *European Geosciences Union General Assembly*, April 17-21, 2007, Vienna, Austria.
179. Sivapalan, M. (2007). Some thoughts on a community science agenda for hydrology: Lessons learned from PUB and CUAHSI. SOLICITED PAPER. Presented at the *European Geosciences Union General Assembly*, April 17-21, 2007, Vienna, Austria.

180. Sivapalan, M., B. Schaefli and C. J. Harman (2007). Behavioural modeling: A new theoretical framework for hydrological prediction. Presented at the *European Geosciences Union General Assembly*, April 17-21, 2007, Vienna, Austria.
181. Sivapalan, M. (2007). Behavioral modeling: a new theoretical framework for hydrologic predictions at catchment scales. *Borland Lecture*. Presented at the *AGU Hydrology Days Annual Conference*, March 19-21, Fort Collins, Colorado, 2007.
182. Sivapalan, M. (2007). On needed interactions between the experimentalist and the modeler: Moving beyond the dialog. INVITED PAPER. International Conference on *Hydrology Delivering Earth System Science to Society*, February 28 to March 2, 2007, Tsukuba, Japan.
183. Sivapalan, M. (2007). Predictions in Ungauged Basins, 2003-2012: Where are we up to at the half way point? Invited Paper. International Conference on *Hydrology Delivering Earth System Science to Society*, February 28 to March 2, 2007, Tsukuba, Japan.
184. Sivapalan, M. and J. J. McDonnell (2006). Moving beyond the curse of watershed heterogeneity and process complexity? INVITED PAPER. Presented at the *AGU Fall Meeting*, December 10-16, San Francisco, California.
185. Li, H. and M. Sivapalan (2006). Exploring possible tight inter-connections between climate, soil, topography through constraining by empirical measure of annual water balance. Presented at the *AGU Fall Meeting*, December 10-16, San Francisco, California.
186. Samuel, J. M., M. Sivapalan, M. and I. Struthers (2006). Impacts of climate variability and change on flood frequency: a comparative study of catchments in Perth, Newcastle and Darwin, Australia. Presented at the *AGU Fall Meeting*, December 10-16, San Francisco, California.
187. Schaefli, B., M. Sivapalan and E. Zehe (2006). Quantifying catchment similarities based on wavelet spectral analysis. Presented at the AGU Fall Meeting, December 10-16, San Francisco, California.
188. Wagener, T., M. Sivapalan, P. A. Troch and R. A. Woods (2006). Catchment classification and hydrological similarity. Presented at the *AGU Fall Meeting*, December 10-16, San Francisco, California.
189. Harman, C. and M. Sivapalan (2006). What effect does subsurface variability have on flows? Using storm response regimes to characterize the effect of spatial heterogeneity within a hillslope. Presented at the *AGU Fall Meeting*, December 10-16, San Francisco, California.
190. Sivapalan, M. (2006). Behavioural modelling: A new approach to hydrologic predictions. KEYNOTE TALK, Presented at the *Conference on Preferential Flow and Transport Processes in Soils*, November 4-9, 2006, Centro Stefano Fransini, Monte Verita, Ascona, Switzerland.
191. Hinz, C., G. McGrath, A. Hearman and M. Sivapalan (2006). Climate controls of preferential flow initiation: threshold processes and their modeling. Presented at the *Conference on Preferential Flow and Transport Processes in Soils*, November 4-9, 2006, Centro Stefano Fransini, Monte Verita, Ascona, Switzerland.
192. Sivapalan, M. (2006). Viewing Future PUB through the Prism of the Representative Elementary Area (REW) approach to distributed hydrologic modeling. KEYNOTE TALK. Presented at the USA PUB Workshop, Oregon State University, Corvallis. October 18-22, 2006.
193. Harman, C. and M. Sivapalan (2006). Interactions of spatial heterogeneity in bedrock elevation, soil depth and permeability with climate variability: A regime approach to assessing process complexity at hillslope or catchment scale. Presented at the USA PUB Workshop, Oregon State University, Corvallis. October 18-22, 2006.
194. Li, H. and M. Sivapalan (2006). Exploring possible tight inter-connection between climate, soil, topography constraining by an empirical measure of annual water balance. Presented at the USA PUB Workshop, Oregon State University, Corvallis, October 18-22, 2006.
195. Schaefli, B., E. Zehe and M. Sivapalan (2006). Analysing rainfall-runoff transformation in the wavelet spectral domain. Presented at the USA PUB Workshop, Oregon State University, Corvallis. October 18-22, 2006.
196. Sivapalan, M., H. Lee and E. Zehe (2006). Representative Elementary Area (REW) Approach to Distributed Hydrologic Modeling at the Catchment Scale: What Next! KEYNOTE TALK, Presented at *International Symposium on Flood Forecasting and Water Resources Assessment for IAHS-PUB*, 28-30 September, 2006, Tsinghua University, Beijing, China.
197. Sivapalan, M., J. S. Samuel and I. Struthers (2006). Impacts of climate variability on flood frequency: comparative study of catchments in Perth, Newcastle and Darwin, Australia. Presented at *International Symposium on Flood Forecasting and Water Resources Assessment for IAHS-PUB*, 28-30 September, 2006, Tsinghua University, Beijing.
198. Sivapalan, M. (2006). An intuitive approach towards the search for similarity principles in watershed hydrology. Presented at the *European Geosciences Union General Assembly*, April 2-7, 2006, Vienna, Austria.
199. Sivapalan, M., Lee, H., and E. Zehe (2006). Development of closure relations and process parameterizations with respect to the REW approach: recent progress and future prospects. Presented at the *European Geosciences Union General Assembly*, April 2-7, 2006, Vienna, Austria.
200. Sivapalan, M. (2006). Pattern, process and function: elements of a new theory of hydrology at the catchment scale. Presented at the *European Geosciences Union General Assembly*, April 2-7, 2006, Vienna, Austria.

201. Sivapalan, M., S. Schymanski and M. Roderick (2006). Transpiration as the leak in a carbon factory: tests of a model of self-optimizing vegetation. Presented at the *European Geosciences Union General Assembly*, April 2-7, 2006, Vienna, Austria.
202. Tromp, E., H. Lee, H.H.G. Savenije and M. Sivapalan (2006). Application of a hydrological model based on the REW approach to the Collie River Basin, Western Australia. Presented at the *European Geosciences Union General Assembly*, April 2-7, 2006, Vienna, Austria.
203. Son, K. and M. Sivapalan and I. Struthers (2006). Investigation of response time and water age. Presented at the *European Geosciences Union General Assembly*, April 2-7, 2006, Vienna, Austria.
204. Son, K. and M. Sivapalan (2005). Improving model structure and reducing parameter uncertainty in conceptual water balance models. Presented at the *American Geophysical Union Fall Meeting*, December 6-12, San Francisco.
205. Sivapalan, M., S. J. Schymanski and M. L. Roderick (2005). Transpiration as a leak in the carbon factory. A model of self-optimizing vegetation. Presented at the *American Geophysical Union Fall Meeting*, December 6-12, San Francisco. INVITED
206. Schymanski, S. J., M. Sivapalan and M. L. Roderick (2005). A Test of the Optimality Approach to Modelling Canopy Gas Exchange by Natural Vegetation. Presented at the *American Geophysical Union Fall Meeting*, December 6-12, San Francisco.
207. Sivapalan, M. (2005). On the nature and causes of hydrological variability and scale effects. Presented at the *American Geophysical Union Fall Meeting*, December 6-12, San Francisco. INVITED
208. Kusumastuti, D. I., D. A. Reynolds and M. Sivapalan (2005). Transformation and filtering processes in a catchment-lake system. Presented at the *American Geophysical Union Fall Meeting*, December 6-12, San Francisco.
209. Struthers, I. S. and M. Sivapalan (2005). Temporal scales and hydrological regimes: The impact of climate change and variability upon flood response. Presented at the *American Geophysical Union Fall Meeting*, December 6-12, San Francisco.
210. Yokoo, Y. and M. Sivapalan (2005). Investigation of the relative roles of climate seasonality and landscape properties on mean annual and monthly water balances. Presented at the *American Geophysical Union Fall Meeting*, December 6-12, San Francisco.
211. McDonnell, J. J. and M. Sivapalan (2005). Pattern, process and function: Elements of a new theory of hydrology at the catchment scale. Presented at the special session on *Predictions in Ungauged Basins (PUB): Data, Science and Policy, World Water Week*, Stockholm, Sweden, August 21-27, 2005.
212. Kusumastuti, D. I., D. A. Reynolds and M. Sivapalan, (2005). Impact of network of lakes within a catchment on rainfall to runoff transformation and filtering. Presented at the *Sir Mark Oliphant Conference on Thresholds and Pattern Dynamics: Towards a New Paradigm for Predicting Climate Driven Systems*. University of Western Australia, Crawley, July 3-7, 2005.
213. Schymanski, S. J., M. Sivapalan and M. M. Roderick (2005). Transpiration, the leak in the carbon factory: A model of self-optimising vegetation. Presented at the *Sir Mark Oliphant Conference on Thresholds and Pattern Dynamics: Towards a New Paradigm for Predicting Climate Driven Systems*. University of Western Australia, Crawley, July 3-7, 2005.
214. Struthers, I. T., C. Hinz and M. Sivapalan (2005). A conceptual examination of the threshold-triggering and rainfall partitioning behaviour of an open-fractured soil. Presented at the *Sir Mark Oliphant Conference on Thresholds and Pattern Dynamics: Towards a New Paradigm for Predicting Climate Driven Systems*. University of Western Australia, Crawley, July 3-7, 2005.
215. McGrath, G., C. Hinz and M. Sivapalan (2005). Presented at the *Sir Mark Oliphant Conference on Thresholds and Pattern Dynamics: Towards a New Paradigm for Predicting Climate Driven Systems*. University of Western Australia, Crawley, July 3-7, 2005.
216. Lee, H., M. Sivapalan and E. Zehe (2005). REW approach, a new blueprint for distributed hydrological modeling at the catchment scale: application to a meso-scale catchment. Presented at the *European Geoscience Union Annual Meeting*, 24-29 April 2005, Vienna, Austria.
217. Sivapalan, M, H. Lee and E. Zehe (2005). REW approach, a new blueprint for distributed hydrological modelling at the catchment scale: development of closure relations. Presented at the *European Geoscience Union Annual Meeting*, 24-29 April 2005, Vienna, Austria.
218. Ocampo, C. J., M. Sivapalan, C. E. Oldham (2005). Hydrological connectivity of upland-riparian zones in agricultural catchments: implications for runoff generation and nitrate transport. Presented at the *European Geoscience Union Annual Meeting*, 24-29 April 2005, Vienna, Austria.
219. Portoghese, I., V. Iacobellis and M. Sivapalan (2005). Assimilation of aprioristic information for uncertainty reduction in water balance models: application to Mediterranean environments. Presented at the *European Geoscience Union Annual Meeting*, 24-29 April 2005, Vienna, Austria.
220. Sivapalan, M., H. Lee and E. Zehe (2005). Representative Elementary Watershed (REW) approach to distributed hydrologic modeling, a novel contribution to predictions in ungauged basins. Presented at the *Symposium on*

*Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Ass*embly, Foz do Iguacu, Brazil, April 3-9, 2005.

