

Jeffrey J. McDonnell

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*Distinguished Professor of Hydrology
Richardson Chair in Watershed Science*

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RICHARDSON CHAIR IN WATERSHED SCIENCE

Watershed hydrology, Runoff processes and modeling, Isotope hydrology, Hydrological theory

EDUCATION

- 1989 Ph.D., Forest Hydrology, University of Canterbury, Christchurch, New Zealand.
Dissertation: "The age, origin and pathway of subsurface stormflow in a steep humid headwater catchment", 270p.
- 1985 M.Sc., Watershed Ecosystems, Trent University, Peterborough, Canada.
Thesis: "Snowcover ablation and meltwater runoff on a small Precambrian Shield watershed", 127p.
- 1983 B.Sc. (Honors), Physical Geography, University of Toronto, Toronto, Canada.
Thesis: "Storm waves, sediment flux and beach morphodynamics in a barred nearshore zone, Wymbolwood Beach, Ontario", 110p.

REGISTRATION

1999- P.H., Registered Professional Hydrologist (reg'n #1506), American Institute of Hydrology.

PROFESSIONAL EXPERIENCE

Post-PhD

- 2009- *Director*, Institute for Water and Watersheds, Oregon State University
- 1999- *Professor and Richardson Chair in Watershed Science*, Department of Forest Engineering, Resources and Management, Oregon State University, Corvallis, Oregon.
- 1993-99 *Professor of Hydrology* (1997-99), *Associate Professor* (1993-97), State University of New York (SUNY), College of Environmental Science and Forestry, Syracuse, New York.
- 1989-93 *Assistant Professor* of Forest Hydrology, Watershed Science Unit, Department of Forest Resources, Utah State University (adjunct Dept. Civil & Env. Engineering; adjunct Dept of Geography; Coordinator, NASA Earth System Science Education Program 1991-93)
- 1989-90 *Research Hydrologist*, NASA Marshall Space Flight Center, Universities Space Research Assoc., Huntsville, Alabama.

Pre-PhD

- 1985-89 *College Don* (Traill College, Trent University); *Tutor-in-Residence* (University Hall, University of Canterbury).
- 1983-86 *Geophysics Technician* (MPH Consulting Ltd., Yukon Territory); Coast Surveyor (Environmental Applications Group Ltd, Ontario) and Research SCUBA diver (University of Toronto)

HONORS

Awards:

- 2010-11 Birdsall-Dreiss Lecture Award, Geological Society of America
- 2009- 6th Century Chair, University of Aberdeen, Scotland
- 2009- University Distinguished Professor, Oregon State University
- 2009 Dalton Medal, European Geosciences Union.
- 2009 Fellow, American Geophysical Union
- 2008 DSc (“for contributions to streamflow generation theory”), University of Canterbury
- 2008 College of Forestry Teaching and Mentoring Award, Oregon State University
- 2005 Fellow, International Water Academy, Oslo Norway
- 1998 Gordon Warwick Award, British Geomorphological Research Group.
- 1995 Scientific Literacy and Information Scholar Award, State University of New York
- 1990 Warren Nystrom Award, Association of American Geographers
- 1987 Horton Research Grant Award, American Geophysical Union.
- 1987 Canterbury Earth Science Prize, Geological Society of New Zealand.
- 1986 Commonwealth Scholarship and Research Fellowship, New Zealand/Canada
- 1985 John B. Webb Memorial Trophy, Canadian Society of Petroleum Geologists.

Named Lectures Given:

- 2009 Woo Lecture, Canadian Geophysical Union
- 2009 Fellows Lecture, American Geophysical Union
- 2006 Boussinesq Lecture, Delft, The Netherlands
- 2006 Frontier Lecture, American Geophysical Union
- 2006 Penman Lecture, British Hydrological Society, Durham, UK.

Visiting Appointments and Fellowships:

- 2009-2013 Visiting Professor, Hohai University, Nanjing China
- 2008-2013 Visiting Professor, Nanjing Hydraulic Research Institute, China
- 2009 Project Scientist, Isotope Hydrology Division, International Atomic Energy Agency, Vienna, Austria
- 2006-07 TU Delft Fellow and Visiting Professor, Dept. Civil Engineering, Delft, The Netherlands
- 2006 DIG Scholar, Dept. of Geography, University of Durham.
- 2005 STINT Fellow, Swedish National Science Foundation, University of Stockholm.
- 2004 Institute for the Study of Planet Earth Speaker, University of Arizona.
- 2003 Gledden Fellow, Center for Environmental Fluid Dynamics, University of Western Australia.
- 2000 Invited Visiting Professor, Institute of Hydrology, Freiburg University.
- 1999 Leverhulme Trust Professor, Institute for Advanced Studies, Bristol University.
- 1998 Hayward Fellow, LandCare New Zealand Ltd.
- 1997 Invited Visiting Hydrologist, LandCare New Zealand.

- 1997 Japan Science and Technology Agency (STA) Fellow, Japan Forestry and Forest Products Research Institute
- 1989 Universities Space Research Association (USRA) Invited Fellow, NASA Marshall Space Flight Center.

PROFESSIONAL DISTINCTIONS

Editorships:

- 2008- Editorial Board, *International Journal of Hydrological Research*
- 2007- Editorial Board, *Ecohydrology*, John Wiley and Sons.
- 2006- Editorial Board, *Geography Compass*, Blackwell Publishers
- 2005- Associate Editor, *Hydrology and Earth System Science*, European Geophysical Union
- 2004- Editorial Board, Korean Journal of Forestry, Korean Forestry Association.
- 2003-05 Associate Editor, *Journal of Hydrologic Engineering*, ASCE
- 2004- Editor-in-Chief, *Benchmark Papers in Hydrological Sciences*, Book Series, IAHS Press.
- 2004- Senior Advisory Editor, *Encyclopedia of Hydrology*, John Wiley and Sons.
- 2005 Associate Editor, *Encyclopedia of Hydrology*, John Wiley and Sons.
- 1999-05 Editor, *Hydrological Processes*, HPToday, John Wiley and Sons.
- 1999-2006 Associate Editor, *Hydrological Sciences Journal*, IAHS Press.
- 1998-01 Editorial Advisory Board, *Progress in Environmental Science*, Edward Arnold.
- 1997-2007 Associate Editor, *Journal of Hydrology*, Elsevier Science Publishers.
- 1995-98 Associate Editor, *Water Resources Research*, American Geophysical Union (AGU).
- 1994- Editorial Board Member, *Hydrological Processes*, John Wiley and Sons.

Guest Editing:

- 2002 *Hydrological Processes*, Special Issue on Runoff Generation Modeling (co-edited with Stefan Uhlenbrook and Chris Leibindgut).
- 2001 *Hydrological Processes*, Special Issue on Forest Hydrology and Biogeochemistry (co-edited with Tadashi Tanaka).

International/National Committees and Commissions:

- 2010 Scientific Advisory Committee, German Water Science Alliance, Helmholtz Assoc.
- 2010- Science Advisory Group, International Association of Hydrological Sciences, Prediction in Ungauged Basin (PUB) Initiative.
- 2009- Member, EGU Nominations Committee
- 2007- Member, AGU Nominations Committee
- 2006- Member, UNESCO PUB-HELP-FRIEND Technical Working Group
- 2005-2007 Chair, Science Steering Group, International Association of Hydrological Sciences, Prediction in Ungauged Basin (PUB) Initiative.
- 2004- Chair, PUB Working Group on Slope Intercomparison Experiment (SLICE)
- 2004- Member, PUB Working Group on Hydrological Theory
- 2004- Member, UN Committee on IDP-PUB relations
- 2004- USA Representative, UNESCO HELP Program and network of hydrological observatories
- 2003-2005 Member, Science Steering Group, International Association of Hydrological Sciences, Prediction in Ungauged Basin (PUB) Initiative.
- 2003- Member, IAPSO-IAHS Joint Commission on Groundwater-Seawater Interactions

2002- Member, Science Steering Group SSG, International Association of Hydrological Sciences (IAHS) Prediction in Ungauged Basin (PUB) Initiative.

2001-2003 Member, CUASHI Instruments Committee, AGU/NSF

2001-2005 President, IAHS International Commission on Tracers (ICT),

2000-04 Member, AGU Horton Research Grant Committee.

1999 Member, Experts Group for IAEA-UNESCO-WMO Joint International Isotope Hydrology Program (JIIHP).

1999-01 President-Elect, IAHS International Commission on Tracers (ICT)

1999-02 Member, Science Steering Committee SSC, IGBP Biospheric Aspects of the Hydrological Cycle (BAHC).

1998-00 Chair, Surface Water Committee, American Geophysical Union (AGU).

1996-2000 Member, UNESCO International Hydrological Program, Working Group 6 - Hydrological Processes in the Humid Tropics.

1995-98 Deputy Chair, Surface Water Committee, American Geophysical Union (AGU).

1993-94 Member, New York City, Scientific Working Group on Hydrologically Sensitive Areas, New York City Water Supply, New York City, NY.

1991- Member, Surface Water Committee, American Geophysical Union (AGU).

1991-94 Wildland Erosion Committee, American Water Resources Association (AWRA)

1991-94 NASA Earth System Science Education Steering Committee, NASA.

1991-93 Chair, USU Global Change Fellowship Committee for U.S. Department of Energy (DOE) and Oak Ridge National Lab Associated Universities.

Review Panels:

2008 NSF Committee of Visitors (COV), for the overall review of the NSF Geobiology and Low Temperature Geochemistry, Geomorphology and Land-Use Dynamics, Hydrological Sciences and Sedimentary Geology and Paleobiology programs, Washington DC

2005 Korean Sustainability of Water Resources Research Program, Seoul South Korea

2005 US Forest Service, Air and Water Research Logic Model review, Riverside CA.

1998 National Science Foundation Annual Review Panel Member, Civil Infrastructure

1994-98 Research Center, Puerto Rico EPSCoR Program (annual review in Mayaguez)

1998-00 Advisory Board and Peer Review Panel, Adirondack Park Agency.

1996 Environmental Protection Agency Review Panel Member, Ecological Assessment and Restoration Program, Washington, DC.

1995 McIntire-Stennis Review Panel, State of New York.

Keynote Addresses and Invited Talks at International Conferences:

2010 First Annual Water Research Horizon Conference, Berlin Germany.

2010 CUAHSI Biennial Conference, Lunchtime Keynote on “How to Publish a Paper”, Boulder CO

2010 International Conference on Triggering of Mass Movements in Steep Terrain, Monte Verita, Switzerland.

2009 American Geophysical Union, Session on *The Fellows Speak*, Toronto Canada

2009 Canadian Geophysical Union, Woo Lecture, Toronto Canada

2009 European Geosciences Union, Vienna, Keynote lectures in five different sessions, including the Dalton Lecture, Vienna.