221. Lee, H., M. Sivapalan and E. Zehe (2005). Representative Elementary Watershed (REW) approach to distributed hydrologic modeling at the catchment scale: Development of closure relations. Presented at the *Symposium on Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Assembly*, Foz do Iguacu, Brazil, April 3-9, 2005.
222. Zehe, E. and M. Sivapalan (2005). Towards a new generation of process based hydrological models for the mesoscale. Presented at the *Symposium on Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Assembly*, Foz do Iguacu, Brazil, April 3-9, 2005.
223. Samuel, J. M., M. Sivapalan and S. W. Franks (2005). Climate, soil and vegetation controls on the variability of water balance: A comparative study of catchments in Perth, Newcastle and Darwin, Australia. Presented at the *Symposium on Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Assembly*, Foz do Iguacu, Brazil, April 3-9, 2005.
224. Kusumastuti, D. I., D. A. Reynolds and M. Sivapalan (2005). Within-storm temporal rainfall pattern and surface runoff triggering: the effect on flood frequency. Presented at the *Symposium on Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Assembly*, Foz do Iguacu, Brazil, April 3-9, 2005.
225. Kusumastuti, D. I., D. A. Reynolds and M. Sivapalan (2005). Impact of the presence of a network of inter-connected lakes within a catchment on flood frequency. Presented at the *Symposium on Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Assembly*, Foz do Iguacu, Brazil, April 3-9, 2005.
226. Montanari, L., M. Sivapalan and A. Montanari (2005). Analysis of dominant hydrological processes in a tropical catchment through development of a physically based model. Presented at the *Symposium on Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Assembly*, Foz do Iguacu, Brazil, April 3-9, 2005.
227. Contreras, S., M. Sivapalan and M. M. Boer (2005). Predicting inter-annual variability of runoff from semi-arid Mediterranean catchments: A top-down approach. Presented at the *Symposium on Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Assembly*, Foz do Iguacu, Brazil, April 3-9, 2005.
228. Sivapalan, M. (2005). On watersheds as complex environmental systems: a case for multi-disciplinary hydrology. Presented at the *Symposium on Predictions in Ungauged Basins: Promise and Progress, IAHS Scientific Assembly*, Foz do Iguacu, Brazil, April 3-9, 2005.
229. Rosbjerg, D., M. Sivapalan, H. H. G. Savenije and J. J. McDonnell (2005). Predictions in Ungauged Basins – A decadal IAHS Initiative. Presented at the *International Conference on Integrated Assessment of Water Resources and Global Change: A North-South Analysis*, 23-25 February 2005, Bonn, Germany.
230. Sivapalan, M. and H. Lee (2005). Representative Elementary Watershed (REW) approach to distributed modeling, a novel contribution to Predictions in Ungauged Basins (PUB). KEYNOTE TALK. Presented at the *International Strategic Land Surface Modeling Workshop for IAHS/PUB*, January 20-22, 2005, Kyoto University, Kyoto, Japan.
231. Ichikawa, Y. and M. Sivapalan (2004). On the relationship between space-time variation of rainfall, catchment characteristics and storm runoff response. Presented at the *CWR /Japan Reunion Symposium*, December 3-4, Hayama, Japan.
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340. Wood, E. F., J. S. Famiglietti and M. Sivapalan (1989). A land-surface climate model for water balance studies. *EOS, Transactions of the American Geophysical Union*, Vol. 70, No. 15, pg. 296.
341. Sivapalan, M. and J. K. Ruprecht (1989). Physically-based model of coupled water and salt transport in a forested catchment in Western Australia. Paper presented at the *AGU Chapman Conference on Hydrogeochemical Responses of Forested Catchments*, Bar Harbor, Maine. September 18-21, 1989.
342. Wood, E. F., M. Sivapalan, D. Thongs, K. Beven and L. Band (1988). A DEM based model for catchment storm response using catchment morphology. *EOS, Transactions of the American Geophysical Union*, Vol. 69, No. 44, pg. 1224.
343. Famiglietti, J., E. F. Wood, M. Sivapalan and K. Beven (1988). Quantification of runoff production controls within the catchment. *EOS, Transactions of the American Geophysical Union*, Vol. 69, No. 16, pg. 344.
344. Wood, E. F., J. Famiglietti and M. Sivapalan (1988). Water balance computation of King's Creek catchment, Kansas, using a distributed hydrological model. *EOS, Transactions of the American Geophysical Union*, Vol. 69, No. 16, pg. 358.
345. Sivapalan, M., E. F. Wood and L. Band (1988). A direct method for the prediction of catchment storm response based on catchment morphology. *EOS, Transactions of the American Geophysical Union*, Vol. 69, No. 16, p. 344.
346. Sivapalan, M. (1988). A direct method for predicting storm response based on actual catchment morphology. Paper presented at the Geosciences Hydrology Workshop, Center for Geosciences, Colorado State Univ., Fort Collins, Colorado, August 4-5.
347. Wood, E. F. and M. Sivapalan (1987). Space-time rainfall fields: Network design, data collection and analysis. *EOS, Transactions of the American Geophysical Union*, Vol. 68, No. 44, pg. 1261.
348. Wood, E. F., M. Sivapalan and L. Band (1987). The GUH: Is it an appropriate large-scale model? *EOS, Transactions of the American Geophysical Union*, Vol. 68, No. 44, pg. 1276.
349. Sivapalan, M. and E. F. Wood (1987). Fluvial geomorphology and flood frequency: A derived distribution procedure using a generalized GUH based on partial area runoff generation. *EOS, Transactions of the American Geophysical Union*, Vol. 68, No. 44, pg. 1276.
350. Sivapalan, M. and E. F. Wood (1986). Stochastic representation and simulation of non-stationary space-time rainfall fields at the catchment scale. Paper presented at the AGU Chapman Conference on Rainfall Fields, Analysis and Synthesis, Caracas, Venezuela, March 24-28.

Seminar Presentations

1. Sivapalan, M. (2021). Megatrends in the Growth in Hydrology: Learning from the Past and Projecting to the Future. Department of Hydraulic Engineering, Tsinghua University, Beijing, China. November 25, 2021. INVITED
2. Sivapalan, M. (2021). Megatrends in the Growth in Hydrological Understanding: From Newton to Darwin to Wegener. Department of Civil and Environmental Engineering, Texas A & M University, October 25, 2021. INVITED
3. Sivapalan, M. (2021). Sociohydrology: “Imagineering”, Not Just Engineering, Needed to Address Water Security Challenges. Centre for Water Informatics & Technology, Lahore University of Management Science (LUMS), August 11, 2021. INVITED
4. Sivapalan, M. (2021). Sociohydrology: "Imagineering", Not Just Engineering, Needed to Address Water Security Challenges, Annual Conference of the Korea Water Resources Association, June 03-04, 2021. KEYNOTE LECTURE
5. Sivapalan, M. (2021). Coevolutionary Perspective of Water Management in a Changing World, Joint American Water Resources Association and National Capitol Region Virtual Water Symposium, April 15-16, 2021. INVITED LECTURE
6. Sivapalan, M. (2020). Time Scale Interactions and Co-evolution of Humans and Water: Socio-hydrology. Department of Environmental Engineering, Seoul National University of Science & Technology, Korea. October 27, 2020. INVITED
7. Sivapalan, M. (2020). Self-interest in the Common Interest: How to Make Community Activities Work. Indian Water Youth Network. October 3, 2020. INVITED
8. Sivapalan, M. (2020). Megatrends in the Growth in Hydrological Understanding: From Newton to Darwin to Wegener. 4th International School for Young Scientists, Water Probems Institute, Russian Academy of Sciences, Moscow, Russia, September 25, 2020. INVITED
9. Sivapalan, M. (2019). Sociohydrology: "Imagineering", Not Just Engineering, Needed to Address Water Security Challenges, Department of Civil and Environmental Engineering, University of Houston, Texas, January 17, 2020. INVITED.

10. Sivapalan, M. (2019). Mega-trends in the Growth of Hydrologic Understanding: From Newton to Darwin to Wegener, Indian Institute of Science, Bangalore, India, November 18, 2019. INVITED
11. Sivapalan, M. (2019). Mega-trends in the Growth of Hydrologic Understanding: From Newton to Darwin to Wegener, Ramaiah University of Applied Science, Bangalore, India, November 16, 2019. INVITED GUEST LECTURE.
12. Sivapalan, M. (2019). Sociohydrology: "Imagineering", Not Just Engineering, Needed to Address Water Security Challenges, Ramaiah University of Applied Science, Bangalore, India, November 25, 2019. INVITED PUBLIC LECTURE
13. Sivapalan, M. (2019). Sociohydrology: "Imagineering", Not Just Engineering, Needed to Address Water Security Challenges, Water Talk, Water Institute, University of Waterloo, Canada, September 26, 2016. INVITED
14. Sivapalan, M. (2018). Water Crisis: Need "Imagineering" Not Just Engineering to Solve Water Security Challenges, Geography Colloquium, Department of Geography and Geographic Information Science, University of Illinois at Urbana-Champaign, November 30, 2018. INVITED
15. Sivapalan, M. (2018). Progress in Socio-hydrology: Meta-analysis of Challenges and Opportunities., Chinese Academy of Sciences, Beijing, China, May 3, 2018. INVITED
16. Sivapalan, M. (2018). From Engineering Hydrology to Earth System Science: Milestones in the Transformation of Hydrologic Science, Tsinghua University, Beijing, China, April 24, 2018. INVITED
17. Sivapalan, M. (2018). Progress in Socio-hydrology: Meta-analysis of Challenges and Opportunities. Beijing Normal University, China, April 23, 2018. INVITED
18. Sivapalan, M. (2017). From Engineering Hydrology to Earth System Science: Milestones in the Transformation of Hydrologic Science, Kyoto University, Japan, May 26, 2017. INVITED
19. Sivapalan, M. (2017). Socio-hydrology: Use-inspired Basic Science in the Age of the Anthropocene. Yamanashi University Kofu, Japan, Department of Civil and Environmental Engineering. May 25, 2017. INVITED
20. Sivapalan, M. (2017). From Engineering Hydrology to Earth System Science: Milestones in the Transformation of Hydrologic Science, Kobe University, Japan, May 22, 2017. INVITED
21. Sivapalan, M. (2017). Socio-hydrology: Use-inspired Basic Science in the Age of the Anthropocene. University of Arizona, Tucson, Department of Hydrology and Atmospheric Sciences. May 8, 2017. INVITED
22. Sivapalan, M. (2017). Progress in Socio-hydrology: Meta-analysis of Challenges and Opportunities. Institut des Géosciences de l'Environnement IGE), Université Grenoble-Alpes, Grenoble, France, March 28, 2017. INVITED
23. Sivapalan, M. (2017). Progress in Socio-hydrology: Meta-analysis of Challenges and Opportunities. Department of Hydraulic Engineering, Tsinghua University, Beijing, China. January 12, 2017. INVITED. DISTINGUISHED LECTURE
24. Sivapalan, M. (2016). Progress in Socio-hydrology: Meta-analysis of Challenges and Opportunities. Department of Geography, Indiana University, Bloomington, Indiana. November 11, 2016. INVITED
25. Sivapalan, M. (2015). Time Scale Interactions and the C-evolution of Humans and Water. Chinese Academy of Sciences, Urumuchi, Xinjiang Province, China. August 14, 2015. INVITED
26. Sivapalan, M. (2015). Time Scale Interactions and the C-evolution of Humans and Water. Chinese Academy of Sciences, Lanzhou, Gansu Province, China. August 6, 2015. INVITED
27. Sivapalan, M. (2015). Time Scale Interactions and the C-evolution of Humans and Water. Chinese Academy of Sciences, Beijing, China. August 3, 2015. INVITED
28. Sivapalan, M. (2015). Changing Water Systems and the "Tyranny of Small Problems". Peter Wall Institute Lecture, Presented at the School of Forest Sciences Center, University of British Columbia, Vancouver, Canada. March 26, 2015. INVITED
29. Sivapalan, M. (2015). Evolution of Hydrologic Science as Use-Inspired Basic Science for the Anthropocene. Presented at the Texas Water Resources Institute, College of Agriculture and Life Sciences, Texas A & M University, College Station, Texas, January 21, 2015. INVITED
30. Sivapalan, M. (2015). Regional Patterns of Water Balance Variability across the United States: A Newtonian-Darwinian Synthesis. Presented at the Department of Civil Engineering, Indian Institute of Science, Bangalore, India, January 9, 2015. INVITED
31. Sivapalan, M. (2014). Predictability of arid zone hydrology: challenges and opportunities. To be presented at King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia, November 24, 2014. INVITED
32. Sivapalan, M. (2014). Regional Patterns of Water Balance Variability: Basis for a Newtonian-Darwinian Synthesis. King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia, November 23, 2014. INVITED
33. Sivapalan, M. (2014). Regional Patterns of Water Balance Variability across the United States: A Newtonian-Darwinian Synthesis. To be presented at the Department of Civil and Environmental Engineering, University of Notre Dame, October 14, 2014. INVITED