2008 2nd China PUB Conference on Integrated Water Management in Mountainous Areas,

- Chengdu China.
- 2008 Geological Society of American and Soil Science Society of America, Session on *Variably Saturated Flow in Soil and Rock*, Houston TX
- 2008 Hydrogeology Conference, Penn State University, College Park PA
- 2008 CUAHSI Biennial Conference, Session on New Hydrological Theory, Boulder CO
- 2007 University of California at Berkeley, Catchment Sciences Symposium, Berkeley, CA
- 2007 PUB Workshop on Conceptualizing Process Heterogeneity, Aberdeen, Scotland
- 2007 American Geophysical Union Fall Meeting, Session on *Contributions by the US to International Hydrology*, San Francisco.
- 2007 American Geophysical Union Fall Meeting, Session on *Advances in Water Quality Modeling*, San Francisco. **
- 2007 IUGG/IAHS General Assembly, Session on *Patterns, Thresholds and Non-linearities: Towards a new Theory of Catchment Hydrology*, Perugia, Italy.
- 2007 European Geophysical Union, Session on *Gauging the Ungauged Basin*, Vienna, Austria.**
- 2007 IAEA International Conference on *Advances in Isotope Hydrology and its Role in Sustainable Water Resource Management*, Vienna, Austria.
- 2006 American Geophysical Union Fall Meeting, Session on *From Karst to Catchment— Preferential Flow Processes Within Surface and Subsurface Hydrologic Systems*, San Francisco.
- 2006 American Geophysical Union Fall Meeting, Session on *Bridging Hydrology, Soil Science, and Ecology: Hydrogeology and Ecohydrology*, San Francisco (given by co-author)
- 2006 British Hydrological Society, 9th National Symposium, Durham, UK
- 2006 China PUB Conference on Flood Forecasting and Water Resources Assessment. Beijing China.
- 2006 IAHS 2020 1-Day Conference, IHE Delft, *The Future of Hydrology*, Delft NL
- 2005 American Geophysical Union Fall Meeting, Frontier Lecture on *The Future of Runoff Generation in Gauged and Ungauged Basins*, San Francisco
- 2005 American Geophysical Union Fall Meeting, Session on *Hydrogeology*, San Francisco
- 2005 American Geophysical Union Fall Meeting, Session on *Watershed Characterization*, San Francisco
- 2005 Stockholm Water Conference, Session on *Policy Implications of PUB*, Stockholm, Sweden
- 2005 Sir Mark Oliphant Conference on *Thresholds and Pattern Dynamics*, Perth Australia
- 2005 IAHS Symposium on *Model Improvements Through Detailed Process Studies*, Foz Iguacu, Brazil
- 2004 American Geophysical Union Fall Meeting, Session on *Process Heterogeneity and Model Predictability*, San Francisco
- 2004 American Geophysical Union Fall Meeting, Session on *Experimental Catchments and Observatories for Cold Season Hydrologic Analysis*, San Francisco
- 2004 Geological Society of America, Session on *Upcoming Revolutions in Observing Systems: Implications for Hydrogeology*, Denver CO
- 2004 International Instrumented Watershed Symposium, Edmonton, Canada.
- 2004 American Geophysical Union Spring Meeting, Session on *Runoff Processes Identification*, Montreal**
- 2004 American Geophysical Union Spring Meeting, Session on *Scale in Catchment*

- Hydrobiogeochemistry*, Montreal**
- 2004 European Geophysical Union, Session on *Links Between Vadose Zone and Catchment Hydrology*, Nice, France**
- 2003 Water and Environment 2003: Indian Water Resources Engineering Society, Bhopal India
- 2003 American Geophysical Union Fall Meeting, Session on *Prediction in Ungauged Basins*, San Francisco
- 2003 American Geophysical Union Fall Meeting, Session on *Linkages Between Hydrology and Geomorphology*, San Francisco
- 2003 American Geophysical Union Fall Meeting, Session on *Hillslope Hydrology*
- 2003 International Association of Hydrological Sciences, Session on *Parameter Estimation Techniques*, Sapporo Japan
- 2003 IAEA 40th Anniversary Conference on Isotopes in Hydrology, Vienna Austria
- 2003 European Geophysical Society, Session on *Tracers and Biogeochemistry*, Nice France
- 2003 European Geophysical Society, Session on *Prediction in Ungauged Basins*, Nice
- 2001 American Geophysical Union Fall Meeting, Session on *Watershed Intercomparison*, San Francisco**
- 2001 American Geophysical Union Fall Meeting, Session on *Non-Linear Geophysics*, San Francisco
- 2001 IGBP Global Change Forum, Session on *Mountains and Global Change*, Amsterdam
- 2000 European Geophysical Union, Session on *Mountain Hydrology*, Nice France.
- 2000 IUFRO and UNESCO Symposium *Forests-Water-People in the humid tropics Past, Present and Future Hydrological Research for Integrated Land and Water Management*, Kuala Lumpur, Malaysia.
- 1999 IAHS/IUGG, Session on *Integrated Methods in Catchment Hydrology—Tracer, Remote Sensing and New Hydrometric Techniques*, Birmingham, UK
- 1998 IUFRO Conference on Environmental Forest Science, Session on *Progress of Field Studies on the Water Cycle in Forests*, Kyoto Japan.
- 1998 American Geophysical Union Fall Meeting, Session on *The Links Between Soil Properties, Terrain Features, and Runoff Processes in Catchments*. San Francisco.
- 1996 American Geophysical Union Fall Meeting, Session on *Spatial Processes and Scaling: Merging Field Data Collect and Distributed Modeling*, San Francisco.
- 1995 International Association of Hydrological Sciences, Session on *Biospheric and Hydrological Aspects of Land-Surface Process Studies, Experiments and Modeling in Mountain Areas*, Boulder.
- 1995 American Geophysical Union Gordon Research Conference on *Hydrological-Biologic-Geochemical Interactions in Forest Watersheds*, New Hampshire.
- 1994 American Geophysical Union Spring Meeting, Session on *Innovative Techniques in Groundwater Hydrology*, Baltimore.
- 1993 European Geophysical Meeting, Session on *Spatially-Distributed Hydrological Modeling*, Wiesbaden, Germany.
- 1992 Association of American Geographers Annual Meeting, Session on *Dilettantism in Hydrology*, San Diego.

Keynote Addresses and Invited Talks at International Workshops:

- 2009 Tropical Hydrology Workshop, U.S. Army Research Office, Republic of Panama

- 2009 Workshop on State-of-the-art of Residence Time Modeling, IAEA Vienna
- 2008 Invited Panelist, The California Flood Management Association, Panel on Climate Change Impacts on Flood Management, San Diego, CA
- 2008 Invited Panelist, The Nature Conservancy-USGS workshop on Regional Scale Streamflow-Ecological Relationships, Seattle.
- 2008 Biosphere 2 Hillslope Planning Workshop, National Center for Hydrological Synthesis and Biosphere 2, Oracle AZ **
- 2008 Northwest Forest Soils Council, Workshop on Soil-Plant-Water Relations, Bellingham WA
- 2007 University of California at Berkeley, Catchment Sciences Symposium, Berkeley, CA
- 2007 PUB Workshop on Conceptualizing Process Heterogeneity, Aberdeen, Scotland
- 2007 Multiscale Nonlinear Systems Workshop, Dept. of Mathematics, Oregon State University, Corvallis OR
- 2006 USA PUB Workshop, Oregon State University, Corvallis OR
- 2005 All-Sweden Hydrology Workshop on *State of the Art of Catchment Hydrology*, Stockholm
- 2005 Slope Intercomparison Experiment (SLICE) Workshop, HJ Andrews, Oregon
- 2004 UNESCO Workshop on *Pesticide Fate and Transport at the Hillslope and Watershed Scale*, GSF Munich, Germany.**
- 2004 NATO Workshop on *State of the Art of Physically Based Modeling*, Moscow, Russia
- 2004 CUASHI Vision Workshop on *New Theory in Hydrology*, Corvallis OR
- 2004 Australia-Japan Workshop on *Prediction in Ungauged Basins*, Perth, Australia.
- 2002 Peter Wall Institute Workshop on *Scaling and Non-linearity*, UBC, Canada
- 2002 IAHS Inaugural Workshop on *Prediction in Ungauged Basins (PUB)*, Kofu Japan
- 2002 BC Workshop on *Small Stream Channels and Their Riparian Zones: Their Form, Function and Ecological Importance in a Watershed Context*, University of British Columbia, Canada
- 2001 IAEA Workshop on *Isotopes in Water Cycle Models*, Vienna, Austria
- 2001 CSIR Workshop on *Isotope Tracers in Catchment Hydrology*, Stellenbosch, South Africa,
- 2001 IGBP Joint BAHC and GEWEX Workshop, Amsterdam, The Netherlands.
- 2000 IGBP Joint IGBP BAHC & WCRP/GEWEX-ISLSCP Workshop, Caracas, Venezuela.
- 2000 NSF Joint Seminar on *Hydrology and Biogeochemistry of Forested Catchments*, East West Center, Hawaii.
- 1999 IGBP BAHC Workshop on *Global Change and Mountain Regions*, Shonan Village, Japan.
- 1998 IGBP BAHC Workshop on *Mountain Headwater Hydrology and Ecology*, Pontresena, Switzerland.
- 1998 UNESCO Hydrology of the Humid Tropics Workshop on *Hydrological Processes and Modeling in the Humid Tropics*, Umea, Sweden.
- 1997 New Zealand Forest Research Institute (LandCare NZ) Workshop on *Future of Forest Catchment Research in New Zealand - planning through the year 2000*, Christchurch, NZ
- 1996 IGBP BAHC Workshop on *Predicting Global Change Impacts on Mountain Hydrology and Ecology*, Katmandu, Nepal.
- 1994 NATO Advanced Science Workshop on *Global Change Research and Education*, London, Ontario.
- 1994 IGBP BAHC Workshop on *Continental-Scale Transport of Nutrients and Sediments to Oceans*, Durham, New Hampshire.

***given on my behalf by one of my Post Docs or PhD students*

Invited Talks at Universities:

2010 Yale University, School of Forestry and Environmental Studies, New Haven, CT
2009 UC Santa Barbara, Bren School of the Environment, Santa Barbara CA
2009 University of Aberdeen, Dept. of Geography, Aberdeen, Scotland
2008 University of Connecticut, Dept of Civil and Environmental Engineering, Storrs, CT
2008 Washington State University, Dept of Civil and Environmental Engineering, Pullman, WA
2007 Texas A & M University, Distinguished Lecture in Multi-Scale Nonlinear, College Station, TX
2007 University of Colorado, Hydrological Sciences Program, Boulder, CO
2006 National Center for Earth-Surface Dynamics, St. Anthony Falls Laboratory, University of Minnesota, Minneapolis.
2006 Durham University, Dept. of Geography, Durham, UK
2005 CUAHSI Cyber Seminar, 50 member US universities, Broadcast from Corvallis OR
2005 University of Stuttgart, Dept. of Civil and Environmental Engineering, Stuttgart, Germany
2005 University of Uppsala, Dept of Physical Geography, Uppsala, Sweden
2005 University of Stockholm, Dept. of Geography and Quaternary Geology, Stockholm Sweden
2005 Swedish Agricultural University, Dept. of Environmental Science, Uppsala, Sweden University
2005 University of Oregon, Dept of Geography, Eugene, OR
2005 University of Nevada Reno, Desert Research Institute, Reno NV
2004 University of Arizona, Dept. of Hydrology, Tucson AZ
2004 ETH Zurich, Dept. of Civil, Environmental and Geomechanics Engineering, Switzerland
2004 EAWAG Dübendorf, Dept. of Environmental Chemistry, Zurich Switzerland
2004 University of Bern, Dept. of Geographical Sciences, Bern Switzerland.
2004 University of Illinois, Center for Water as a Complex System, Urbana-Champaign IL
2004 CUAHSI Cyber Seminar, 50 member US universities, Broadcast from Corvallis OR
2004 Boise State University, Dept. of Geology, Boise ID
2004 UC Berkeley, CUAHSI Hydrological Synthesis Center Review, Berkeley CA
2003 University of Western Australia College of Geosciences, Perth, Australia
2003 University of Melbourne, Dept. of Civil Engineering, Melbourne, Australia
2003 Newcastle University, Dept. of Civil and Environmental Engineering, Newcastle, Australia
2003 University of New South Wales, Dept. of Civil and Environmental Engineering, Sydney, Australia
2003 Australia National University, iCAM Center, Canberra Australia
2003 Technical University of Vienna, Dept. of Civil Engineering, Vienna Austria
2003 University of Western Australia, Center for Water Research, Perth, Australia
2003 University of Oregon, Dept. of Geosciences, Eugene, OR
2003 Utah State University, Dept. of Civil and Environmental Engineering, Logan UT
2003 Stanford University, Dept. of Earth Science, Palo Alto, CA
2003 UC Davis, Dept. of Land Atmosphere and Water Science, Davis CA

2002 Uppsala University, Dept. of Earth Sciences, Uppsala, Sweden
2001 Colorado State University, Dept. of Earth Science, Fort Collins, CO
2000 Swiss Federal Institute (ETH) Zurich, Institute of Hydrology, Zurich Switzerland
2000 Freiburg University, Institute of Hydrology, Freiburg Germany (a 4-lecture series)
2000 Dartmouth University, Dept. of Earth Sciences, Hanover NH
1999 Imperial College London, Dept. of Civil Engineering, London UK
1999 Exeter University, Dept. of Geography, Exeter UK
1998 Princeton University, Distinguished Lecturer Series, Dept. of Civil and Environmental Engineering, Princeton, NJ.
1998 University of Waterloo, Groundwater Center, Waterloo, Canada.
1998 Uppsala University, Dept. of Hydrology, Uppsala Sweden.
1998 Trent University, Watershed Ecosystems Program, Peterborough, Canada.
1997 University of Toronto, Dept. of Geography, Toronto, Canada.
1997 University of Tsukuba, Dept. of Earth Sciences, Tsukuba, Japan.
1997 University of North Carolina, Dept. of Earth Sciences, Charlotte, NC.
1996 Harvard University, Dept. of Earth and Planetary Sciences, Cambridge, Mass.
1996 Carnegie Mellon University, Dept. of Civil and Env. Engineering, Pittsburgh, Penn.
1996 University of Puerto Rico, Dept. of Civil Engineering, Mayaguez, Puerto Rico.
1996 Free University, Department of Hydrology, Amsterdam, The Netherlands.
1996 Freiburg University, Institute of Hydrology, Freiburg, Germany.
1994 Cornell University, Center for the Environment, Ithaca, New York.
1994 University of Puerto Rico, Dept. of Civil Engineering, Mayaguez, Puerto Rico.
1993 University of Florida, Department of Geology, Gainesville, Florida.
1993 University of Puerto Rico, Dept. of Civil Engineering, Mayaguez, Puerto Rico.
1992 University of Southern California, Department of Geography, Catalina Island Field Station, Catalina Island, California.
1991 University College, Galway, Department of Civil Engineering, Galway, Ireland.
1991 University of British Columbia, Department of Geography, Vancouver, Canada.
1991 Simon Fraser University, Department of Geography, Vancouver, Canada.
1990 University of Iowa, Department of Geography, Iowa City, Iowa.
1989 Pennsylvania State University, Environmental Resources Research Institute, College Park, Pennsylvania.

Invited Talks at Research Institutes:

2008 Nanjing Hydraulic Research Institute, Nanjing China.
2008 Oak Ridge National Lab, Oak Ridge, TN
2008 Environmental Protection Agency, Ecological Services Group, Corvallis OR
2007 National Science Foundation, Hydrological Sciences Division and Earth Sciences Directorate, Washington DC
2007 NOAA National Weather Service, Washington DC
2006 Los Alamos National Lab, Los Alamos NM
2006 Savannah River Ecology Lab, Savannah River SC
2005 Korean Forest Research Institute, Seoul, Korea
2005 Environmental Protection Agency (EPA), Corvallis OR
2004 USGS Northwest Regional Science Meeting, HJ Andrews Conference Center, OR
2004 USGS, Portland District Office, Water Resources Division, Portland OR
2004 Environmental Protection Agency (EPA), Corvallis OR

2003 US Forest Service, Savannah River Site, Aiken, SC
 2003 US Forest Service, Watershed Research Group, Juneau, AL
 2002 Environmental Protection Agency (EPA), Corvallis OR
 2001 International Atomic Energy Agency (IAEA), Vienna, Austria
 2001 CSIR, Ministry of Forests, Pretoria, South Africa
 2001 CSIR, Ministry of Forests, Stellenbosch, South Africa
 2000 Forschungszentrum für Umwelt und Gesundheit (GSF), Institute of Hydrology, Munich.
 2000 USRA/ARS Northwest Watershed Research Center, Boise ID
 1999 Potsdam Institute for Climate Change (PIK), Berlin Germany.
 1998 Chinese Water Resources Agency, Nanjing, China.
 1998 Forest Research Institute, Seoul, South Korea.
 1998 Institute for Geological and Nuclear Sciences, Wellington, New Zealand.
 1997 Japan Forestry and Forest Products Research Institute, Tsukuba, Japan.
 1997 LandCare New Zealand, Christchurch, New Zealand.
 1997 U.S. Forest Service, Cooperative Research Unit, Syracuse, NY.
 1996 Nepal Institute of Forestry, Pokhara, Nepal.
 1995 LandCare New Zealand, Christchurch, New Zealand.
 1989 Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tenn.
 1989 NASA, Earth Science and Applications Division, Marshall Space Flight Center, Huntsville, Alabama.

Invited Shortcourses:

2010 IAEA Isotope Hydrology, Cairo, Egypt
 2010 How to Succeed in an Academic Career, San Francisco, CA
 2010 *Catchment Science Summer School*, University of Aberdeen, Scotland
 2010 *Catchment Hydrology Monitoring*, Federal University of Rio de Janeiro and Instituto de Radioproteção e Dosimetria, Rio de Janeiro, Brazil
 2010 *Ethics in Peer Review*, Dept. of Fisheries and Wildlife Annual Graduate student conference, Corvallis OR
 2010 *How to Write and Publish a Paper*, CUAHSI Science Conference, Boulder CO
 2009 *How to Write and Publish a Paper*, Taught at the European Geosciences Union, Vienna.
 2007 *Advanced Techniques in Experimental Hydrology, Winter School*, Delft University of Technology, UNESCO-IHE, Gabrielle Lippmann Institute.
 2006 *Runoff Generation Processes and Modeling*, Taught at TU Delft, 1-Day
 2005 *Runoff Generation in Forested Watersheds*, Taught at Stockholm University, 1-Day
 2005 *Isotope Tracers in Catchment Hydrology*, Taught at Stockholm University, 1-Day
 2004 *Runoff Generation in Forested Watersheds*, Taught at the USFS National Science Conference, San Diego, CA, 1-Day
 2004 *Isotope Tracers in Catchment Hydrology*, Taught at Australia CSIRO Catchment Modeling School, Melbourne Australia, 1-Day
 2003 *Isotope Hydrology in Environmental Engineering: A Primer*, Taught at the Center for Environmental Fluid Dynamics, University of Western Australia, 2 Days
 2002 *Isotope Hydrology*, A shortcourse taught on behalf of the UN and the International Atomic Energy Agency IAEA, Nanjing China, 4 days.
 2001 *Quantifying groundwater-surface water interactions using isotope tracers*, A shortcourse taught on behalf of the UN and the International Atomic Energy Agency IAEA at the CSIR Stellenbosch, South Africa, 2 days.

2001 *Tracers in Catchment Hydrology and Biogeochemistry* Taught with Rick Hooper and Carol Kendall at Oregon State University, 2 Days

Academic Courses

2008- *The Future Professoriate* (a course for PhD students, Post Docs and Assistant Professors interested in pursuing an academic career; (FE 607)
1989- *Hillslope and Watershed Hydrology* (senior undergraduate/graduate course), USU, ESF, OSU (now FE 537)
1990- *Field Hydrology* (senior undergraduate/graduate course), ESF, OSU (now FE 538)

PROFESSIONAL SERVICE

Proposal Reviewer for: National Science Foundation (Programs: Hydrological Sciences, Geosciences, Geographical and Regional Science, Ecology, EPSCoR), Environmental Protection Agency, Canadian GEWEX Program, National Science and Engineering Research Council (Canada), Utah State University, University of Puerto Rico, State University of New York, New York McIntire-Stennis Program, Longman Group Publishing Ltd. (UK), John Wiley and Sons (UK), U.S. Geological Survey (Water Resources Centers in Pennsylvania and New York), University of North Carolina, Canada Center for Innovation, ETH Zurich, Illinois Water Survey, Oregon State University; Swiss National Science Foundation; Australia National Science Foundation; The Nuffield Foundation (UK); The Leverhulme Trust (UK), NERC Program, LOCAR Instrumented Catchment Network, Government of Western Australia.

Journal Reviewer for: Water Resources Research, Hydrological Processes, Journal of Hydrology, Water Resources Bulletin, Advances in Water Resources, ASCE Journal of Irrigation and Drainage ASCE Journal of Hydrologic Engineering, Atmospheric Research, Water Air and Soil Pollution, Geofísica Internacional, Boreal Environment Research, Soil Science Society of America Journal, Hydrological Sciences Journal, Hydrology and Earth Systems Science, Review of Environmental Science, Water SA, Ecohydrology..

External International Examiner (PhD Theses, Faculty Review): The University of Western Australia, University of Waterloo, University of Toronto, ETH Zurich, University of British Columbia, University of Adelaide; University of Edinburgh; SUNY-ESF; UC Berkeley; Australia National University; University of Maryland; University of Western Ontario; University of South Carolina; Portland State University; University of San Diego; Louisiana State University; University of Canterbury; University of Melbourne; University of Newcastle; UBC Kelowna; University of Mass.; Freiberg University; Utah State University; Colorado State University, Delft University of Technology, The Royal Society (UK), The Royal Society (New Zealand), University of North Carolina, CSIRO (Australia), Canada Research Chair Program.