34. Sivapalan, M. (2014). Derivation of closure relations for models based on the REW approach: Catchment self-organization and the pitfalls of up-scaling. Department of Geography, Utrecht University, The Netherlands. INVITED.
35. Sivapalan, M. (2013). Socio-hydrologic Modeling to Understand and Mediate the Competition for Water between Humans and Ecosystems: Murrumbidgee River Basin, Australia. Distinguished Lecture Series. Global Institute for Water Security, University of Saskatchewan, Saskatoon, Canada, November 27, 2013. INVITED
36. Sivapalan, M. (2013). Parameterization of the Effects of Landscape Heterogeneity on Integrated Subsurface Runoff Response: A Reconciliation of Newtonian and Darwinian Approaches. Department of Natural Resources and Environmental Sciences (NRES), University of Illinois at Urbana-Champaign, March 1, 2013. INVITED
37. Sivapalan, M. (2012). From PUB to PUC – "Predictions under Change": Water, Earth and Biota in the Anthropocene. Dept. of Hydraulic Engineering, Tsinghua University. Beijing, China. October 19, 2012. INVITED
38. Sivapalan, M. (2012). From PUB to PUC – "Predictions under Change": Water, Earth and Biota in the Anthropocene. Chinese Academy of Sciences. Beijing, China. October 19, 2012. INVITED
39. Sivapalan, M. (2012). Predictions under Change: Water, Earth and Biota in the Anthropocene. Indian Institute of Technology, Chennai, India. August 14, 2012. INVITED
40. Sivapalan, M. (2012). Functional Signatures as the Basis of Hydrologic Similarity: Regional Analysis Across the Continental United States. Delft University of Technology, The Netherlands. January 11, 2012. INVITED
41. Sivapalan, M. (2011). Predictions under Change (PUC): Water, Earth and Biota in the Anthropocene. University of New South Wales, Department of Civil and Environmental Engineering, August 15, 2011. INVITED
42. Sivapalan, M. (2011). Predictions under Change (PUC): Water, Earth and Biota in the Anthropocene. University of Technology Sydney, Department of Civil and Environmental Engineering, July 25, 2011. INVITED
43. Sivapalan, M. (2011). Predictions under Change (PUC): Water, Earth and Biota in the Anthropocene. UFZ Leipzig, June 7, 2011. INVITED
44. Sivapalan, M. (2011). Predictions under Change (PUC): A research agenda for co-evolution of water cycle structure and dynamics. Free University of Amsterdam, April 11, 2011. INVITED
45. Sivapalan, M. (2010). Landscapes as non-linear filters and the dynamic role of vegetation: A fundamental hydrologic modelling framework. Presented at the Department of Bioengineering, Texas A & M University, College Station, November 10, 2010. INVITED
46. Sivapalan, M. (2010). Landscapes as non-linear filters and the dynamic role of vegetation: A fundamental hydrologic modelling framework. Presented at the Department of Geosciences, University of Oslo, Norway, September 17, 2010. INVITED
47. Sivapalan, M. (2010). Space-time symmetry of hydrologic variability: A functional model of annual water balance at the catchment scale. Institute of Industrial Science, University of Tokyo, June 20, 2010. INVITED
48. Sivapalan, M. (2010). Space-time symmetry of hydrologic variability: A functional model of annual water balance at the catchment scale. Hydrosystems Group, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, January 29, 2010. INVITED
49. Sivapalan, M. (2010). Space-time symmetry of annual water balance variability and climate Sensitivity: A functional model. Columbia Water Center, Earth Institute, Columbia University, March 4, 2010. INVITED
50. Sivapalan, M. (2009). Water cycle dynamics in a changing environment: Advancing hydrologic science through synthesis. Department of Civil and Environmental Engineering, University of Connecticut, September 25, 2009. INVITED
51. Sivapalan, M. (2009). Hydrologic Change Science: Predictions in a Changing Environment. Institute of Advanced Study. Munich Technical University, Munich, Germany. June 8, 2009. INVITED
52. Sivapalan, M. (2009). Response of floods to climate and/or land use changes: Is there a role for similarity concepts and catchment typology? Department of Civil and Environmental Engineering, Purdue University, Wester Lafayette, Indiana, March 9, 2009. INVITED
53. Sivapalan, M. (2009). Sustainable Water Management in a Changing Environment: A Vibrant Research Agenda Centred on Ecosystem Services. Department of Geographical Sciences, University of Bristol, UK, February 6, 2009. INVITED
54. Sivapalan, M. (2008). Water Cycle Dynamics in a Changing Environment: Advancing Hydrologic Science through Synthesis. Environmental Dynamics Seminar, Centre for Water Research, University of Western Australia, August 13, 2008. INVITED
55. Sivapalan, M. (2008). Water Cycle Dynamics in a Changing Environment: Advancing Hydrologic Science through Synthesis. Department of Atmospheric Science, University of Illinois, Urbana, April 2, 2008. INVITED
56. Sivapalan, M. (2008). Multiple Scale Interactions of Landscape Processes within Intensively Managed Watersheds, Department of Civil and Environmental Engineering, Northwestern University, February 22, 2008. INVITED

57. Sivapalan, M. (2008). Comparative analysis of process controls of watershed water balance, or alternatively, "watersheds marching to a different drummer", Hydrosystems Seminar, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, February 8, 2008
58. Sivapalan, M. (2007). Water Cycle Dynamics in a Changing Environment: Advancing Hydrologic Science through Synthesis. CUAHSI Cyber-seminar, October 17, 2007. INVITED
59. Sivapalan, M. (2007). Predictions in Watershed Hydrology: Perspectives on the State of the Art and Pathways Forward, St. Anthony Falls Hydraulic Laboratory, University of Minnesota, October 3, 2008. INVITED
60. Sivapalan, M. (2007). Behavioral modeling: a new theoretical framework for hydrologic predictions at the watershed scale. Presented at the Water Research Institute (IRSA-CNR), Rome, Italy, July 6, 2007. INVITED
61. Sivapalan, M. (2007). Behavioral modeling: a new theoretical framework for hydrologic predictions at the watershed scale. Presented at the Technical University of Delft, The Netherlands, May 8, 2007. INVITED
62. Sivapalan, M. (2006). On Watersheds as Complex Environmental Systems: A Case for Multi-Disciplinary Hydrology. Presented at the Department of Hydrology and Water Resources, University of Arizona, Tucson, Arizona, February 1, 2006. INVITED
63. Sivapalan, M. (2006). Transpiration as the Leak in a Carbon Factory: Test of a Model of Self-Optimizing Vegetation, Presented at the Department of Civil and Environmental Engineering, University of North Carolina, Chapel Hill, North Carolina, January 12, 2006.
64. Sivapalan, M. (2006). Pattern, Process and Function: Elements of a Unified Theory of Hydrology at the Catchment Scale, Presented at the Department of Civil and Environmental Engineering, Duke University, Durham, North Carolina, January 11, 2006. INVITED
65. Sivapalan, M. and S. Schymanski (2005). Transpiration as the Leak in a Carbon Factory: Test of a Model of Self-Optimizing Vegetation, Presented at the Hydrosystems Laboratory, Department of Civil and Environmental Engineering, University of Illinois, Urbana-Champaign, November 30, 2005.
66. Sivapalan, M., Origins of Scaling and Non-linearity of Flooding Response in Catchment Form and Function, and Links to Coupled Mass and Force Balances. Seminar presented at the Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, USA. April, 20, 2005. INVITED
67. Sivapalan, M., Pattern, Process and Function: Elements of a Unified Theory of Hydrology at the Catchment Scale. Seminar presented at the Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, USA. April, 15, 2005. INVITED
68. Sivapalan, M., Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Basin Scale. Seminar presented at the Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China. January 26, 2005. INVITED
69. Sivapalan, M., On Watersheds as Complex Environmental Systems: A Case for Multi-Disciplinary Hydrology. Seminar presented at the Chinese Academy of Sciences, Beijing, China. January 26, 2005. INVITED
70. Sivapalan, M., Invitation to PUB: Predictions in Ungauged Basins, an IAHS decadal initiative. Seminar presented at the Department of Civil and Environmental Engineering, Tsinghua University, Beijing, China. January 24, 2005. INVITED
71. Sivapalan, M., Representative Elementary Watershed (REW) Approach to Distributed Modeling, A Novel Contribution to Predictions in Ungauged Basins (PUB). Seminar presented at the Department of Civil and Environmental Engineering, Tsinghua University, Beijing, China. January 24, 2005. INVITED
72. Sivapalan, M., On Watersheds as Complex Environmental Systems: A Case for Multi-Disciplinary Hydrology. Department of Civil and Environmental Engineering, Tohoku University, Sendai, Japan. January 18, 2005. INVITED
73. Sivapalan, M., On Watersheds as Complex Environmental Systems: A Case for Multi-Disciplinary Hydrology. Centre for Water Research, Environmental Dynamics seminar, University of Western Australia. August 25, 2004. INVITED
74. Sivapalan, M., On Watersheds as Complex Environmental Systems: A Case for Multi-Disciplinary Hydrology. Department of Geography, University of Illinois, Urbana-Champaign, USA. July 14, 2004. INVITED
75. Sivapalan, M. A New Blueprint for Distributed Modelling at the Basin Scale. Institute of Hydrology, University of Freiburg, Germany. May 7, 2004. INVITED
76. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Basin Scale. Departmental Seminar, School of Engineering, University of Newcastle, November 18, 2003. INVITED
77. Sivapalan, M. Origins of Scaling and Non-linearity of Flooding Response in Catchment Form and Function, and Links to Coupled Mass and Force Balances. Department of Civil Engineering, University of Hong Kong, June 10, 2002. INVITED.
78. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. Environmental Dynamics seminar, Centre for Water Research, University of Western Australia, April 17, 2002. INVITED

79. Sivapalan, M. Process Complexity at the Hillslope Scale, Process Simplicity at the Watershed Scale: Is There a Connection. Institute of Industrial Science, University of Tokyo, Japan, March 26, 2002. INVITED
80. Sivapalan, M. Process Complexity at the Hillslope Scale, Process Simplicity at the Watershed Scale: Is There a Connection, Environmental Dynamics Seminar, Centre for Water Research, University of Western Australia. November 14, 2001. INVITED.
81. Sivapalan, M. Climate, Soil, Vegetation Controls on Streamflow Variability and the Required Complexity of Water Balance Models. Imperial College, London University, November 6, 2001. INVITED
82. Sivapalan, M. Process Complexity at the Hillslope Scale, Process Simplicity at the Watershed Scale: Is There a Connection. University of Bristol, November 5, 2001. INVITED
83. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment. CEMAGREF, Paris, France, June 1, 2001. INVITED
84. Sivapalan, M. Climate, Soil, Vegetation Controls on Streamflow Variability and the Required Complexity of Water Balance Models. Delft University of Technology, The Netherlands, May 31, 2001. INVITED
85. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. IHE Delft, The Netherlands, May 18, 2001. INVITED
86. Sivapalan, M. Climate, Soil, Vegetation Controls on Streamflow Variability and the Required Complexity of Water Balance Models. Wageningen Agricultural University, The Netherlands, April 27, 2001. INVITED
87. Sivapalan, M. Climate, Soil and Vegetation Controls on Mean Annual Water Balance. Politecnico di Bari, Bari, Italy, April 19, 2001. INVITED
88. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. Politecnico di Bari, Bari, Italy, April 19, 2001. INVITED
89. Sivapalan, M. Climate, Soil, Vegetation Controls on Streamflow Variability and the Required Complexity of Water Balance Models. Universita di Basilicata, Potenza, Italy, April 18, 2001. INVITED
90. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. Coastal Morphodynamics group, WL | Delft Hydraulics, April 3, 2001. INVITED
91. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. Department of Hydraulic Engineering. University of Stuttgart, Germany. February 21, 2001. INVITED
92. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. University of Newcastle-Upon-Tyne, January 31, 2001. INVITED
93. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. University of Lancaster, January 29, 2001. INVITED.
94. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. University of Barcelona, January 11, 2001. INVITED.
95. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. Indian Institute of Science, Bangalore, November 24, 2000. INVITED (Golden Jubilee Lecture Series).
96. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. Indian Institute of Technology, Madras, November 20, 2000. INVITED
97. Sivapalan, M. Prediction of Ungauged Catchments: Vehicle for a New Theory of Hydrology at the Catchment Scale. CSIRO Land and Water, Floreat. October 13, 2000. INVITED
98. Sivapalan, M. Prediction of Ungauged Catchments. Lawrence Wilson Art Gallery, University of Western Australia. INAUGURAL LECTURE. September 20, 2000.
99. Sivapalan, M. Balance in Catchment Water Balance. UWA Extension Lecture, July 27, 2000.
100. Sivapalan, M. and C. Jothityangkoon. Estimation of extreme floods: Examination of Process Changes Using a Distributed Rainfall-Runoff Model. Institution of Engineers Australia, WA Division, Perth. July 10, 2000 (INVITED)
101. Sivapalan, M. Climate, Soil, Vegetation Controls on Water Balance Variability Over Changing Time Scales, University of California, Davis, 1999, December (INVITED)
102. Sivapalan, M. Temporal scales of rainfall-runoff processes and spatial scaling of flood peaks, Wageningen Agricultural University, The Netherlands, 1999, November, (INVITED)
103. Sivapalan, M. Climate, Soil, Vegetation Controls on Water Balance Variability Over Changing Time Scales, Delft University of Technology, The Netherlands, 1999, November, (INVITED)
104. Sivapalan, M. Climate, Soil, Vegetation Controls on Water Balance Variability Over Changing Time Scales, ETH-Zürich, Switzerland, Soil Physics and Hydrology, 1999, November, (INVITED)
105. Sivapalan, M. Climate, Soil, Vegetation Controls on Water Balance Variability Over Changing Time Scales, Institution of Engineers, Australia, Perth, 1999, October, (INVITED)
106. Sivapalan, M. Climate, Soil, Vegetation Controls on Water Balance Variability Over Changing Time Scales, University of Adelaide, 1999, September, (INVITED)