Conference and Workshop Organization:

2009 Chapman Conference on Examining Ecohydrological Feedbacks of landscape change along elevation gradients in semi-arid regions, (with Brad Wilcox, David Breshears, Mark Seyfried), Sun Valley Idaho.
2009 State of the Art of Residence Time Computation, Analysis and Modeling, IAEA Vienna Austria
2007 IAHS-IUGG General Assembly, IAHS Main Program, Perugia, Italy
2006 NSF-sponsored USA PUB Workshop, October 2006 Corvallis OR

- 2005 UNESCO-sponsored PUB-HELP-FRIEND Workshop, Corvallis OR
- 2005 *Slope Intercomparison Experiment (SLICE)* International Workshop, HJ Andrews Experimental Forest, September 2005
- 2004 CUAHSI Vision Workshop on *Confronting the Theory Vacuum in Catchment Hydrology*, Corvallis OR (with Kellie Vache)
- 2003 Workshop Organizer; IAHS/IUGG *Isotopes in Water Cycle Models*, Sapporo Japan (with John Gibson and Pradeep Aggarwal), Sapporo Japan.
- 2003 Symposium Organizer, IAHS/IUGG, Prediction in Ungauged Basins, (with Enda O'Connell and M. Sivapalan), Sapporo Japan.
- 2001 Conference Co-organizer, Chapman Conference on *Catchment Runoff Processes and Modeling* (with Larry Band), American Geophysical Union, Sunriver OR
- 2000 Conference Co-Convener, International Workshop on Runoff Generation and Implications for River Basin Modeling, Freiburg, Germany (with Stefan Uhlenbrook and Chris Leibundgut).
- 2000 Conference Organizing Committee member, IUFRO and UNESCO Symposium *Forests-Water-People in the humid tropics Past, Present and Future Hydrological Research for Integrated Land and Water Management*, Kuala Lumpur, Malaysia
- 2000 Conference Organizer, USA-Japan Workshop on Forest Catchment Hydrology and Biogeochemistry, National Science Foundation, Japan JSPS and IGBP BAHC.
- 1999 Symposium Co-convener, Symposium 4: Integrated Methods of Catchment Hydrology - Tracer, Remote Sensing and New Hydrometric Techniques (with Chris Leibundgut, G. Schultz and D. Collins), IUGG/IAHS International Union of Geodesy and Geophysics and International Association of Hydrological Sciences, Birmingham, UK,
- 1997 Conference Organizer, *Syracuse Catchment Hydrology Meeting*, Syracuse New York
- 1996 Symposium Technical Chair, AWRA Summer Symposium *Watershed Restoration: Physical, Chemical and Biological Controls*, AWRA (American Water Resources Association) Symposium, Syracuse, NY.
- 1995 Symposium Co-convener, *Tracer Technologies in Hydrology* (with Chris Leibundgut), IUGG/IAHS International Union of Geodesy and Geophysics and International Association of Hydrological Sciences, Boulder, Colorado.
- 1993 Conference Organizer, *Syracuse Catchment Hydrology Meeting*, Syracuse New York

Conference Session Organization:

- 2008 European Geophysical Union, Session on *Benchmarking the prediction in ungauged basin (PUB) initiative*, (with Guenter Bloeschl), Vienna Austria.
- 2006 American Geophysical Union Fall Meeting, Session on *DOC fate and transport: from molecular to catchment scales* (with Tim Burt and others), San Francisco CA
- 2006 American Geophysical Union Fall Meeting, Session on *Watershed Characterization*. (with Andrew Binley and others), San Francisco CA
- 2005 American Geophysical Union Fall Meeting, Session on *The life and contributions of John Hewlett*, (with Doug Burns), San Francisco CA
- 2005 American Geophysical Union Fall Meeting, Session on Hydrogeology (with Henry Lin)
- 2005 American Geophysical Union Fall Meeting, Session on Prediction in Ungauged Basins (with Thorsten Wagener, Brian McGlynn)
- 2005 International Association of Hydrological Sciences, Session on *Tracers and Remote Sensing*, (with John Gibson and Al Pietroniro), Foz Iguacu, Brazil

- 2004 American Geophysical Union / Canadian Geophysical Union Meeting, Session on *Isotope Tracing of Water and Carbon Cycling in Large River Basins*, (with P. Agarwal and J. Gibson), Montreal Canada
- 2004 Geological Society of America, Session on *Future of Applied Tracers in Hydrogeology*, (with Craig Devine), Denver CO
- 2004 American Geophysical Union / Canadian Geophysical Union Meeting, Session on *Catchment Classification* (with Kellie Vache), Montreal Canada
- 2003 American Geophysical Union Fall Meeting, Session on *Hillslope Hydrology* (with Larry Band and Markus Weiler), San Francisco CA
- 2003 MODSIM 2003, Session on *Measurements and Modeling in Catchment Hydrology*, (with Markus Weiler) Townsville, Australia
- 2002 American Geophysical Union Fall Meeting, Session on *Watershed Hydrology and Biogeochemistry* (with Mike Goeseff and Dave DeWalle), San Francisco CA
American Geophysical Union Fall Meeting, Session on *Hydroecology of Mountain Catchments* (with Mark Williams), San Francisco CA
- 1999 American Geophysical Union Spring Meeting, Session on *Watershed Hydrology: Physical, Chemical and Policy Issues*, Boston Mass.
- 1997 American Geophysical Union Fall Meeting, Session on *Use of Tracers for Understanding Hydrological Processes*, (with Chris Leibundgut), San Francisco CA.
- 1997 Gordon Research Conference on Hydrobiogeochemistry of Forested Watersheds, Workshop Leader *Innovations in Field Monitoring Techniques* (with Frank Bowles and Greg Lawrence), Plymouth, New Hampshire.
- 1996 American Geophysical Union Spring Meeting, Session on *Hydrograph Separation Techniques in Catchment Hydrology*, (with Jamie Shanley), Baltimore MD.
- 1995 American Geophysical Union Spring Meeting, Session on *Interactions Between Water and Solutes in Small Catchments*, (with Carol Kendall), Baltimore MD.
- 1994 Western Pacific Geophysical Meeting, Session on *Headwater Hydrology and Slope Stability*, (with Roy Sidle), Hong Kong.
- 1993 American Geophysical Union Fall Meeting, Session on *Runoff Pathways in Small Catchments*, San Francisco, CA.
- 1992 Western Pacific Geophysical Meeting, Session on *Hillslope Hydrology*, Hong Kong.
- 1991 American Geophysical Union Fall Meeting, Session on *Isotope Tracing in Small Catchments*, (with Carol Kendall), San Francisco, CA.

International Conference Steering Committees:

- 2008 Member, Science Steering Committee, 2nd China-PUB Conference, Sichuan University, Chengdu, China.
- 2006 Member, Science Steering Committee, 1st China-PUB Conference, TsingHua University, Beijing China.
- 2004- Member, International Technical Committee, *International Conference on Reservoir Operation & River Management (ICROM)*, Sun Yat-sen University, China
- 2003 Member, Science Steering Committee, *British Hydrological Society 2nd International Hydrology Conference*, Imperial College London, London UK
- 2000 Member, Scientific Advisory Committee, *Workshop on Runoff Generation Modeling*, Freiburg University, Freiburg Germany.
- 1998 Member, International Technical Committee, *Civil and Environmental Engineering -- Year 2000, New Frontiers and Challenges*, Asian Institute of Technology, Bangkok,

Thailand.

Membership: American Geophysical Union (since 1985), New Zealand Hydrological Society (since 1986), Society of American Foresters (since 1989), Association of American Geographers (since 1988), American Water Resources Association (since 1990), American Association for the Advancement of Science (since 1991), British Geomorphological Research Group (since 1996), Japan Society of Hydrology and Water Resources (since 1996), American Institute of Hydrology (since 1997).

RESEARCH GRANTS (APPLIED RESEARCH) FUNDED

Hydrological impacts of cellulosic-based biofuel production: Principal Investigator

Funded by the Dept. of Energy (\$325,000), 2009-2010.

Combining field work and modeling to explore forest management effects on streamflow: Phase 1:

Principal Investigator

Funded by the National Council for Air and Stream Improvement (\$75,000), 2006-2007.

Hydrological performance of cover systems at the Green Creek Mine: A combined field-modeling analysis: Principal Investigator

Funded by Kennecott Greens Creek Mine (\$420,000), 2006-2009.

Hillslope Hydrology of the Savannah River Site—Watershed Scale Analysis: Principal Investigator

Funded by the US Forest Service (\$100,000), 2006-2007

Hillslope Hydrology of the Savannah River Site for Tritium Phytoremediation: Principal Investigator

Funded by the US Forest Service (\$90,000), 2004-2005

A Combined Watershed-Reservoir Model for the Croton Watershed, New York; Co-Principal Investigator.

Funded by: New York City, Dept. of Environmental Protection, (\$6,300,000), 1999-2002.

Preliminary evaluation of linked watershed reservoir models; Co-Principal Investigator

Funded by: New York City, Dept. of Environmental Protection, (\$65,000), 1998-1999.

Contaminant Transport from Buried Galleys: A combined Physical, Chemical and Isotopic Study;

Principal Investigator

Funded by: New York City, Dept. of Environmental Protection (\$1,400,000), 1997-1998.

Subsurface Stormflow and Contaminant Transport; Principal Investigator

Funded by: New York City, Dept. of Environmental Protection (\$600,000), 1997-1998

Evaluation of Non-Point Pollutant Removal by Best Management Practices; Principal Investigator

Funded by: New York City, Dept. of Environmental Protection (\$275,000), 1994-1996.

RESEARCH GRANTS (BASIC RESEARCH) FUNDED

Water sustainability in the Willamette Basin, Oregon (Principal Investigator)

Funded by NSF Hydrological Science (\$4.3 M), 2010-2015.

Development of a new field based water isotope analyse, Phase II: Principal Investigator

Funded by the Dept. of Energy, (\$70,000), 2010-2011.

Development of a new field based water isotope analyse, Phase 1: Principal Investigator
Funded by the Dept. of Energy, (\$35,000), 2009-2010.

An integrated investigation of nutrient generation and delivery processes and pathways from paddock to small catchment scales
Co-Principal Investigator
Funded by the Australian Research Council, (\$440,000 AUS) 2009-2012.

Ecohydrological controls on watershed response to land use change in the montane cloud forest zone in Central Veracruz, Mexico
Co-Principal Investigator
Funded by NSF Hydrological Sciences and NSF Ecology Programs (\$1,500,000) 2007-2011

Headwater stream processes revealed by continuous ultra-high resolution thermal measurement
Co-Principal Investigator
Funded by NSF Hydrological Sciences Program (\$193,000), 2007-2009.

Understanding ecohydrological coupling in upland humid watersheds for soil and water management
Principal Investigator
Funded by International Atomic Energy Agency (IAEA) (8,000 Euros per year), 2008--

USA PUB Workshop for defining CUAHSI community science questions
Principal Investigator
Funded by NSF Hydrological Sciences Program (\$80,000) 2005-2007

Processes of Water Cycling and Streamflow Generation in Semi-Arid Watersheds in Eastern Washington (3) – Isotope Tracing of Water Sources; Principal Investigator
Funded by the US Forest Service (\$50,000), 2004-2005

Development of the Willamette Basin Watershed for UNESCO Hydrology, Environment, Life and Policy Program, Principal Investigator
“Funded” by UNESCO, 2004-

Towards a new theoretical framework for watershed hydrology, Principal Investigator
Funded by: Consortium of Universities for the Advancement of Hydrological Sciences, (\$9,000) 2004

Use of isotope tracers to detect water source and water age at the HJ Andrews Experimental Forest; Principal Investigator
Funded by NSF HJ Andrews LTER Program (\$20,000) 2004-2005

The Institute for Water and Watersheds Initiative; Co-Principal Investigator
Funded by the OSU Provost's Office, (\$1,500,000), 2005-2009

Catchment water residence time: understanding the relation between landscape organization and runoff characteristics, Co-Principal Investigator

Funded by Dutch Science Foundation (\$250,000 EU), 2005-2007

A Physically Based Method for Spatial Interpolation of Soil Measurements; Co-Principal Investigator
Funded by the Australia Research Council (\$260,825 AU), 2005-2007

Processes of Water Cycling and Streamflow Generation in Semi-Arid Watersheds in Eastern Washington
(2) – *Snowmelt Hydrology*: Principal Investigator
Funded by the US Forest Service (\$50,000), 2004-2005

Modeling Mesoscale Flows in the Maybeso Catchment; (2) – *Documenting Rainfall Spatial Patterns*,
Principal Investigator
Funded by the US Forest Service (\$50,000), 2004-2005

Processes of Water Cycling and Streamflow Generation in Semi-Arid Watersheds in Eastern Washington
(1) – *Understanding Landuse Effects on Water quantity and Quality*: Principal Investigator
Funded by the US Forest Service (\$100,000), 2003-2004

Modeling Mesoscale flows in the Maybeso Catchment (1) - Principal Investigator
Funded by the US Forest Service (\$86,000), 2003-2004

Hillslope Hydrology of the Oregon Coast Range: Principal Investigator
Funded by: BLM and US Forest Service (\$218,000), 2002-2003

US-German Exchange Proposal for Hydrological Modeling; Principal Investigator
Funded by: National Science Foundation International Division (\$8,000), 2001-2002.

Sources and Sinks of Nitrogen Within a Forested Watershed; Co-Principal Investigator
Funded by: NSF Environmental Biology and Ecosystem Studies (\$659,000), 2000-2002.

Topographical Linkages Between Nitrogen and Organic Carbon Solutes Within a Forested Watershed;
Co-Principal Investigator
Funded by: USDA Competitive Grants Program (\$100,000), 1999-2002

Hillslope hydrology of the Maybeso Watershed, SE Alaska; Principal Investigator
Funded by the US Forest Service (\$50,000), 2001-2002

Joint Seminar on Hydrology and Biogeochemistry of Forested Headwater Catchments; Principal
Investigator.
Funded by: NSF International Programs, (\$20,000), 1999-2000.

BAHC Workshop on Hydrology and Biogeochemistry of Forested Headwater Catchments; Principal
Investigator.
Funded by: International Geosphere-Biosphere Program, (\$5,000), 2000.

*International Supplement: Hillslope-Riparian Zone Reservoir Mixing: A Multi-Catchment Test of a New
Methodology for Predicting Stream Chemistry*; Principal Investigator
Funded by: NSF International Programs, (\$63,242).

Hillslope-Riparian Zone Reservoir Mixing: A Multi-Catchment Test of a New Methodology for Predicting Stream Chemistry; Principal Investigator

Funded by: NSF Hydrological Sciences Program (\$330,000), 1999-2001

Effects of Forest Harvesting on Streamflow Generation and Water Quality in a Catskill Mountain Watershed; Co-Principal Investigator

Funded by: USDA McIntire Stennis Program (\$75,630), 1997-1999.

Development of an Evolutionary Flow Path Model of Water and Solutes; Principal Investigator

Funded by: NSF Hydrological Sciences Program (\$300,000), 1994-1997.

A Spatial/Temporal Investigation of the Hydrology and Biogeochemistry of N Transport within a Forested Hillslope/Wetland/Lake Ecotone; Principal Investigator

Funded by: USDA Competitive Grants Program (\$120,000), 1994-1996.

Mapping Soil Macropores in a Japanese Cedar Catchment; Principal Investigator.

Funded by: EARTHWATCH (\$11,000), 1994.

A Water Module for the NY State Environmental Science Program; Co-Principal Investigator

Funded by: SUNY Central Office of Educational Technology (\$12,000), June - Dec. 1994.

Evaluation of Hydrological and Biogeochemical Pathways and Fluxes in a Forested Watershed in the Adirondack Mountains; Co-Principal Investigator

Funded by: USDA McIntire Stennis Program (\$66,630), 1994-1997.

A Watershed Simulation Model With Vegetation; Principal Investigator.

Funded by: NSF Hydrological Sciences Program (\$156,559), 1993-1994.

Mapping Soil Macropores in a New Zealand Rainforest Catchment; Principal Investigator.

Funded by: EARTHWATCH (\$35,000), 1992.

Earth Systems Science Education Program for Utah State University; Principal Investigator/Instructor.

Funded by: NASA Headquarters and USRA (\$105,000), 1992-1993.

Watershed Runoff Production in the Intermountain West at Varying Forested Basin Scales; Principal Investigator.

Funded by: Utah Agricultural Experiment Station (\$13,900), 1991-1995.

Snowmelt Erosion From Simulated Waste Burial Trench Caps; Co-Investigator.

Funded by: U.S. Department of Energy (\$101,000), 1991-1992.

Improvement and Further Development of SSM/I Overland Parameter Algorithms Using the WetNet Workstation; Co-Principal Investigator.

Funded by: NASA Headquarters (\$225,926), 1991-1994.

A Spatially Distributed Water Balance Based on Physical, Isotopic and Airborne Remotely Sensed Data; Co-Principal Investigator.

Funded by: U.S. Geological Survey 105 Program (\$350,234), 1991-1993.

Snowmelt Energy Balance and Melt Infiltration in Complex Terrain; Principal Investigator.

Funded by: Utah State University (\$16,000), 1991-1992.

Effects of Streambank Erosion on Water Quality; Co-Principal Investigator.

Funded by: U.S. Department of Agriculture Competitive Grants Program (\$282,353), 1991-1993.

Landslide Generation in a Laboratory Rainfall-Runoff Simulator; Principal Investigator.

Funded by: Utah State University (\$15,179), 1990.

Snowmelt Processes in Northern Utah; Principal Investigator.

Funded by: Ecology Center, Utah State University (\$11,000), 1989.

Vegetation-induced Moisture Flux, With Implications for Global Climate Modeling; Co-Principal Investigator.

Funded by: NASA Marshall Space Flight Center (\$51,000), 1989.

Rainfall Oxygen-18 Variations in Mesoscale Events; Principal Investigator.

Funded by: NASA Marshall Space Flight Center (\$1,200), 1989.

PUBLICATIONS

A. EDITED BOOK SERIES

McDonnell, J.J., Editor-in-Chief. 2006-. Benchmark Papers in Hydrology Book Series, IAHS Press, 10 volumes 2006-2010.

Beven, K. (ed) (2006). Streamflow Generation Processes. Benchmark Papers in Hydrology Series, IAHS Press, 432 pp

Gash, J. and J. Shuttleworth (eds) (2007). Evaporation. Benchmark Papers in Hydrology Series, IAHS Press, 526 pp.

Anderson, M. (ed) (2008). Groundwater. Benchmark Papers in Hydrology Series, IAHS Press, xxx pp

Loague, K. (2009). Rainfall-runoff Modeling, Benchmark Papers in Hydrology Series, IAHS Press, xxx pp

Kirkby, M. (ed) (2010). Erosion and Sedimentation. Benchmark Papers in Hydrology Series, IAHS Press, xxx pp.

Anderson, M.G., Editor; J.J. McDonnell, Senior Advisory Editor. 2005. Encyclopedia of Hydrological Sciences, John Wiley and Sons, 5 volume set, 3456 pages.

B. EDITED BOOKS

- McDonnell, J.J. and T.P. Burt. 2011, Rainfall-Runoff Processes, John Wiley and Sons, in prep.
- Uhlenbrook, S., J.J. McDonnell and C. Leibundgut, Editors. 2003. Runoff Generation Modeling. Hydrological Processes. Special Issue, Volume 17 (10), 377 pages.
- McDonnell, J.J. and T. Tanaka, Editors. 2001. Hydrology and Biogeochemistry of Forested Catchments. John Wiley and Sons, 435p.
- Leibundgut, C., J.J. McDonnell and G. Schultz, Editors. 1999. Integrated Methods of Catchment Hydrology: Tracer, Remote Sensing and New Hydrometric Techniques. IAHS Publication 258, Wallingford UK, 284pp.
- Kendall, C. and J.J. McDonnell, Editors. 1998. Isotope Tracers in Catchment Hydrology, Elsevier Science Publishers, 816p.
- McDonnell, J.J., S. Stribling, B. Neville, D. Leopold, Editors. 1996. Watershed Restoration Management: Physical, Chemical and Biological Considerations. American Water Resources Association, 514p.
- McDonnell, J.J., D. Leopold, B. Neville, S. Stribling, Editors. 1996. New York City Water Supply Studies. American Water Resources Association, 174p.

C. REFEREED PAPERS

- Barnard, H., Graham, C. VanVerseveld, W., Brooks, J., Bond, B., and J.J. McDonnell 2010. Mechanistic assessment of hillslope transpiration controls of diel sub-surface flow: a steady-state irrigation approach. *Ecohydrology*, 3(2): 133-142.
- Carey, S.K., D. Tetzlaff, J. Seibert, C. Soulsby, J. Buttle, H. Laudon, J.J. McDonnell, K. McGuire, D. Caissie, J. Shanley, M. Kennedy, K. Devito and J. Pomeroy, 2010. Inter-comparison of hydro-climatic regimes across northern catchments: synchronicity, resistance and resilience. *Hydrological Processes*, DOI: 10.1002/hyp.7880.
- Fenicia, F. S. Wrede, D. Kavetski, L. Pfister, H. Savenije and J.J. McDonnell, 2010. Assessing the impact of mixing assumptions on streamwater mean residence time estimation. *Hydrological Processes*, 24(12): 1730-1742.
- Govind, A., J.M.Chen, J.J., McDonnell, J. Kumari and O. Sonnentag, 2010. Effects of lateral hydrological processes on photosynthesis and evapotranspiration in a boreal ecosystem. *Ecohydrology*, DOI: 10.1002/eco.141.
- Graham, C., J.J. McDonnell and R.Woods, 2010a. Hillslope threshold response to storm rainfall: (1) A field based forensic approach. *Journal of Hydrology*, doi: 10.1016/j.jhydrol.2009.12.015.
- Graham, C. and J.J. McDonnell, 2010b. Hillslope threshold response to storm rainfall: (2) A simple macroscale model. *Journal of Hydrology*, doi: 10.1016/j.jhydrol.2010.03.008.

Graham, C., H. Barnard, W. van Verseveld and J.J. McDonnell, 2010c. Closure of the hillslope water balance within a measurement uncertainty framework. *Hydrological Processes*, in press.

Hopp, L., J.J. McDonnell and P. Condon, 2010. Measuring and modeling lateral subsurface flow in a soil cover over waste rock in a humid temperate environment. *Vadose Zone Journal*, in press.