107. Sivapalan, M. Climate, Soil, Vegetation Controls on Water Balance Variability Over Changing Time Scales, ED seminar, CWR
108. Sivapalan, M. Climate, Soil, Vegetation Controls on Water Balance Variability Over Changing Time Scales, University of Colorado, Boulder, 1999, June 8, (INVITED)
109. Sivapalan, M. Physical controls on annual water balance, New Zealand Institute of Water and Atmosphere (NIWA), Christchurch, 1999, May 26
110. Sivapalan, M. Temporal scales of rainfall-runoff processes and spatial scaling of flood peaks, Civil and Environmental Engineering, Univ. of New South Wales, April 14, 1999.
111. Sivapalan, M. Temporal scales and hydrological regimes: Implications for flood frequency scaling, New Zealand Institute of Water and Atmosphere (NIWA), Christchurch, 1997, June 23 (INVITED)
112. Sivapalan, M. Temporal scales and hydrological regimes: Implications for flood frequency scaling, Asian Institute of Technology, Bangkok, Thailand, 1997, May 16 (INVITED)
113. Sivapalan, M. Scaling of flood frequency: Temporal scales and hydrologic regimes (Tewkesbury Lecture), Department of Civil and Environmental Engineering, University of Melbourne, 1997, February 24, Tewkesbury Lecture (INVITED)
114. Sivapalan, M. Transformation of point rainfall to areal rainfall: Intensity-duration-frequency curves, Department of Civil Engineering, Monash University, 1997, February 26 (INVITED)
115. Sivapalan, M. (1996). Process controls on flood frequency. Environmental Dynamics Seminar, University of Western Australia, Nedlands, March 20.
116. Robinson, J. S. and M. Sivapalan (1994). On the relative roles of hillslope processes, channel routing and network geomorphology in the hydrological response of natural catchments. Environmental Dynamics Seminar, University of Western Australia, Nedlands, September 21.
117. Sivapalan, M. (1993). Heterogeneity and similarity of runoff generation in small agricultural catchments in Western Australia. Institute of Industrial Science, University of Tokyo, July 1993.
118. Sivapalan, M. (1993). Large scale catchment modelling to predict the effects of land use changes in forested catchments. Institute of Industrial Science, University of Tokyo, July 1993.
119. Sivapalan, M. (1993). Runoff generation in small agricultural catchments in the wheatbelt: Heterogeneity and similarity. Environmental Dynamics Seminar, University of Western Australia, Nedlands, June 23.
120. Sivapalan, M. (1991). Linking hydrologic parameterizations across a range of scales - hillslope to catchment to region. Environmental Dynamics Seminar, University of Western Australia, Nedlands, June 26.
121. Sivapalan, M. (1990). Progress on the Extreme Flood Estimation Project. Seminar presented to the Institution of Engineers Australia, Perth, November 12.
122. Bates, B. C. and M. Sivapalan (1990). A generalised diffusion wave flood routing method. Seminar presented to the Institution of Engineers Australia, Perth, May 14.
123. Ruprecht, J. K. and M. Sivapalan (1990). Water and salt transport modelling for south-west catchments. Seminar presented to the Institution of Engineers Australia, Perth, June 11.
124. Sivapalan, M. (1989). Geomorphology and catchment storm response - A sound basis for new modelling approaches. Seminar presented at the Institution of Engineers, Australia, Perth, August 14.
125. Sivapalan, M. (1989). Combined hydraulic and hydrologic approaches to runoff routing in river channel networks. Environmental Dynamics Seminar, University of Western Australia, Nedlands, February 15.
126. Sivapalan, M. (1988). Towards the modeling of water balance dynamics at the catchment scale. Seminar presented at Geophysical Fluid Dynamics Laboratory, Princeton University, Princeton, New Jersey, March 10

Research Funds Received

2019-2022	US$540,460	Collaborative Research: *Cross-Scale Interactions and the Design of Adaptive Reservoir Operations* (M. Garcia, D. J. Yu and M. Sivapalan). *US National Science Foundation*
2013-2014	US$108,000	Towards socio-hydrologic synthesis: modeling the co-evolutionary dynamics of coupled human, water and ecological systems. (T. Troy, M. Sivapalan and M. Konar). *SESYNC: National Social Environmental Synthesis Center, Annapolis, Maryland*
2013-2014	US$25,010	Advancing socio-hydrology – a new science of people and water. (M. Sivapalan, X. Cai and M. Konar). Department of Civil and Environmental Engineering, University of Illinois

2011-2013	US$68,549	Development of Subsurface Flow Parameterization for VIC Based on a Combination of Top-Down and Bottom-Up Approaches (M. Sivapalan). *Pacific Northwest National Laboratory, Washington*
2009-2010	US$76,285	Supplementary Request: Towards a Forward-Looking Research Agenda – Water Balance Projections over Decades to Centuries at River Basin to Regional Scales (M. Sivapalan, P. Kumar, B. L. Rhoads and D. Wuebbles). *US National Science Foundation*
2009-2013	US$784,280	Collaborative Research: Using empirical and modeling approaches to quantify the importance of nutrient spiraling in rivers (J. Tank, M. Sivapalan, R. O. Hall, E. J. Rosi-Marshall, M. A. Baker) *US National Science Foundation.*
2009-2012	A$213,000	Animals on the move – an integrated approach to selecting conservation reserves under climate change (N. J. Mitchell, M. R. Hipsey, M. R. Kearney, W. Porter, M. Sivapalan and G. Kuchling) *Australian Research Council Discovery Grant.*
2009-2012	US$523,661	Biotic Alteration of Soil Hydrologic Properties and Feedback with Vegetation Dynamics in Water Limited Ecosystems (M. Sivapalan, P. Kumar, K. Lohse, P. A. Troch, E. Vivoni and P. S. C. Rao) *US National Science Foundation*
2008-2012	US$1,967,000	EFRI-RESIN: Interdependence, Resilience and Sustainability of Infrastructure Systems for Biofuel Development (X. Cai *et al.*). *US National Science Foundation.*
2008-2009	US$41,924	Coupled Modeling of Water, Sediment and Nutrients at the Watershed Scale (M. Sivapalan). UIUC Institute for Advanced Computing Applications and Technologies (IACAT)
2008-2011	US$ 73,000	Research Monograph on Hydrologic and Hydroclimatic Variability (M. Sivapalan). *Delft Technical University, The Netherlands.*
2007-2008	US$ 41,000	Distributed Predictions of Streamflow Response under Human Interferences (M. Sivapalan and X. Cai). *UIUCAdaptive Infrastructure and Information Systems (AISIS).*
2007-2011	US$875,000	Water Cycle Dynamics in a Changing Environment: Advancing Hydrologic Science through Synthesis (M. Sivapalan, P. Kumar, B. L. Rhoads and D. Wuebbles). *US National Science Foundation*
2007-2009	US$360,000	Collaborative Research: Understanding the hydrologic implications of landscape structure and climate - Towards a unifying framework of watershed similarity (T. Wagener, P. A. Troch and M. Sivapalan) *US National Science Foundation*
2007-2010	US$1,650,000	Interactions between Water, Energy and Carbon Dynamics as Predictors of Canopy to Ecosystem Scale Vegetation Pattern and Function in a Changing Environment (P. Kumar, M. Sivapalan, S. Long, X. Liang) *US National Science Foundation*
2006-2008	US$70,000	Development of Hydrological Observatories for the Institute of Intensively Managed Landscapes (P. Kumar, B. L. Rhoads, E. Herricks, D. Wuebbles, G. McIsaac) *Illinois Environmental Council*
2003-2005	A$245,000	A Generalized Flood Frequency Framework for Prediction of the Effects of Multi-Scale Hydroclimatic Variability (M. Sivapalan, S. W. Franks) *Australian Research Council (Discovery Grant)*
2003-2005	A$160,000	Integration of Surface Water and Groundwater Processes in Coastal Catchments (D. Reynolds, M. Sivapalan, C. de La Galle) *Australian Research Council (Linkage Grant), Department of*

		Conservation and Land Management (CALM)
2001-2003:	A$81,876	Evaluation of Surface Water Management Strategies in Agricultural Catchments *Australian Research Council (SPIRT Grant), Agriculture W.A.*
2001	A$14,731	Hydrological and Biogeochemical Controls on Catchment Nutrient Response. *Australian Research Council (Small Grant)*
1999-2002:	A$58,500	Rehabilitation of Gold Mining Residue at Boddington and Hedges Gold Mines. Water Balance Investigations *Alcoa of Australia, Boddington Gold Mine*
1999-2001:	A$185,000	A Theory Linking Space-Time Variability of Runoff Fields in a River Basin (with V.K. Gupta) *Australian Research Council (Large Grants)*
1999-2001:	A$112,000	Research Programme to Improve Rural Dam Efficiency *W. A. Water Corporation, W. A. Office of Water Regulation & Agriculture W.A.*
1999-2001:	A$102,898	Process Improvements and Implementation of LASCAM Water Quality Model. *Estuarine Research Foundation of W.A.*
1999-2000:	A$139,000	Predicting the Hydrological Effects of Bauxite Mining and Rehabilitation: Development of Improved Process Descriptions for a Large Scale Catchment Model *Australian Research Council (SPIRT Grant), WA Water and Rivers Commission, Alcoa of Australia*
1999	A$19,500	Process Controls of Regional and Inter-Annual Variability of Water Balance in South-West WA. *Australian Research Council (Small Grants)*
1995-1996:	A$187,500	Modelling of Freshwater Peatswamp Catchments for Rural Water Supply and Saltwater Intrusion in Estuaries *Public Works Department (JKR), Sarawak, Malaysia*
1995-1998	A$209,138	Development of Large Scale Catchment Model for the Prediction of Water Yield, Sediments and Nutrients for the Swan-Avon River Basin *Estuarine Research Foundation of W. A.*
1994	A$400,000	Environmental Impact Assessment for Bakun Hydroelectric Project - Upstream Catchment Hydrology and Reservoir Water Quality (with Jörg Imberger and David Hamilton) *Universiti Malaysia Sarawak (UNIMAS), Sarawak*
1994-1995	A$40,000	Extreme Flood Estimation Model for South-West Dams *Water Authority of Western Australia*
1994-1995	A$24,000	Evaporation Rates Above and Within a Jarrah Forest (with Dr Neil Viney) *Australian Research Council (Small Grants)* *Centre for Water Research, and ALCOA*
1992-1994	A$240,378	Large Scale Catchment Modelling Project *Water Authority of W. A. and Alcoa of Australia*
1993	A$25,000	Workshop on: Scale Issues in Hydrological Modelling (with J. D. Kalma and I. D. Moore) *Department of Trade, Industry and Commerce, Water Authority of W. A., ALCOA of Australia, Centre for Water Research*
1992-1993	A$40,000	Linking Hydrologic Parameterizations Across a Range of

		Scales - From Small Hillslopes to Large Catchments *Australian Research Council (Small Grants)*
1991-1992	A$100,000	Special Environmental Fluid Dynamics Grant *Centre for Environmental Fluid Dynamics* *University of Western Australia*
1989-1991	A$12,260	A Hydraulic Approach to Runoff Routing Models for Flood Estimation (with B. C. Bates) *CSIRO – Univ. of W. A. Collaborative Research Fund*
1988-1991	A$198,000	Extreme Flood Estimation in the South-West of Western Australia *Water Authority of Western Australia & Land and* *Water Resources Research and Development Corporation*

TEACHING ACTIVITIES

Teaching interests

Environmental Mechanics, Physical Hydrology, Stochastic Hydrology, Hydrological Modelling and Design, Statistical Methods for Civil Engineers, Environmental Engineering Design

Courses Taught

CEE 202: Engineering Risk and Uncertainty	Spring 2012
Water Planet, Water Crisis	Spring 2009, 2010
Surface Hydrology CEE 450	Fall 2009, 2011, 2013
Global Water Crisis: Causes and Consequences	Spring 2008
Watershed Hydrology NRES/GEOG 401	Fall 2006, 2008, 2009, 2011, 2012
Watersheds as Complex Systems, UIUC	Spring 2006
Hydrologic and Hydroclimatic Variability, UIUC	Spring 2006, 2007, 2010, 2014
Analytical Methods in Environmental Engineering 351	2001-2004
Environmental Mechanics 342 (Catchment Hydrology)	2000-present
Environmental Mechanics (640.301)	1991-1999
Environmental Engineering Design 215 (640.215)	1998-1999
Hydrology 403 (640.403)	1988-present
Surface Hydrology 419 (640.419)	1992-1993
Surface Hydrology 601 (Post-Graduate 643.601)	1993, 1998
Civil Engineering Analysis 320 (610.320)	1989, 1990
Engineering Analysis 321 (640.321)	1996
Data Collection and Analysis 221 (640.221)	1996, 1997
Our Living Earth 117	1999-present
Engineering 101 (First Year – Dimensional Analysis)	2003-present

Undergraduate Students Supervised

Honours Theses (26):

Ashley Kirvan, 2004/2005	Mark Wittwer, 2004/2005
Melinda Burton, 2004	Sam Nicol, 2004
Cameron Hanush, 2003	Christina Young, 2003
Thaddeus Chew, 2003	Dina Rahmah, 2003
Jacqueline Schöpf, 2002	Mary-Ann Berti, 2002

Gajan Sivandran, 2002
Elonn Tyl, 2000
Sivan Sivanathan, 1999
Chris Gwynne, 1998
Danielle Hanns, 1998
Gavan McGrath, 1998
Stuart Atkinson, 1997
Chris Deshon, 1994
Brad Harris, 1994
Michael Dufty, 1992

Palenque Blair, 2000
Michelle Donnelly, 2000
Kala Senathirajah, 1999
Kerrie Hawkes, 1998
Leanne Phillips, 1998
Andrew King, 1997
Joseph Scholz, 1997
Sally Stewart-Wynne, 1994
Alex Rogers, 1992

Pass Projects (6):

Matthew Bowman, 1996
Justin Robinson, 1992
Sean Tonkin, 1992

Brett Wallace, 1994
Stephanie Gorman, 1992
Rashid Mukri, 1991

SERVICE

Within University

- **Member, Capricious Grading Committee**, Department of Geography, University of Illinois, Urbana-Champaign, 2009-2010.
- **Member, Departmental Advisory Committee**, Department of Geography, University of Illinois, Urbana-Champaign, 2009-2011, 2014-2015.
- **Director,** Center for Water as a Complex Environmental System (CWACES), University of Illinois at Urbana-Champaign, October 2008-present.
- **Affirmative Action Officer,** Department of Geography, University of Illinois at Urbana-Champaign, 2006-present.
- **Member, Grievance Committee**, Department of Geography, University of Illinois, Urbana-Champaign, 2007-present.
- **Chair, Search Committee,** Centre for Water as a Complex Environmental System, University of Illinois at Urbana-Champaign (for three positions in Surficial Geology, Hydrometeorology and Sedimentology), 2005-2006
- **Chair, Environmental Hydroscience Discipline Group,** University of Western Australia (2003-2005).
- **Postgraduate Coordinator** in the Centre for Water Research (1997-2003). The main role is the recruitment of post-graduate students from within and from outside of Australia – involves coordinating publicity, advising and evaluation of applications, and administering admissions procedures.
- Member of the Faculty of Engineering and Mathematical Sciences **Higher Degrees Committee** (1997-2003)
- **Head of Department of Environmental Engineering** (July 1996-June 1997), and Member of the Dean's **Management Advisory Committee** - also acting Head of Department at numerous other times.
- Founded (when I was Head of Department), and was a member of, the Department of Environmental Engineering's **Advisory Panel** in 1996/1997.
- Member, Department of Environmental Engineering **staff selection/interview panels**: Associate Professor in Computational Fluid Dynamics, Lecturer/Senior Lecturer in Groundwater Hydrology, Departmental Manager, and Manager of the Technology Transfer Facility
- Member, Faculty of Engineering and Mathematical Sciences **staff selection/interview panels** for the Faculty Executive Officer, and on ranking committees for the Gledden Travel Awards/Gledden Senior Visiting Fellowships, and Research Launching Grants.
- Member of the **Advisory Board of Engineering**, Faculty of Engineering and Mathematical Sciences, for a period of two years.

- Member of the **Faculty Board** of the Faculty of Engineering and Mathematical Sciences for two years.
- **Chair, Search Committee**, Lecturer/Senior Lecturer/Associate Professor in Aquatic Ecological Processes, 2002
- **Chair, Committee of Fellows,** Examination Panel for Final Year Design Project (EED415), Centre for Water Research, 2002, 2003

Outside the University

Member, Selection Committee, Prince Sultan bin Abdulaziz International Prize for Water (Creativity Prize): 2022

Member, Alfred Wegener Medal Committee, European Geosciences Union: 2018 – 2020.

Chair, Alfred Wegener Medal Committee, European Geosciences Union: 2020 – 2021

Member, Honors and Recognition Committee (Union Committee), American Geophysical Union: 2015 – 2017.

Member of Evaluation Committee of the Netherlands Research School for Socio-economic and Natural Sciences of the Environment (SENSE), and **Chair of SENSE Review Committee** for the UNESCO-IHE Institute for Water Education, and **Chair of the Review Panels** at UNESCO-IHE for: Hydrology, River Basin Development, Land and Water Development, Hydro-informatics, Water Management, Aquatic Ecosystems, Coastal Engineering, June 9-13, 2014.

Chair, Robert E. Horton Medal Committee, American Geophysical Union: 2013 – 2014, 2017 – 2019

Chair, John Dalton Medal Committee, European Geosciences Union: 2011 – 2014.

Member, Early Career Award Committee, American Geophysical Union Hydrology Section, 2011-2012

Member, Hydrological Sciences Review Panel, US National Science Foundation, Division of Earth Sciences: 2007-2008.

Member, Science Plan Drafting Committee, Consortium of Universities for Advancement of Hydrologic Synthesis and Infrastructure (CUAHSI)

Member, PUB Strategic Advisory Group (SAG): 2002-2005, IAHS Decade on Prediction of Ungauged Basins: 2003-2012, International Association of Hydrological Sciences: 2003-2005. Other members of the group are: Dr John Schaake (USA, Chair), Prof. Kuniyoshi Takeuchi (Japan), Prof. Pierre Hubert (France), Prof. Jim Shuttleworth (USA), Prof. Jim Wallace (UK), Prof. Huub Savenije (The Netherlands), Mr Alan Hall (Australia).

Chair, PUB Science Steering Group (SSG): 2002-2005, IAHS Decade on Prediction of Ungauged Basins: 2003-2012, International Association of Hydrological Sciences: 2003-2005. Other members of the group are: Daniel Schertzer (France), Jeff McDonnell (USA), John Pomeroy (UK), Taikan Oki (Japan), Stefan Uhlenbrook (Germany), Venkat Lakshmi (USA), Xu Liang (USA), Stewart Franks (Australia), Harouna Karambiri (Burkina Faso), Eduardo Mario Mendiondo (Brazil), Praveen Kumar (USA), Erwin Zehe (Germany), Thorsten Wagener (USA), Ian Littlewood (UK), Yasuto Tachikawa (Japan), & Denis Hughes (South Africa).

Membership of Professional Societies

Member, American Association of Geographers (AAG)
Member, American Geophysical Union (06726019)
Member, European Geosciences Union (SIVA33235)
Member, International Association of Hydrological Sciences
Member, New Zealand Hydrological Society
Member, Modelling and Simulation Society of Australia
Member, AIT Alumni Association (Ref: SL10M77)

Representation on Committees

Member, American Geophysical Union, Surface Water Committee, 1994-present
Member, European Geosciences Union, Catchment Hydrology Committee, 2001-present
Member, Hydrology and Water Resources Panel, Institution of Engineers, Australia (Western Australia Division): 1989 – 1993, and 2000-2003
Member, Research Review Panel for Project 1.2: Scaling Procedures to Support Large Scale Model, CRC for Catchment Hydrology, Melbourne: 2000 - 2002
Member, Steering Committee for Research on Land Use and Water Supply (Western Australian Water Resources Council): 1989-1992

Member, Research and Development Technical Committee, WA State Salinity Council: 2000 to 2003
Member, Bauxite Subcommittee, Mining and Management Program Liaison Group (MMPLG), (Western Australia): 1999-2003.
Member, Judging Panel, Western Australian Water Industry Awards (Office of Water Regulation): 1997-2000

Membership of Editorial Boards

Executive Editor, *Hydrology and Earth System Sciences* (European Geosciences Union)	2004-2012
Editor, *Hydrology and Earth System Sciences* (European Geosciences Union)	2012-2018
Member, Editorial Board: *Ecohydrology* (John Wiley & Sons)	2008-2018
Emeritus Editor: *Hydrology Research Letters* (Japan Soc. of Hydrology & Water Resources)	2016-present
Associate Editor: *Hydrology Research Letters* (Japan Soc. of Hydrology & Water Resources)	2007-2016
Member, Editorial Board, *Benchmark Papers in Hydrology* (IAHS Press)	2004-2018
Associate Editor: *Encyclopaedia of Hydrological Sciences* (John Wiley & Sons)	2001–2012
Member, Editorial Board (Hydrology & Water Resources): *Geography Compass* (Wiley-Blackwell)	2009–2011
Member, Editorial Board: *Hydrological Sciences Journal* (IAHS)	2004–2009
Section Editor (Hydrology and Water Resources), *Geography Compass* (Blackwell Publishers)	2006-2009
Member, Editorial Board: *Advances in Water Resources* (Elsevier Science)	2001–2009
Associate Editor: *Water Resources Research* (American Geophysical Union)	2006-2008
Member, Editorial Board: *Nordic Hydrology*	2004–2007
Member, Editorial Board: *Environmental Modelling & Software* (Elsevier Science)	2000–2006
Associate Editor: *Journal of Hydrology* (Elsevier Science)	1996–2004
Member, Editorial Board: *Hydrological Processes* (John Wiley & Sons)	1996–2004

Conference Organisation

Co-convener: Special Session H157 on *Hydrology, Society, and Environmental Change: Convergent Approaches to Human–Water Interactions* (with Maura Allaire, Fuqiang Tian, Hilary K McMillan, and Giuliano Di Baldassarre), AGU Fall Meeting, December 1-17, 2020.

Co-convener: Special Session on *Hydrology, Society, and Environmental Change: Convergent Approaches to Human Water Interactions*, December 9-13, 2019, San Francisco, California (with Maura Allaire, Giuliano Di Baldassarre, and Hilary McMillan).

Co-convenor: Special Session HS5.2.2 on *Advances in Socio-hydrology,* EGU General Assembly, April 7-12, 2019 (Markus Nüsser, Murugesu Sivapalan, Britta Höllermann , Giuliano Di Baldassarre , Saket Pande, Ted Veldkamp, Jeroen Aerts, Marleen de Ruiter, Convenors).

Co-convener: Special Session on *Coupled Human-Water System Dynamics across Scales: Observations, Modeling and Management,* Joint AGU-JpGU Session, May 20-25, 2017, Chiba, Japan (with Taikan Oki, Naota Hanasaki, Giuliano Di Baldassarre).

Co-convener: Special Session on *Hydrology, Society, and Environmental Change: Coupled Human-Water Dynamics across Scales,* December 12-16, 2016, San Francisco, California (with Hilary McMillan, Taikan Oki and Alfonso Mejia).

Co-convener: *Observations and Modeling of Land Surface Water and Energy Exchanges Across Multiple Scales: Symposium in Honor of Eric Wood,* June 2-3, 2016, Princeton, New Jersey, USA (with Justin Sheffield Tara Troy, Christa Peters-Lidard, Wade Crow, Matt McCabe, Dennis Lettenmaier).

Co-convener: Special Session on *Coupled Human-Water System Dynamics across Scales: Observations, Modeling and Management,* Joint AGU-JpGU Session, April 2016, Tokyo, Japan (with Taikan Oki, Naota Hanasaki, Giuliano Di Baldassarre).

Co-convener: Special Session HS 2.2.2 Dryland Hydrology, European Geosciences Union, General Assembly, April 12-17, 2015, Vienna, Austria (with Efrat Morin, Mike Kirkby and Roger Moussa).

Co-convener: Special session on Socio-hydrology and River Basin Development: Scaling and Sustainability Issues, European Geosciences Union, General Assembly, April 12-17, 2015, Vienna, Austria (with A. Zlinszky , J. Froebrich, F. Gallart, H. Hoff, M. Kirkby, G. Timár, C. Siderius, A. van Griensven, and C. Leduc)

Co-convener: Special session on Socio-hydrology and River Basin Development: Scaling and Sustainability Issues, European Geosciences Union, General Assembly, April 27- May 2, 2014, Vienna, Austria (with J. Froebrich, A. Zlinszky, M. Kirkby, G. Timár, A. van Griensven, H. Hoff , F. Gallart, R. Schulze, C. Leduc, C. Siderius)

Co-convener and co-chair: Special session on General Ecohydrology**.** European Geosciences Union, General Assembly, April 7-12, 2013, Vienna, Austria (with K. Smettem, Nicola Montaldo, Vito Iacobellis, Salvatore Manfreda, Félix Francés, and Gregory Egger)

Co-convener and co-chair: Special session on Hydrology of temporary streams and basins, European Geosciences Union, General Assembly, April 22-27, 2012, Vienna, Austria (with M.J. Kirkby, F. Gallart, and R. Moussa)

Co-convener and co-chair: Special session on *The role of rainfall and soil water in shaping land-vegetation-atmosphere interactions,* European Geosciences Union, General Assembly, April 22-27, 2012, Vienna, Austria (with K. Smettem, F. Frances, S. Manfreda, N. Montaldo, V. Iacobellis, G. Egger, D. Or, R. Helmig, J. Vanderborght, T. Illangasekare, M. Coenders-Gerrits, O. Terranova, E. Morin, J. Friesen, P. Llorens, A. Hildebrandt, D. Dunkerley)

Co-convener and co-chair: *Special session on Environmental and anthropogenic change affecting catchments and groundwater-dependent ecosystems,* European Geosciences Union, General Assembly, April 22-27, 2012, Vienna, Austria (with S. J. Schymanski, S. Fatichi, B. Klöve, S. Manfreda, and C. Stumpp)

Co-convener and co-chair: Special session on *Hydrometeorological modeling and Earth Observations under Extremes: Issues of Scale, Dependence and Robust Frameworks for Collective Risk Assessment,* European Geosciences Union, General Assembly, April 4-8, 2011, Vienna, Austria (with Andras Bardossy, Douglas Cripe, Antonio Parodi, Efi Foufoula, Boyko Dodov, Giorgio Boni, and Roberto Rudari)

Co-convener and co-chair: Special session on *Groundwater recharge: Processes and Quantification*, European Geosciences Union, General Assembly, April 4-8, 2011, Vienna, Austria (with Ulf Mohrlok, Mike Kirkby, Mark Bakker, Ty P. A. Ferre)

Co-convener and co-chair: Special session on *Climate-Soil and Vegetation Interactions in Ecological-Hydrological Processes*, European Geosciences Union, General Assembly, April 4-8, 2011, Vienna, Austria (with Keith Smettem, Nicola Montaldo, Vito Iacobellis, Salvatore Manfreda, Felix Frances, and Gregory Egger)

Co-convener and co-chair: Special session on *Predicting Behavior of Freshwater Systems in a Changing Environment*, Fall Meeting of the American Geophysical Union, December 13-17, 2010 (with M A Hassan, A I Packman, J Wilson)

Co-Convenor and Co-Chair: Special Session on *Climate-Soil and Vegetation Interactions in Ecological-Hydrological Processes*, European Geophysical Union, General Assembly, May 02-07, 2010, Vienna, Austria (with Drs Salvatore Manfreda, Nicola Montaldo, Vito Iacobellis and Keith Smettem).