James, A., J.J. McDonnell and H.J. Tromp van Meerveld 2010. Gypsies in the palace: Experimentalist's view on the use of 3-D physics-based simulation of hillslope hydrological response. *Hydrological Processes*, DOI: 10.1002/hyp.7819

James, A., J.J. McDonnell and K. McGuire 2010. On the link between streamflow residence time and hydrograph recession. *Hydrological Processes*, in review.

McDonnell, J.J. Foreword to D. Levia, D. Carlyle-Moses and T. Tanaka (eds.) *Forest Hydrology and Biogeochemistry: Synthesis of Past Research and Future Directions*, Springer., pages i-ii.

McDonnell, J., K. McGuire, P. Aggarwal, K. Beven, D. Biondi, G. Destouni, S. Dunn, A. James, J. Kirchner, P. Kraft, S. Lyon, P. Maloszewski, B. Newman, L. Pfister, A. Rinaldo, A. Rodhe, T. Sayama, J. Seibert, K. Solomon, C. Soulsby, M. Stewart, D. Tetzlaff, C. Tobin, P. Troch, M. Weiler, A. Western, A. Wörman, S. Wrede, 2010. How old is the water? Open questions in catchment transit time conceptualization, modelling and analysis. *Hydrological Processes*, 24(12): 1745-1754.

McGuire, K. and J.J. McDonnell, 2010. Hydrological connectivity of hillslopes and streams: Characteristic timescales and nonlinearities. *Water Resources Research*, in press.

Pfister, L., J.J. McDonnell, C. Hissler and L. Hoffmann, 2010. Ground-based thermal imagery as a simple, practical tool for mapping saturated area connectivity and dynamics. *Hydrological Processes*, DOI: 10.1002/hyp.7840

Sayama, T., J.J. McDonnell, A. Dhakal and K. Kate Sullivan, 2010. Storage excess: A new conceptual framework for subsurface water collection, storage and discharge at the watershed scale. *Hydrological Processes*, in review.

Seibert, J. and J.J. McDonnell 2010. Change detection modeling to assess the effect of forest harvesting and road construction on peak flow. *Hydrological Sciences Journal*, 55(3): 316-332.

Seibert, J., R. Woodsmith and J.J. McDonnell 2010. Effects of wildfire on catchment runoff response: A modeling approach to change detection. *Hydrology Research*, doi: 10.2166/nh.2010.036, 41(5): 378-390.

Stewart, M., U. Morgenstern and J.J. McDonnell, 2010. On the truncation of stream residence time: How the use of stable isotopes has skewed our concept of streamflow age and origin. *Hydrological Processes*, 24(12): 1646-1659.

Surfleet, C., Skaugset, A. and J.J. McDonnell, 2010. Uncertainty assessment of forest road modeling with the Distributive Hydrology Soil Vegetation Model (DHSVM). Canadian Journal of Forest Research, in press.

Van Verseveld, W., J.J. McDonnell, K. Lajtha, H. Barnard and C. Graham 2010. A hillslope sprinkling experiment to resolve the double paradox in hydrology and bio-geochemistry". Hydrological Processes, in review.

Zegre, N., A.E. Skaugset, N. Som, J.J. McDonnell, and L. Ganio, 2010. Improved methods for detecting change using hydrology and statistical models in paired-catchment studies. Water Resources Research, in press.

Berman, E., M. Gupta, C. Gabrielli, T. Garland, and J.J. McDonnell, 2009. High-frequency field deployable isotope analyzer for hydrological applications. Water Resources Research, 45, 10, doi:10.1029/2009WR008265.

Brooks, R., R. Barnard, R. Coulombe and J.J. McDonnell, 2009. Two water worlds paradox: Trees and streams return different water pools to the hydrosphere. Nature-Geoscience, doi: 10.1038/NGEO722.

Hopp, L. and J.J. McDonnell, 2009. Connectivity at the hillslope scale: Identifying interactions between storm size, bedrock permeability, slope angle and soil depth. Journal of Hydrology, 376, 378-391, DOI: 10.1016/j.jhydrol.2009.07.047.

Hopp, L., C. Harman, S. Desilets, C. Graham, J.J. McDonnell and P. Troch, 2009. Hillslope hydrology under glass: Confronting fundamental questions of soil-water-biota co-evolution at Biosphere 2. Hydrology and Earth System Science, 13, 2105-2118.

McDonnell, J.J. 2008. Foreword to *DaVinci's Water Theory: On the origin and fate of water* by L. Pfister, H. Savenije and F. Fenicia, IAHS Press, pp. vii-ix.

McDonnell, J.J. 2009. Classics in Physical Geography Revisited: *Hewlett JD, Hibbert AR. 1967. Factors affecting the response of small watersheds to precipitation in humid areas*. Progress in Physical Geography, 33(2): 1-6.

Pfister, L., J.J. McDonnell, S. Wrede, D. Hlúbiková, P. Matgen, F. Fenicia, L. Ector and L. Hoffmann 2009. The rivers are alive: On the potential for diatoms as a tracer of water source and hydrological connectivity. Hydrological Processes, DOI: 10.1002/hyp.7426.

Pielke, R., K. Beven, G. Brasseur, J. Calvert, M. Chahine, D. Entekhab, E. Foufoula-Georgiou, H. Gupta, V. Gupta, W. Krajewski, E. Krider, M. Lau, J.J. McDonnell, W. Rossow, J. Schaake, S. Sorooshian and E. Wood 2009. Climate Change: The Need to Consider Human Forcings Other than Greenhouse Gases. EOS, 90(45): 413.

Sayama, T. and J.J. McDonnell, 2009. A new time-space accounting scheme for to understand predicting streamwater residence time and hydrograph source components in catchments. Water Resources Research, 45, 7, doi:10.1029/2008WR007549.

Tromp van Meerveld, H.J. and J.J. McDonnell 2009. On the use of multi-frequency electromagnetic induction for the determination of temporal and spatial patterns of hillslope soil moisture. *Journal of Hydrology*, 368 (1), p.56-67.

Van Verseveld, W. J., McDonnell, J. J., Lajtha, K. 2009. The role of hillslope hydrology in controlling nutrient loss. *Journal of Hydrology*, doi: 10.1016/j.jhydrol.2008.11.002.

Fenecia, F., J.J. McDonnell and H. Savenije, 2008. Learning from model improvement: On the contribution of complementary data to process understanding, *Water Resources Research.*, 44, W06419, doi:10.1029/2007WR006386.

Grant, Gordon E; Lewis, Sarah L; Swanson, Frederick J.; Cissel, John H; McDonnell, Jeffrey J., 2008. Effects of forest practices on peak flows and consequent channel response in western Oregon: a state-of-science report, Gen. Tech. Rep. PNW-GTR-760. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Stations. 76p.

Mazurkiewicz, A., J.J. McDonnell, D. Callery 2008. Assessing the controls of the snow energy balance and water available for runoff in a rain-on-snow environment. *Journal of Hydrology*, in press. *Journal of Hydrology*, 354: 1-14

Poor, CJ, J.J. McDonnell and J. Bolte 2008. Testing the hydrological landscape unit classification system and other terrain analysis measures for predicting lowflow nitrate and chloride in watersheds. *Environmental Management*, 42:877-893.

Qu, S., Bao W., McDonnell JJ, Yu Z., and Shi P., 2008. Isotope tracers in watershed hydrological modeling. *Advances in Water Science (in Chinese)*, 119 (14): 587-596.

Tetzlaff, D., McDonnell, J.J., Uhlenbrook, S., McGuire, K.J., Bogaart, P.W., Naef, F., Baird, A.J. Dunn, S.M., Soulsby, C. (2008). Conceptualizing catchment processes: simply too complex? *Hydrological Processes*. 22, 1727-1730.

Tromp-van Meerveld, H. J., A. L. James, J. J. McDonnell, and N. E. Peters, 2008. A reference data set of hillslope rainfall runoff response, Panola Mountain Research Watershed, United States, *Water Resources Research.*, 44, W06502, doi:10.1029/2007WR006299.

Van Verseveld, W., J.J. McDonnell and K. Lajtha 2008. A mechanistic assessment of nutrient flushing at the catchment scale. *Journal of Hydrology*, in press. DOI: 10.1016/j.jhydrol.2008.06.009

Dunn, S., J.J. McDonnell and K. Vaché 2007. Factors influencing streamwater residence time: A virtual experiment approach. *Water Resources Research*, 43, W0604, doi: 10.1029/2006Wr005393.

Lehmann, P., C. Hinz, G McGrath, H. J. Tromp - van Meerveld, J. J. McDonnell 2008 Rain threshold for hillslope outflow: an emergent property of flow path connectivity. *Hydrology and Earth System Science* (11): 1047-1063.

McDonnell, J.J., M. Sivapalan, K. Vaché S. Dunn, G. Grant R. Haggerty, C. Hinz, R. Hooper, J. 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*, 43, W07301, doi:10.1029/2006WR005467.

McGuire, K.K., M. Weiler and J.J. McDonnell, 2007. Integrating tracer experiments with modeling to assess runoff processes and water transit times. *Advances in Water Resources*, 30(4): 824-83.

McGuire, K. and J.J. McDonnell, 2007. Stable isotope tracers in watershed hydrology. In: Laijthe K. and W. Michener (eds). *Stable Isotopes in Ecology and Environmental Sciences*, 2nd Edition. Blackwell Publishing, Oxford, pp xx-xx.

Poor, C.J. and J.J. McDonnell 2007. The effects of land use on stream nitrate dynamics, *Journal of Hydrology*, 332: 54-68.

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Seibert, J. and J.J. McDonnell. 2000. Towards a better process representation of catchment hydrology in conceptual runoff modelling; Runoff generation and implications for river basin modeling. p. 229-235 In: Proceedings, Freiburger Schriften zur Hydrologie, 13, Freiburg, Deutschland. Leibundgut, C., Uhlenbrock, S. and McDonnell, J., Editors.

Hjerdt, K.N, R. S. Melloh, J. Taylor, C. Shanley, C. Kendall, and J. J. McDonnell. 2000. Evaluating the impact of spatially and temporally varying d18O of recharge on hydrograph separation during Spring melt of 1999. In: Proceedings, Eastern Snow Conference. May. Syracuse, New York.

Sun, C., C. Neale, J.J. McDonnell and H. Cheng. 1996. Snow classification from SSM/I over varied terrain using an artificial neural network classifier. p. 133-135 In: Proceedings, International Geoscience and Remote Sensing Symposium (IGARSS=96), Remote Sensing for a Sustainable Future.

Sun, C., C. Neale and J.J. McDonnell. 1996. Snow wetness from SSM/I data over varied terrain using an artificial neural network. In: Proceedings, Eastern Snow Conference, 6pp.

Perlitsch, S., J.J. McDonnell, H. Green, S. Perlitsch, B. Hill, D. Borchert and S. Marino. 1996. A comparison of measured and modeled water flow and quality from three suburban catchments. p. 49-60. In: Proceedings, New York City Water Supply Studies. American Water Resources Association. McDonnell, J.J., D. Leopold, B. Neville, S. Stribling, Editors.

Borchert, D., S. Marino, S. Perlitsch, H. Green and J. McDonnell. 1996. Testing the effectiveness of BMP's using urban stormwater models: Project overview. p. 37-48 In: Proceedings, New York City Water Supply Studies. American Water Resources Association. McDonnell, J.J., D. Leopold, B. Neville, S. Stribling, Editors.