Co-Convenor and Co-Chair: Special Session on *Hydrological change: Future projections of hydrological behaviour*, European Geophysical Union, General Assembly, May 2-7, 2010, Vienna, Austria (with Harald Kunstmann, S. Hagemann and Bettina Schaefli).

Co-Convenor and Co-Chair: Special Session on *Quantifying and Modeling Spatially and Temporally Dependent Extremes: The Key to a Robust Collective Risk Assessment*, European Geophysical Union, General Assembly, May 2-7, 2010, Vienna, Austria (with Boyko Dodov and Andras Bardossy).

Co-convener and co-chair: Special session on *Hydrologic Predictions in a Changing Environment*, Fall Meeting of the American Geophysical Union, December 14-18, 2009 (with B Ruddell, N. B,. Basu, M. A Hassan, A I Packman, T. Wagener, J Wilson)

Co-Convenor and Co-Chair: Special Session on *Investigations of Process Interactions in Space and Time in Agricultural, Ecological and Hydrological Systems*, 18th IMACS World Congress MODSIM'09 (with Tim Green and James Ascough), July 13-17, 2009, Cairns, Australia.

Co-Convenor and Co-Chair: Special Session on *The role of vegetation in catchment hydrology*, European Geosciences Union, General Assembly, April 19-24, 2009, Vienna, Austria. (with Drs Luis Samaniego, Darren Drewry, A. Hildebrandt, Stan Schymanski).

Co-Convenor and Co-Chair: Special Session on *Climate-Soil-Vegetation Interactions in Ecological-Hydrological Processes*, European Geophysical Union, General Assembly, April 19-24, 2009, Vienna, Austria. (with Drs Salvatore Manfreda, Nicola Montaldo, Vito Iacobellis and Keith Smettem).

Member, International Advisory Committee: 1st International Conference on Hydropedology, August 4-7, 2008, Penn State University, University Park, Pennsylvania, USA.

Co-Convenor and Co-Chair: Boussinesq Center Workshop and Master Class on *Hydrologic Science for an Ever Changing World: Search for New Hydrologic Concepts, Theories, Models and Practices*, June 23-25, 2008, Delft University of Technology (with Professor Hubert Savenije).

Co-Convenor and Co-Chair: Special Session on *Climate-Soil-Vegetation Interactions in Ecological-Hydrological Processes*, European Geophysical Union, General Assembly, April 13-18, 2008, Vienna, Austria. (with Drs Salvatore Manfreda, Nicola Montaldo and Vito Iacobellis),

Co-Convenor and Co-Chair: Special Session on *Pan Evaporation Trends: Observations, Interpretations, and the Ecohydrological Implications*, Fall Meeting of the American Geophysical Union, December 10-14, 2007, San Francisco, California (with Drs. M Roderick and M. Parlange*)*

Co-Convenor and Co-Chair: Special Session on *Dryland Hydrology*, European Geophysical Union, General Assembly, April 15-20, 2007, Vienna, Austria. (with Prof. Mike Kirkby and Dr Francesc Gallart).

Co-Convenor and Co-Chair: Special Session on *Role of Climate, Soil and Vegetation Interactions on Water Balance Variability and Extremes*, European Geophysical Union, General Assembly, April 15-20, 2007, Vienna, Austria. (with Dr Salvatore Manfreda, Dr Nicola Montaldo and Dr Vito Iacobellis).

Co-convener and Co-chair: *USA PUB Workshop*, LaSells Stewart Center, Oregon State University, October 16-19, 2006 (with Jeffrey J. McDonnell Larry Band, Michael Campana, Chris Duffy, Rick Hooper, Praveen Kumar)

Co-Convenor and Co-Chair: Special Session on *Dryland Hydrology*, European Geophysical Union, General Assembly, April 2-7, 2006, Vienna, Austria. (with Prof. Mike Kirkby and Dr Francesc Gallart).

Co-Convenor and Co-Chair: Special Session on *Role of Climate, Soil and Vegetation Interactions on Water Balance Variability and Extremes*, European Geophysical Union, General Assembly, April 2-7, 2006, Vienna, Austria. (with Dr Vito Iacobellis and Prof. Pierluigi Claps).

Co-Convenor and Co-Chair: Special Session on *Multi-scale Hydro-climatic Variability and Change – Observations and Implications*, International Congress on Advances and Applications in Modelling and Simulation, MODSIM' 2005, December 12-15, 2005, Melbourne, Australia (with Dr Stewart W. Franks).

Member, International Advisory Board: MODSIM'2005, International Congress on Advances and Applications in Modelling and Simulation, December 12-15, Melbourne, Australia.

Co-Convenor: Special session on *Predictions in Ungauged Basins (PUB): Data, Science and Policy*, *World Water Week*, Stockholm, Sweden, August 21-27, 2005 (with S. W. Franks and J. J. McDonnell).

Co-Convenor and Co-Chair: *Sir Mark Oliphant Conference on Thresholds and Pattern Dynamics – A New Paradigm for Predicting Climate Driven Processes*, Organized by UWA Environmental Hydrosciences Discipline Group, Perth, Australia, July 4-7, 2005 (with Drs. Christoph Hinz and Greg Hancock).

Co-Convenor and Co-Chair: Special Session on *Role of Climate, Soil and Vegetation Interactions on Water Balance Variability and Extremes*, European Geophysical Union, General Assembly, April 30-May 3, 2005, Vienna, Austria. (with Dr Vito Iacobellis and Prof. Pierluigi Claps).

Main Convenor: Symposium on *Predictions in Ungauged Basins (PUB): Promise and Progress*, IAHS Congress, Foz do Iguaçu, Brazil, March 29-April 3, 2005.

Main Convenor: Workshop on *Predictions in Ungauged Basins (PUB): PUB Working Groups*, IAHS Congress, Foz do Iguaçu, Brazil, March 29-April 3, 2005.

Member, Scientific Advisory Committee: *Symposium on PUB for Sustainable Water Resources Planning and Management,* October 30-31, 2004, Karnal, Rajastan, India.

Member, Scientific Advisory Committee: *CAHMDA-II International Workshop on The Terrestrial Water Cycle: Modeling and Data Assimilation across Catchment Scales*, October 25- 27, 2004, Princeton, N.J., USA.

Co-Convenor and Co-Chair: Special Session on *Role of Climate, Soil and Vegetation Interactions on Water Balance Variability and Extremes*, European Geophysical Union, General Assembly, March 25-30, 2004, Nice, France. (with Dr Vito Iacobellis and Prof. Pierluigi Claps).

Co-Convenor and Co-Chair: Workshop on *Australia-Japanese Contribution to PUB: Predictions in Ungauged Basins*, Perth, Australia, February 2-5, 2004 (with K. Takeuchi, S. Franks and Y. Tachikawa).

Co-Convenor and Co-Chair: Workshop WH-07: *Towards a Science Programme for Prediction in Ungauged Basins*, International Union of Geodesy and Geophysics (IUGG) General Assembly, Sapporo, Japan, June 30-July 11, 2003 (with Profs. Enda O'Connell, Levent Kavvas and Jeff McDonnell).

Co-Convenor and Co-Chair: Special Session on *Role of Climate, Soil and Vegetation Interactions on Water Balance Variability and Extremes*, European Geophysical Union, General Assembly, April 26-30, 2003, Nice, France (with Dr Vito Iacobellis and Prof. Pierluigi Claps).

Member, International Steering Committee: Third International Conference on *Water Resources and Environment Research (ICWRER*), 22-26 July 2002, Dresden, Germany.

Co-Convenor and Co-Chair: Special Session on *Role of Climate, Soil and Vegetation Interactions on Water Balance Variability and Extremes*, European Geophysical Union, General Assembly, March 25-30, 2002, Nice, France (with Dr Vito Iacobellis and Prof. Pierluigi Claps).

Co-Convenor and Co-Chair: Special Session on *Scaling Issues in Hydrology*, International Congress on Modelling and Simulation, MODSIM' 2001, December 10-13, 2001, Canberra, Australia. (with A/Prof. Rodger Grayson and Dr Ross Woods).

Member of Discussion Panel (along with Keith Beven, Mike Kirkby, Tom Dunne and Jeff McDonnell), and **Plenary Speaker:** AGU Chapman Conference on *State-of-the-Art in Hillslope Hydrology*, Sunriver, Oregon, October 8-12, 2001.

Member, Scientific Advisory Committee, and Keynote Speaker: *CAHMDA-I, International Workshop on Catchment Scale Hydrologic Modelling and Data Assimilation*, Wageningen Agricultural University, The Netherlands, September 3-5, 2001.

Co-Convenor, Co-Chair and Keynote Speaker: Specialist Workshop on *Catchment and Regional Scale Hydrologic Predictions Using the Downward Approach*, Cooperative Research Centre for Catchment Hydrology, Melbourne, Victoria, October 23-25, 2000 (with Dr Lu Zhang and Dr Rob Vertessy).

Co-Convenor and Co-Chair: Special session on *Nonlinear Propagation of Multi-Scale Dynamics Through Hydrologic Subsystems*, AGU Fall Meeting, December 13-17, 1999, San Francisco, California, U. S.A. (with Drs. P. Kumar and Daniel Harris).

Co-convenor and Co-Chair: Special session on *Process Interactions in the Natural Environment*, International Congress on Modelling and Simulation, *MODSIM'97*, Hobart, Tasmania, Dec. 8-11, 1997 (with Dr. Tim Green, CSIRO).

Co-convenor and Co-Chair: Special session on *Spatial Processes and Scaling: Merging Field Data Collection and Distributed Modelling*, AGU Fall Meeting, December 11-15, 1996, San Francisco, California (with A/Prof. G. Blöschl and Prof. L. Band).

Joint Convenor: 4-th International Workshop on *Scale Problems in Hydrology*, June 17-21, 1996, Krumbach (Vienna), AUSTRIA (with Profs. G. Blöschl, V. K. Gupta and K. J. Beven).

Co-Convenor and Co-Chair: Special session on *Advances in Regional Flood Frequency Analyses and Scale Effects*, AGU Fall Meeting, December 11-15, 1995, San Francisco, California (with Prof. J. Valdes).

Joint Convenor of the Workshop on *Scale Issues in Hydrological/Environmental Modelling*, Nov. 30 - Dec. 2, 1993, Robertson, NSW (with Profs. J. D. Kalma and E. F. Wood).

Short Courses, Workshops & Colloquia Given

June 23-August 4, 2019: Co-leader, *Yunnan Socio-hydrology Summer Institute on Transboundary Rivers*. Held at Yunnan University, Chenggong Campus, China. Involved 14 graduate students and 14 faculty mentors from around the world.

December 26, 2011 –January 15, 2012: Team Leader, Winter Research Workshop (involving 18 PhD students, 24 MSc students and 5 mentors.): Comparative Hydrology and Water Resources Management under Change. Ethiopian Institute of Water Resources (EIWR), University of Addis Ababa, Ethiopia.

June 22-August 5, 2010: Co-leader, Summer Institute, *Improving Predictability of Water Cycle Dynamics through Inter-Disciplinary Synthesis* (UIUC Synthesis Project). Held at the Department of Geography, University of British Columbia, Vancouver, and involved 12 graduate students and 6 faculty mentors.