Sun, C., C. Neale and J.J. McDonnell. 1996. The potential of using artificial neural network in estimation of snow water equivalent from SSM/I data. In: Proceedings, AGU Hydrology Days. June. Fort Collins, Colorado. 11pg.

Sun, C., H. Cheng, J.J. McDonnell and C. Neale. 1995. Classification of mountain snowpack from passive microwave measurements using an artificial neural network approach. In: Proceedings, IEEE International Conference on Acoustics, Speech and Signal Processing vol 5: 3451-3454.

Tarboton, D.G., T. Jackson, J.Z. Liu, C. Neale, K. Cooley and J.J. McDonnell. 1995. A grid based distributed hydrologic model: testing against data from the Reynold's Creek experimental watershed. p. 79-85 In: Proceedings, American Meteorological Society, Conference on Hydrology.

Sun, C., C. Neale and J.J. McDonnell. 1995. Relationship between snow wetness and air temperature and its use in the development of an SSM/I snow wetness algorithm. p. 271-280 In: Proceedings, AGU 15th Annual Hydrology Days.

Unnikrishna, P.V., J.J. McDonnell, D.G. Tarboton, C. Kendall and K. Cooley. 1995. Stable isotope tracing as a tool for testing assumptions in a grid based distributed hydrologic model. p. 86-91 In: Proceedings, American Meteorological Society, Conference on Hydrology,

Brammer, D., V. Brown, R. Houck, C. Kendall, J.J. McDonnell and A. Titus. 1994. Effect of cover type on snow isotopic composition. p. 105-114 In: Proceedings, 51st Eastern Snow Conference.

Harris, D. and J.J. McDonnell. 1993. Soil moisture and vegetation response to climate change: Strategies for validating a watershed simulation model. p. 99-101 In: Proceedings, American Meteorological Society, Conference on Hydrology.

Kumar, V., J.J. McDonnell and R.C. Peralta. 1992. Improvement of non-point source pollution management using GIS. In: Proceedings, American Water Resources Association Annual Meeting. November. Reno, Nevada. 9pp.

Sauter, K.A. and J.J. McDonnell. 1992. Prediction of snowmelt rates at a forested alpine site in Northern Utah. In: Proceedings, Western Snow Conference. April. Jackson Hole, Wyoming. 10pp.

McDonnell, J.J. 1991. A laboratory system for examining vegetation-induced rainfall infiltration. Bulletin of the Hydrographical Service of Austria (Mitteilungsblatt des Hydrographischen Dienstes in Osterreich), 65/66:217-220.

McDonnell, J.J. and C.H. Taylor. 1986. Effects of varying snowpack and watershed conditions on snowmelt runoff response. p.262-266. In: Proceedings, 42nd Eastern Snow Conference. June. Montreal.

Buttle, J.M. and J.J. McDonnell. 1986. Snowpack depletion in a forested watershed. p. 267-271 In: Proceedings, 42nd Eastern Snow Conference. June 1985. Montreal.

Papers in preparation, abstracts and reports are omitted

OTHER PRESENTATIONS:

Local University Seminars:

- 2010 OSU Stream Team Seminar Series, Corvallis OR
- 2006 Institute for Water and Watershed Graduate Orientation, OSU Corvallis OR
- 2004 OSU Math Department Seminar Series, OSU Corvallis OR
- 2004 HJA Science Hour, OSU Corvallis OR
- 2003 HJA Science Hour, OSU Corvallis OR

- 2003 OSU Hydrology Seminar Series, OSU Corvallis OR
- 2002 Dept. of Crop and Soil Science, OSU Corvallis OR
- 2002 Dept. of Bioresource Engineering, OSU, Corvallis OR
- 2002 Forest Engineering Seminar series, OSU Corvallis OR
- 2001 Oregon Dept of Forestry Workshop on Headwater Streams, Corvallis OR
- 2001 College of Forestry Freshman Class, Corvallis, OR
- 2000 HJ Andrews Annual Research Symposium, Corvallis, OR
- 2000 OSU Hydrophiles Group, Corvallis OR
- 2000 Dept. of Forest Engineering, OSU Corvallis OR
- 1998 Faculty of Forestry, SUNY-ESF, Syracuse, New York.
- 1996 Syracuse University, Dept. of Geology, Syracuse New York.
- 1996 Syracuse University, Dept. of Civil and Environmental Engineering, Syracuse, New York.
- 1996 Faculty of Forestry, SUNY-ESF, Syracuse, New York.
- 1995 Syracuse University, Dept. of Civil and Environmental Engineering, Syracuse, New York.
- 1992 Utah State University, Dept. of Civil and Environmental Engineering, Logan, Utah.
- 1991 Utah State University, Ecology Center, Logan, Utah.

Public Lectures:

- 2009 Distinguished Professor Inaugural lecture, Memorial Union OSU.
- 2007 President's Circle, Development Fund Event, Seattle Athletic Club, Seattle WA
- 2006 Golder and Associates, Mining Engineering Group, Vancouver BC Canada
- 2003 CH2MHill, Portland OR office
- 2002 Golder and Associates, Mining Engineering Group, Vancouver BC Canada
- 1999 State Legislature of New York, SMART-NY Forum.
- 1998 SUNY-ESF Board of Trustees Meeting, Syracuse, New York.
- 1997 SUNY Brockport, Dept. of Earth Sciences, Keynote Speech for the Annual Awards Banquet.
- 1994 American Water Resources Association, Salt City Student Chapter, Syracuse, New York.
- 1994 Society of American Foresters, Syracuse New York Student Chapter, Syracuse, New York.
- 1992 California Earthwatch Society, Los Angeles, California, New York.
- 1990 Huntsville Geological Society, Huntsville, Alabama, New York.
- 1988 Royal Commonwealth Society, Keynote Speech for Annual Meeting, Christchurch, New Zealand.

Expert Witness Testimony:

- 2006 Debevoise and Plympton LLP

GRADUATE PROGRAM (* denotes co-supervision):

MS Theses Directed

Alley, D. Sources of storm runoff in a semi-arid basin. MF (Forest Engineering), Anticipated Feb 2007.

Awasthi, K. 1995. A laboratory model of hillslope runoff. M.S. Plan B, SUNY-ESF, 35pp.

Brammer, D. 1996. Hillslope hydrology of a small forested catchment, Maimai New Zealand. M.S. SUNY-ESF, 90pp. plus appendices.

- Brown, V. 1996. The role of event water, rapid shallow flowpaths and catchment size in summer stormflow. M.S. SUNY-ESF, 73pp. plus appendices.
- Callery, D. Assessment of DEM-based terrain indices. MS (Water Resources Science), June 2007.
- Gabrielli, C. A new portable drill rig for remote rock aquifer study, anticipated June 2011.
- Kendall, K. 1997. Snowmelt runoff in steep humid areas: A test of the transmissivity feedback mechanism at the Sleepers River watershed. M.S. SUNY-ESF, 142pp.*
- Kumar, V. 1993. Development of GIS-based water quality model using AgNPS. M.S. Thesis, Civil and Environmental Engineering. Utah State University, 56pp.
- Mazurkiewicz, A. 2006. Modeling snowmelt hydrology using the physically-based SNOBAL model. MS. 82pp.
- McGlynn, B. 1997. Flowpaths in the riparian zone: Reconciling hydrometric, chemical and isotopic evidence. M.S. 78pp.*
- McIntosh, J. 1996. The effects of preferential flow on soil water movement and conservative solute transport in large intact soil cores. M.S. SUNY-ESF, 69pp.
- Patchett, S. 1999. Comparison of mixing models for isotope hydrograph separation. M.S. SUNY-ESF, 49pp.*
- Sauter, K. 1991. The use of bulk aerodynamic formulae for determining latent and sensible heat flux over melting snow: A field-based approach. M.S. Watershed Science, Utah State University, 110, pp.
- Taratoot, M. 1993. Moisture and energy conditions in a sloping laboratory soil mass. M.S. Watershed Science, Utah State University, 75pp.
- Victory, N. 2007. Quantifying dispersion in subsurface stormflow. MS (Civil and Environmental Engineering), June 2007 *
- Welsch, D. 1999. Nitrogen flushing in the Catskill Mountains. M.S. SUNY-ESF, 74pp.*
- Zumbuhl, A. 1998. Spatial modeling of soil depth and landscape variability in a small forested catchment. M.S. SUNY-ESF, 119pp.

PhD Theses Directed

- Barnard, H. Ecohydrological processes at the HJ Andrews LTER. PhD (Forest Science), Anticipated Aug 2008 * (**Awarded Ford Foundation Fellowship; Awarded AGU Horton Research Grant**)
- Burns, D. 1999. The hydrochemical evolution of stormflow in a forested Piedmont catchment. Ph.D. SUNY-ESF, 192pp.

Fanelli, R., The role of soil and geological storage on streamflow generation. Ph.D., anticipated completion date Aug 2012. (**Awarded Richardson Fellowship; Awarded College of Forestry Fellowship**)

Graham, C. Bedrock influences on subsurface stormflow generation. Ph.D. anticipated completion date Aug. 2008. (**Awarded NSF IGERT Fellowship**)

Goff, B.G. 1991. Hydrologic and erosion response of a disturbed sagebrush hillslope. Ph.D. Watershed Science, Utah State University, 138pp.

Hale, C. Effects of forest harvesting on streamflow generation processes, Ph.D. Forest Engineering, Oregon State University, anticipated completion date summer 2011. (**Awarded College of Forestry Fellowship; Awarded AGU Horton Research Grant; Awarded CUASHI Pathfinder Grant**)

Harris, D. 1995. A watershed simulation model with vegetation. Ph.D. Watershed Science, Utah State University, 285pp.

Hjerdt, N. 2002. Scale effects on streamflow generation processes in till catchments. Ph.D. SUNY-ESF, 183pp (**Awarded AGU Best Student Paper**)

McGuire, K. 2004. Water residence time distribution and water age spectra. Ph.D. Oregon State University, 2xxpp. (**Awarded the OSU Forest Engineering Award for Graduate Student Excellence; Awarded AGU Best Student Paper; Invited AGU Poster**)

McGlynn, B. 2002. The role of riparian zones in catchment hydrology and geochemistry. Ph.D. SUNY ESF. 194 pp. (**Awarded AGU Horton Research Grant; Two Invited Posters at 2001 Fall AGU Meeting**)

McHale, M. 1999. Hydrological controls of nitrogen cycling in an Adirondack watershed. Ph.D. SUNY-ESF, 221pp.*

Pangle, L., Ecohydrological interactions at the plot scale: Asymmetrical warming. PhD expected 2012 (**Awarded OSU College of Forestry Fellowship**)

Poor, C.J., 2006. Effect of landuse on streamwater nitrate. PhD (Civil and Environmental Engineering, xxx pp*)

Sun, C. 1995. Integration of special sensor microwave imager (SSM/I) and in situ data for snow studies from space. Ph.D. Watershed Science, Utah State University, 140pp.