June 22-August 5, 2009: Leader, Summer Institute, *Improving Predictability of Water Cycle Dynamics through Inter-Disciplinary Synthesis* (UIUC Synthesis Project). Held at the Department of Geography, University of British Columbia, Vancouver, and involved 12 graduate students and 6 faculty mentors.

July 20-27, 2008: Summer Course on *Advanced Hydrology and Water Resources by Overseas Researchers*, Tsinghua University, Beijing, China (joint with Drs Ximing Cai and Stan Schymanski)

1. Water in an Ever Changing World: Role of Hydrologic Science
2. Hydrologic Cycle and Global Water Circulation: Concept of Water Balance
3. Human Perspectives on Variability and the Global Water Cycle: Introduction to Global Change
4. Water, Earth, Biota, Humans: Structure and Evolution.
5. Structure of the Land Surface, Heterogeneity, Organization and Scale: Human Impacts
6. Water, Earth, Biota and Humans: Transport and Transformations, The functional perspective.
7. Water, Earth, Biota and Humans: Landscapes as Space-Time Filters
8. Thresholds and Connectivity: Process Interactions and Feedbacks

February 23 – May 28, 2001: Colloquia on *Recent Advances in Surface Hydrology*, Delft Technical University (a series of 10 lectures)

1. Climatic Controls on Mean Annual Water Balance (February 23, 2001)
2. Climate, Soil, Vegetation Controls on Water Balance (March 5, 2001)
3. Geomorphological Unit Hydrograph and Geomorphological Dispersion (March 12, 2001)
4. Hillslope-Channel Network Interactions and Storm Response (April 2, 2001)
5. Stochastic Modelling of Rainfall Time Series and Random Fields (April 9, 2001)
6. Intensity-Duration-Frequency Curves and Areal Reduction Factors (April 23, 2001)
7. Derived Flood Frequency Analysis and Process Controls (May 7, 2001)
8. Process Controls on Scaling and Regionalisation of Flood Frequency (May 14, 2001)
9. Scale Issues in Hydrological Modelling (May 21, 2001)
10. Downward Approach to Hydrologic Modelling (May 28, 2001)

March 30-31, 1998: Fundamentals of Hydrology, in: Short Course on Water Resources Management, Asian Institute of Technology, Thailand

Outside Consulting Projects

- Environmental Impact Assessment for the Bakun Hydroelectric Project
- Sarawak Water Resources Master Plan: Modelling of Freshwater Peat Swamp Catchments and Saltwater Intrusion in Estuaries

Reviewer for International Journals

Water Resources Research	American Geophysical Union
Journal of Hydrology	Elsevier Science (Amsterdam)
Hydrological Processes	John Wiley (U. K.)
Journal of Geophysical Research	American Geophysical Union
Advances in Water Resources	Elsevier Science
Civil Engineering Transactions	Institution of Engineers Australia
Water Resources, Planning and Management	American Society of Civil Engineers
Nordic Hydrology	Society of Nordic Hydrology
Journal of the Meteorological Society of Japan	Meteorological Society of Japan
Hydrology and Earth System Science	European Geophysical Society
Journal of Hydrometeorology	American Meteorological Society

External Examiner (PhD)

Hemantha Jagath Perera, PhD thesis, University of Newcastle. Title: *Hydrogeomorphic Modelling of Saturation Excess Runoff Generation*, 1998.

Mai Chun Zhou, PhD thesis, University of Hong Kong. Title: *Modified Xinanjiang Model and Its Incorporation with GIS and TOPMODEL*, 2000.

Ferdinand Diermanse, PhD thesis, Technical University of Delft, The Netherlands. Title: *Physically Based Modelling of Rainfall-Runoff Processes*, 2001.

Lucy Marshall, PhD thesis. University of New South Wales, Sydney, Australia. Title: *A Bayesian Framework for Hydrologic Model Implementation and Choice: Development of the Hierarchical Mixture of Experts Rainfall-Runoff Models, 2006*

Stephen Tan Boon Kean, PhD thesis. Nanyang Technological University, Singapore. Title: *Rainfall-Recharge Characteristics of an Unconfined Sandy Aquifer, Changi Reclaimed Land, Singapore*, 2006

Guoping Zhang, PhD thesis. Delft University of Technology, The Netherlands. Title: *Application of the REW Approach to Physically Based Distributed Watershed Modeling in Groundwater Dominated Catchments*, 2005

Reinder Brolsma, PhD thesis. Utrecht University, The Netherlands. Title: *Effect of Climate Change on Temperate Forest Eco-systems, 2010*

Ype van der Velde, PhD thesis. Wageningen Agricultural University, The Netherlands. Title: *Climate Change Impact on a Groundwater-Influenced Hillslope Ecosystem, 2010*

B. Venkatesh, PhD thesis. National Institute of Technology Karnataka, India. Title: *Measurement and Modelling of Hydologic Regimes Under Different Land Covers in Sahyadri Mountains, India.*

Keith Sawicz, PhD dissertation. Department of Civil and Environmental Engineering, Pennsylvania State University. Title: *Catchment Classification – Understanding Hydrologic Similarity through Catchment Function, 2013*

Ekkamol Vannametee, PhD thesis. Utrecht University, The Netherlands. Title: *Hydrograph Prediction in Ungauged Basins: Development of the Closure Relation for Hortonian Runoff, 2014*

Mesgana Gizaw, PhD thesis. Department of Civil and Environmental Engineering, University of Alberta. Title: *Global Warming Impacts on Hydrologic Extremes in North America and Africa, 2016*

Galatia Terti, PhD thesis. LTHE, Grenoble University, France. Title: *Towards Probabilistic Prediction of Flash Flood Human Impacts, Risk Analysis, 2017*

Margaret Garcia, PhD thesis. Department of Civil and Environmental Engineering, Tufts University. Title: *Modeling Coupled Hydrological-Human Systems: Assessing the Impact of Infrastructure Choice on Water Demand*, 2017

Juan Carlos Castilla-Rho, PhD thesis. Department of Civil and Environmental Engineering, University of New South Wales. Title: *Agent-Based Modelling of Groundwater Systems*, 2017.

Benjamin Abban, PhD thesis. Department of Civil and Environmental Engineering, University of Tennessee Knoxville. Title: Capturing the role of the co-play of land use and rainfall on the non-stationarity of water and sediment fluxes across different spatiotemporal scales in intensively managed landscapes (IMLs), 2018.

Linda Kuil, Dr. Tech Sc. Thesis. Faculty of Civil Engineering, Vienna University of Technology. Title: *Towards a sustainable water future? Understanding the interactions between humans and their environment in response to water scarcity*, 2018.

Emma White, PhD thesis. Department of Infrastructure Engineering, University of Melbourne. Title: *A quantitative evaluation of the effectiveness of groundwater management plans*, 2019

Titih Titisari Danielaini, PhD thesis. School of Science and Health, Western Sydney University. Title: *Analysis of socio-ecohydrological factors affecting water security, liveability and sustainability: A case study of the Cirebon Metropolitan Region, West Java, Indonesia*, 2019

Ansir Ilyas, PhD Thesis. Department of Electrical Engineering. Lahore University of Management Sciences, Pakistan. Title: Integrating Local Behavioural Feedbacks to Identify Sustainable Pathways for Natural Resource Management, 2022

Most Cited Publications: 72 Publications with 72 or more ISI Citations (Out of a total of 268)

1. Blöschl, G. and M. Sivapalan (1995). Scale issues in hydrological modelling - A review. *Hydrological Processes*, Vol. 9, Nos. 3/4, pp. 251-290. **Citations = 1163**
2. Sivapalan, M., K. Takeuchi, S. W. Franks, V. K. Gupta, H. Karambiri, V. Lakshmi, X. Liang, J. J. McDonnell, E. M. Mendiondo, P. E. O'Connell, T. Oki, J. W. Pomeroy, D. Schertzer, S. Uhlenbrook, and E. Zehe (2003). IAHS Decade on

Predictions in Ungauged Basins (PUB), 2003-2012: Shaping an exciting future for the hydrological sciences. *Hydrological Sciences Journal,* Vol. 48, No. 6, pp. 857-880. **Citations = 848**

3. Sivapalan, M., H. H. G. Savenije and G. Blöschl (2012). Socio-hydrology: A new science of people and water. *Hydrological Processes*, Vol. 26, 1270–1276, doi: 10.1002/hyp.8426. **Citations = 602**
4. Hrachowitz, M., H. H. G. Savenije, G. Blöschl, J. J. McDonnell, M. Sivapalan, J. W. Pomeroy, B. Arheimer, T. Blume, M. P. Clark, U. Ehret, F. Fenicia, J. E. Freer, A. Gelfan, H. V. Gupta, D. A. Hughes, R. W. Hut, A. Montanari, S. Pande, D. Tetzlaff, P. A. Troch, S. Uhlenbrook, T. Wagener, H. C. Winsemius, R. A. Woods, E. Zehe and C. Cudennec (2013). A decade of Predictions in Ungauged Basins (PUB) – a review. *Hydrological Sciences Journal*, Vol. 58, No. 6, pp. 1–58, doi: 10.1080/02626667.2013.803183. **Citations = 593**
5. Wood, E. F., J. K. Roundy, T. J. Troy, R. van Beek, M. F. P. Bierkens, E. M. Blyth, A. de Roo, P. Döll, M. Ek, J. S. Famiglietti, D. Gochis, N. van de Giesen, P. Houser, P. Jaffe, S. Kollet, B. Lehner, D. P. Lettenmaier, C. Peters-Lidard, M. Sivapalan, J. Sheffield, A. Wade, and P. Whitehead (2011). Hyper-resolution global land surface modeling: Meeting a grand challenge for monitoring Earth's terrestrial water. *Water Resources Research*, Vol. 47, W05301, doi:10.1029/2010WR010090. **Citations = 507**
6. Wood, E. F., M. Sivapalan, K. Beven and L. Band (1988). Effects of spatial variability and scale with implications to hydrologic modeling. *Journal of Hydrology*, Vol. 102, pp. 29-47. **Citations = 475**
7. Montanari, A., G. Young, H. H. G. Savenjie, D. Hughes, T. Wagener, L. Ren, D. Koutsoyiannis, C. Cudennec, S. Grimaldi, G. Blöschl, M. Sivapalan, K. J. Beven, H. V. Gupta, B. Arheimer, Y. Huang, A. Schumann, D. A. Post, V. Srinivasan, E. Boegh, P. Hubert, C. J. Harman, S. E. Thompson, M. Rogger, M. Hipsey, E. Toth, A. Viglione, G. Di Baldassarre, B. Schaefli, H. McMillan, S. J. Schymanski, G. Characklis, B. Yu, Z. Pang and V. Belyaev (2013). "Panta Rhei – Everything Flows": Change in hydrology and society – The IAHS Scientific Decade 2013-2022. *Hydrological Sciences Journal*, Vol. 58(6), pp. 1256–1275, doi: 10.1080/02626667.2013.809088. **Citations = 465**
8. McDonnell, J. J., M. Sivapalan, K. Vaché, S. Dunn, G. Grant, R. Haggerty, C. Hinz, R. P. Hooper, J. W. Kirchner, M. L. Roderick, J. Selker, and M. Weiler (2007). Moving beyond heterogeneity and process complexity: A new vision for watershed hydrology. *Water Resources Research*, Vol. 43, W07301, doi: 10.1029/2006WR005467. **Citations = 464**
9. Wagener, T., M. Sivapalan, P. A. Troch, B. L. McGlynn, C. J. Harman, H. V. Gupta, P. Kumar, P. S. C. Rao, N. B. Basu and J. S. Wilson (2010). The future of hydrology: An evolving science for a changing world. *Water Resources Research*, Vol. 46, W05301, doi:10.1029/2009WR008906. **Citations = 393**
10. Sivapalan, M., K. Beven and E. F. Wood (1987). On hydrologic similarity. 2. A scaled model of storm runoff production. *Water Resources Research*, Vol. 23, No. 12, pp. 2266-2278. **Citations = 318**
11. Sivapalan, M. (2003). Prediction of ungauged basins: A grand challenge for theoretical hydrology. *Hydrological Processes*, Vol. 17, No. 15, pp. 3163-3170. **Citations = 317**
12. Sawicz, K., T. Wagener, M. Sivapalan, P. A. Troch, and G. Carrillo (2011). Catchment classification: empirical analysis of hydrologic similarity based on catchment function in the eastern USA. *Hydrology and Earth System Sciences*, Vol. 15, pp. 2895–2911, www.hydrol-earth-syst-sci.net/15/2895/2011/ **Citations = 311**
13. Basu, N. B., G. Destouni, J. W. Jawitz, S. E. Thompson, N. Loukinova, A. Darracq, S. Zanardo, M. A. Yaeger, M. Sivapalan, A. Rinaldo and P. S. C. Rao (2010). Nutrient loads exported from managed catchments reveal emergent biogeochemical stationarity. *Geophysical Research Letters*, Vol. 37, L23404, doi:10.1029/2010GL045168. **Citations = 273**
14. Sivapalan, M., G. Blöschl, L. Zhang, and R. Vertessy (2003). Downward approach to hydrological prediction. *Hydrological Processes*, Vol. 17, pp. 2101-2111, doi: 10.1002/hyp.1425. **Citations = 252**
15. Blöschl, G., M.F.P. Bierkens, A. Chambel, C. Cudennec, G. Destouni, A. Fiori, J. W. Kirchner, J. J. McDonnell, H.H.G. Savenije, M. Sivapalan, C. Stumpp, E. Toth, E. Volpi, G. Carr, J. Salinas, B. Széles, A. Viglione et al. (2019). Twenty-three unsolved problems in hydrology: A community perspective. *Hydrological Sciences Journal*, Vol. 64(10), pp. 1141–1158, doi: 10.1080/02626667.2019.1620507. **Citations = 237**
16. Thompson, S. E., C. J. Harman, P. A. Troch, P. D. Brooks, and M. Sivapalan (2011). Scaling of ecohydrologically mediated water balance partitioning: A synthesis framework for catchment ecohydrology. *Water Resources Research*, Vol. 47(10), W00J03, doi:10.1029/2010WR009998. **Citations = 226**
17. Sivapalan, M. (2003). Process complexity at hillslope scale, process simplicity at the watershed scale: Is there a connection? *HP Today, Hydrological Processes*, Vol. 17, pp. 1037–1041, doi: 10.1002/hyp.5109. **Citations = 221**
18. Ye, W., B. C. Bates, N. R. Viney and M. Sivapalan and A. J. Jakeman (1997). Performance of conceptual rainfall-runoff models in low-yielding ephemeral catchments. *Water Resources Research*, Vol. 33, No. 1, pp. 153-166. **Citations = 216**
19. Wood, E. F., M. Sivapalan and K. J. Beven (1990). Scale and similarity in catchment storm response. *Reviews of Geophysics*, Vol. 28, No.1, 1-18. **Citations = 208**
20. Wittenberg, H. and M. Sivapalan (1999). Watershed groundwater balance estimation using streamflow recession analysis and baseflow separation. *Journal of Hydrology,* Vol. 219, pp. 20-33. **Citations = 197**

21. Sivapalan, M., M. Konar, V. Srinivasan, A. Chhatre, A. Wutich, C. A. Scott, J. L. Wescoat and I. Rodriguez-Iturbe (2014). Socio-hydrology: Use-inspired water sustainability science for the Anthropocene. *Earth's Future*, Vol. 2, pp. 225-230, **Citations = 196**
22. Jothityangkoon, C., M. Sivapalan and D. Farmer (2001). Process controls of water balance variability in a large semi-arid catchment: Downward approach to hydrological model development. *Journal of Hydrology*, Vol. 254, No. 1-4, pp. 174-198. **Citations = 187**
23. Farmer, D., M. Sivapalan and C. Jothityangkoon (2003). Climate, soil and vegetation controls upon the variability of water balance in temperate and semi-arid landscapes: Downward approach to hydrological prediction. *Water Resources Research*, Vol. 39, No. 2, 1035, doi: 10.1029/2001WR000328. **Citations = 183**
24. Robinson, J. S., M. Sivapalan and J. D. Snell (1995). On the relative roles of hillslope processes, channel routing and network geomorphology in the hydrological response of natural catchments. *Water Resources Research*, Vol. 31, No. 12, pp. 3089-3101. **Citations = 182**
25. Berghuijs, W. R., R. A. Woods, C. J. Hutton and M. Sivapalan (2016). Dominant flood generating mechanisms across the United States. *Geophysical Research Letters*, Vol. 43, pp. 4382–4390, doi:10.1002/2016GL068070. **Citations = 182**
26. Zehe, E. and M. Sivapalan (2009). Threshold behavior in hydrological systems as (human) geo-ecosystems: manifestations, controls and implications. *Hydrology and Earth System Sciences*, Vol 13, No. 7, pp. 1273-1297. **Citations = 160**
27. Sivapalan, M. and G. Blöschl (2015). Time scale interactions and the coevolution of humans and water. *Water Resources Research*, Vol. 51, No. 9, pp. 6988–7022. **Citations = 158**
28. Sivapalan, M. and G. Blöschl (1998). Transformation of point rainfall to areal rainfall: Intensity-duration-frequency curves. *Journal of Hydrology*, Vol. 204, pp. 150-167. **Citations = 155**
29. Breuer, L., J.A. Huisman, et al. (2009). Assessing the impact of land use change on hydrology by ensemble modeling (LUCHEM). I: Model inter-comparison of current land use. *Advances in Water Resources*, Vol. 32, No. 2, pp. 129-146, **Citations = 151**
30. Reggiani, P., M. Sivapalan and S. M. Hassanizadeh (1998). A unifying framework for watershed thermodynamics: Balance equations for mass, momentum, energy, entropy and the 2nd law of thermodynamics. *Advances in Water Resources*, Vol. 22, No. 4, pp. 367-398. **Citations = 145**
31. Troch, P. A., G. F. Martinez, V. R. N. Pauwels, M. Durcik, M. Sivapalan, C. J. Harman, P. D. Brooks, H. V. Gupta and T. E. Huxman (2009). Climate and vegetation water-use efficiency at catchment scales. *Hydrological Processes*, Vol. 23, pp. 2409-2414, doi: 10.1002/hyp.7358. **Citations = 144**
32. Elshafei, Y., M. Sivapalan, M. Tonts and M. L. Hipsey (2014). A prototype framework for models of socio-hydrology: Identification of key feedback loops and parameterisation approach. *Hydrology and Earth System Sciences*, Vol. 18, pp. 2141–2166, doi:10.5194/hess-18-2141-2014. **Citations = 140**
33. Parajka, J., A. Viglione, M. Rogger, J. Salinas, M. Sivapalan, and G. Blöschl (2013). Comparative assessment of predictions in ungauged basins, Part 1: Runoff hydrograph studies. *Hydrology and Earth System Sciences*, Vol. 17, pp. 1783–1795, doi:10.5194/hess-17-1783-2013. **Citations = 136**
34. Sivapalan, M., G. Blöschl, R. Merz and D. Gutknecht (2005). Linking flood frequency to long-term water balance: Incorporating the effects of seasonality. *Water Resources Research*, Vol. 41, W06012, doi: 10.1029/2004WR003439. **Citations = 133**
35. Atkinson, S., R. A. Woods and M. Sivapalan (2002). Climate and landscape controls on water balance model complexity over changing time scales. *Water Resources Research*, Vol. 38, No. 12, 1314, doi: 10.1029/2002WR001487. **Citations = 131**
36. Berghuijs, W. R., M. Sivapalan, R. A. Woods and H. H. G. Savenije (2014). Patterns of similarity of seasonal water balance: A window into streamflow variability over a range of timescales. *Water Resources Research*, Vol. 50(7), pp. 5638–5661, doi:10.1002/2014WR015692. **Citations = 130**
37. Sivapalan, M., E. F. Wood and K. Beven (1990). On hydrologic similarity. 3. A dimensionless flood frequency model using a generalized geomorphologic unit hydrograph and partial area runoff generation. *Water Resources Research*, Vol. 26, No. 1, 43-58. **Citations = 124**
38. Beven, K., E. F. Wood and M. Sivapalan (1988). On hydrological heterogeneity - Catchment morphology and catchment response. *Journal of Hydrology*, Vol. 100, pp. 353-375. **Citations = 116**
39. Ocampo, C. J., M. Sivapalan and C. E. Oldham (2006). Hydrological connectivity of upland-riparian zones in agricultural catchments: Implications for runoff generation and nitrate transport. *Journal of Hydrology*, Vol. 331, Issues 3-4, pp. 643–658, doi:10.1016/j.jhydrol.2006.06.010. **Citations = 113**
40. Ocampo, C. J, C. E. Oldham and M. Sivapalan (2006). Nitrate attenuation in agricultural catchments: Shifting balances between transport and reaction. *Water Resources Research*, Vol. 42, W01408, doi: 10.1029/2004WR003773. **Citations = 112**
41. Menabde, M. and M. Sivapalan (2000). Modelling of rainfall time series and extremes using bounded random cascades and Levy-stable distributions. *Water Resources Research*, Vol. 36, No. 11, pp. 3293-3301. **Citations =111**

42. van Emmerik, T., Zheng Li, M. Sivapalan, J. Kandasamy, S. Pande, H. H. G. Savenije, A. Chanan and S. Vigneswaran (2014). Socio-hydrologic modeling to understand and mediate the competition for water between agriculture development and environmental health: Murrumbidgee River Basin, Australia. *Hydrology and Earth System Sciences*, Vol. 18, pp. 4239–4259. **Citations = 111**
43. Blöschl, G. and M. Sivapalan (1997). Process controls on regional flood frequency. Coefficient of variation and basin scale. *Water Resources Research*, Vol. 33, No. 12, pp. 2967-2980. **Citations = 109**
44. Barry, D. A., J. -Y. Parlange, G. C. Sander and M. Sivapalan (1993). A class of exact solutions for Richards' Equation. *Journal of Hydrology*, Vol. 142, pp. 29-46. **Citations = 108**
45. Troch, P. A., G. Carrillo, M. Sivapalan, T. Wagener and K. Sawicz (2013). Climate-vegetation-soil interactions and long-term hydrologic partitioning: Signatures of catchment co-evolution. *Hydrology and Earth System Sciences*, Vol. 17, pp. 2209–2217, doi:10.5194/hess-17-2209-2013. **Citations = 107**
46. Schymanski, S. J., M. Sivapalan, M. L. Roderick, J. Beringer and L. Hutley (2008). An optimality-based model of coupled soil moisture and root dynamics. *Hydrology and Earth System Sciences*, Vol. 12, pp. 913–932. www.hydrol-earth-syst-sci.net/12/913/2008/ **Citations = 107**
47. Son, K. and M. Sivapalan (2007). Improving model structure and reducing parameter uncertainty in conceptual water balance models through the use of auxiliary data. *Water Resources Research*, Vol. 43, W01415, doi: 10.1029/2006WR005032. **Citations = 106**
48. Woods, R. A. and M. Sivapalan (1999). A synthesis of space-time variability of storm response: Rainfall, runoff generation and routing. *Water Resources Research*, Vol. 35, No. 8, pp. 2469-2486. **Citations = 106**
49. Robinson, J. S. and M. Sivapalan (1997). Temporal scales and hydrological regimes: Implications for flood frequency scaling. *Water Resources Research*, Vol. 33, No. 12, pp. 2981-2999. **Citations = 103**
50. Di Baldassarre, G., M. Sivapalan, M. Rusca, C. Cudennec, M. Garcia, H. Kreibich, M. Konar, E. Mondino, J. Mård, S. Pande, M. Sanderson, Fuqian Tian, A. Viglione, Jing Wei, Yongping Wei, D. J. Yu, V. Srinivasan and G. Blöschl, (2019). Sociohydrology: Scientific challenges in addressing the Sustainable Development Goals. *Water Resources Research*, Vol. 55(8), pp. 6327-6355, https://doi.org/10.1029/2018WR023901. **Citations = 102**
51. Wada, Y., M. F. P. Bierkens, A. de Roo, P. Dirmeyer, J. S. Famiglietti, N. Hanasaki, M. Konar, J. Liu, H. Müller Schmied, T. Oki, Y. Pokhrel, M. Sivapalan, T. J. Troy, A. van Dijk, T. van Emmerik, M. H. J. van Huijgevoort, H. A. J. van Lanen, C. J. Vörösmarty, N. Wanders and H. S. Wheater (2017). Human-water interface in hydrological modeling: Current status and future directions. *Hydrology and Earth System Sciences*, Vol. 21, pp. 4169–4193. **Citations = 102**
52. Viney, N. R., H. Bormann, L. Breuer, A. Brönstert, B.F.W. Croke, H.-G. Frede, T. Gräff, L. Hubrechts, J.A. Huisman, A.J. Jakeman, G. Kite, J. Lanini, G. Leavesley, D.P. Lettenmaier, G. Lindström, J. Seibert, M. Sivapalan and P. Willems (2009). Assessing the impact of land use change on hydrology by ensemble modelling (LUCHEM). II: Deterministic and probabilistic ensemble combinations and predictions. *Advances in Water Resources*, Vol. 32, No. 2, pp. 147-158, doi:10.1016/j.advwatres.2008.05.006. **Citations = 102**
53. Reggiani, P., M. Sivapalan and S. M. Hassanizadeh (2000). Conservation equations governing hillslope responses: Exploring the physical basis of water balance. *Water Resources Research*, Vol. 36, No. 7, pp. 1845-1864. **Citations = 102**
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