Tromp-VanMeerveld, I. 2004. Hillslope hydrology: from patterns to processes, Ph.D. Oregon State University, Corvallis. 270 p. (**Awarded OSU College of Forestry Fellowship**)

Unnikrishna, P.V. 1995. Stable isotope tracer study of flow generation mechanisms in a small, semi-arid mountain watershed. Ph.D. Civil and Environmental Engineering. Utah State University, 230pp.

VanVeersveld, W. Hydrological controls on nutrient flushing at the hillslope scale. PhD. Anticipated completion date Sept. 2007

International Student Interns

Amed, S., **IAEA and NRC Fellow** from the Bangladesh Water Development Board, Isotope Traineeship, March-May, 2002

Anderson, Axel, PhD student from University of British Columbia, *Effect of forest roads on lateral flow interception*, Sept 2006.

Biondi, Daniela, Recent PhD from University of Calabria, Italy, *Development of physically based watershed models with realistic internal flowpaths*, Sept-Dec 2008.

Barthold, Frauke, PhD student from Giessen University, *Development of model structures for ungauged basins in Inner Mongolia*, Sept-Dec. 2007.

Fabrizio Fenicia, PhD student from TU Delft, Parsimonious watershed modeling—evaluating the value of data, Sept-Dec 2006. **(best student paper at Fall 2006 AGU based on OSU work)**

Frey, Martin, PhD student from EAWAG/ETH Zurich, *A hillslope scale model experiment of threshold behavior*, Sept-Dec 2004.

Garvelmann, Jakob, Pre-diplome student from Freiburg University, *Field measurements of water flux in steep coast range watersheds*, Sept-Dec 2008.

Martius, Olivia, Pre-diplome student from ETH Zurich, *EM Analysis of volumetric water content*, April – July 2001.

Penne, Daniele, PhD student from Padua University, *Spatial patterns of soil moisture at the catchment scale*, Sept 2006-June 2007.

Reany, Sim, Recent PhD from University of Durham, *Agent-based modeling of water and chemical flux*, July-Sept. 2009.

Spaaks, Jurriaan, PhD student from University of Amsterdam, The Netherlands, *Conceptual models of hillslope runoff generation*, Sept.-Dec 2008,

Starcke, Corinna, Pre-diplome student from Braunschweig University, Germany, *Isotopic Analysis of Columbia River Waters*, Sept 2000 – June 2001

Reiter, Mattias, Diplome student from Freiburg University, Germany, *Hillslope Hydrology of the Oregon Coast Range*, March 2003 – May 2003.

Post-Doctoral Scholars

Cirno, Chris., Ph.D from Syracuse University, worked on *Hydrological-Biogeochemical Linkages in Nitrogen Cycling*, May 1994 - August 1994.

Freer, Jim., Ph.D. from Lancaster University, England, worked on *Development of a Hydrogeochemical Version of TOPMODEL*, January 1995 - January 1997. (**Invited AGU Talk, 1997**)

Green, Hannah., Ph.D. from Lancaster University, England, worked on *Stormwater Management Modeling*, January 1995 - January 1997.

Inamdar, Shreeram, PhD from U. of West Virginia, worked on *Hydrobiogeochemical Modeling*, September 1999 – August 2001 (co-supervised with main advisor Myron Mitchell).

James, April, PhD from McGill University, working on *Hillslope Flow Theory and Modeling*, Sept 2005-Aug 2007.

Hopp, Luisa, PhD from Braunschweig University, working on Hydrology of Mine Covers, Oct 2006-Sept 2008. (**Invited AGU talk 2008; Invited EGU talk 2009**)

Keim, Richard, PhD from Oregon State University, worked on *Hillslope flow modeling with Throughfall Intensity Smoothing*, August 2003 – January 2004.

Kim, Kyongha, Ph.D. from Seoul University, South Korea, worked on *Dynamics of Subsurface Stormflow and Macropore-Matrix Interactions*, June 1994 - June 1996.

Sayama, Takahiro, Ph.D. from Kyoto University, working on Incorporating Residence Times Estimates Into Model Structures and Testing, Aug 2007-July 2009. (**awarded best poster at the 1st Hydrogeology Conference, Penn State; Best Paper Award from the Japan Society of Hydrology and Water Resources; Invited Talk AGU, 2008**)

Seibert, Jan, Ph.D. from Uppsala University, worked on *Distributed Watershed Modeling*, January 2000 – January 2001.

Sherlock, Mark, Ph.D. from Lancaster University, England, worked on *Hillslope Tracer Experiments of Septic Leachate in the New York City Water Supply Watershed*, April 1998 - March 2001.

Simin, Qu, PhD from Hohai University, working on Isotope Hydrology of the HJ Andrews Experimental Forest (Sept 2006-Mar 2007)

Uchida, Taro, PhD from Kyoto University, worked on *Hillslope Hydrology Intercomparison and Classification*, (August 2002-January 2003)

Vaché, Kellie, PhD from Oregon State University, worked on *Mesoscale Watershed Modeling* (June 2003-May 2005).

Villers, Lyssette, PhD from INECOL Mexico, working on Cloud Forest Hydrological Processes, August 2008-July 2010.

Vitvar, Tomas, PhD from ETH Zurich, worked on *Residence Time Modeling of Urban Waters*, January 2000-July 2003.

Weiler, M., PhD from ETH Zurich, worked on *Hydrology of Alaska Headwater Catchments*, October 2001-September 2003. (**awarded College of Forestry Research Fellow Prize**)

Youn, HoJoong, Ph.D. from Seoul University, South Korea, worked on *Subsurface Flow and Landslide Initiation*, December 1995 - May 1996.

CONFLICT OF INTEREST

[Collaborators on Papers, Proposals or Reports (since obtaining PhD; not including students/post docs)]:

Malcolm Anderson (Dept. of Geography, Bristol University)
Heidi Asbjornsen (Dept. of Natural Resources, Iowa State University)
Brent Aulenbach (U.S. Geological Survey, Atlanta)
Larry Band (Dept. of Geography, University of North Carolina).
Paul Bates (Dept. of Geography, Bristol University)
Alfred Becker (Center for Climate Studies, Potsdam University)
Adrian Bejan (Dept of Mechanical Engineering, Duke University)
Keith Beven (Center for Environmental Systems, Lancaster University)
Peter Black (Dept. of Forestry, SUNY-ESF)
Mike Bonell (UNESCO, Paris)
Dale Borchert (New York City Department of Environmental Protection)
Breck Bowden (University of Vermont, Burlington)
Axel Bronstert (Potsdam University)
Renee Brooks (US Environmental Protection Agency, Corvallis)
Sampurno Bruijnzeel (Free University, Amsterdam)
Jim Buttle (Watershed Ecosystems, Trent University)
J.J. Cheng (Dept. of Computer Science, Utah State University)
John Christy (Dept. of Atmospheric Sciences, University of Alabama)
Chris Cirmo (Dept. of Geology, SUNY-Cortland)
Pete Condon (Kennecott Greens Creek Mine, Alaska)
Nick Costes (NASA, Marshall Space Flight Center)
Keith Cooley (USDA/ARS, Northwest Watershed Research Center)
Deb Curry (New York City Department of Environmental Protection)
Todd Dawson (UC Berkeley)
Craig Devine (ARCADIS, Denver)
Jim Dobrowolski (Dept. of Range Science, Utah State University)
Jim Doolittle (U.S. Department of Agriculture, Agricultural Research Service, Lincoln NE)
Charlie Driscoll (Dept. of Civil and Environmental Engineering, Syracuse University)
Sarah Dunn (Macaulay Institute)
Rick Edwards (US Forest Service, Juneau Research Station)
Steve Effler (Upstate Freshwater Institute, Syracuse)
Helmut Elsenbeer (Potsdam University)
Gordon Grant (US Forest Service, Pacific Northwest Station)
Wei-Zu Gu (Dept. of Water Resources, Hohai University, Nanjing China)
Greg Hancock (Dept. of Environmental Engineering, Newcastle University, Newcastle)
Charlie Hall (Dept. of Environmental and Forest Biology, SUNY-ESF)
Jim Hassett (Dept. of Forest Engineering, SUNY-ESF)
Chuck Hawkins (Dept. of Fisheries and Wildlife, Utah State University)

Christoph Hinz (University of Western Australia)
John Hoopes (Dept of Civil Engineering, University of Wisconsin)
Rick Hooper (CUASHI, Washington)
Dave Hulse (Dept. of Landscape Architecture, University of Oregon)
George Ice (NCASI, Corvallis)
Jack Istok (Dept. of Civil and Environmental Engineering, Oregon State University)
Rhett Jackson (Dept. of Forestry, University of Georgia, Athens)
Julia Jones (Dept. of Geosciences, Oregon State University)
Jetse Kalma (Dept, of Environmental Engineering, Newcastle University)
Carol Kendall (U.S. Geological Survey, Menlo Park)
Jim Kirchner (University of California, Berkeley)
Chuck Kroll (Dept. of Forest Engineering, SUNY-ESF)
Praveen Kumar (Dept. of Civil and Environmental Engineering, University of Illinois)
Greg Lawrence (U.S. Geological Survey, Albany)
Chris Leibundgut (Institute of Hydrology, Freiberg University)
Charlie Luce (US Forest Service, Boise)
Luis Martinez (University of Guadalajara)
Danny Marks (USDA/ARS Northwest Watershed Research Center, Boise)
Bruce McGurk (U.S. Forest Service, Pacific Southwest Experiment Station)
Myron Mitchell (Dept. of Environmental and Forest Biology, SUNY-ESF)
Steve Marino (New York City Department of Environmental Protection)
David Myrold (College of Ocean and Atmospheric Sciences, Oregon State University)
Pete Murdoch (U.S. Geological Survey, Albany)
Chris Neale (Dept. of Biological and Irrigation Engineering, Utah State University)
Mike O'Neill (USDA, Washington DC)
Ian Owens (Dept. of Geography, University of Canterbury)
Andy Pearce (LandCare New Zealand)
Rick Peralta (Dept. of Biological and Irrigation Engineering, Utah State University)
Jake Peters (U.S. Geological Survey, Atlanta)
Mike Roderick (Australia National University)
Alan Rodhe (Dept. of Hydrology, Uppsala University)
Lindsay Rowe (LandCare New Zealand)
Hubert Savenije (Dept. of Civil Engineering, TU Delft)
Fred Scatena (University of Pennsylvania)
Sherry Schiff (Groundwater Center, University of Waterloo)
John Selker (Dept. of Bioresource Engineering, Oregon State University)
Jamie Shanley (U.S. Geological Survey, Montpelier)
Arne Skaugset, (Dept. of Forest Engineering, Oregon State University)
Roy Sidle (Kyoto University)
Don Siegel (Dept. of Geology, Syracuse University)
Siva Sivapalan (Dept. of Geography, University of Illinois)
Chris Soulsby (Dept. of Geography, University of Ainerdeen)
Thor Smith (U.S. Geological Survey, Montpelier)
Mike Stewart (Institute of Nuclear and Geological Sciences, New Zealand)
Marc Stieglitz (Dept. of Civil Engineering, Georgia Tech)
Sam Stribling (Tetra Tech Inc., Maryland)
Fred Swanson (US Forest Service, PNW Station, Corvallis)

Tadashi Tanaka (Dept. of Geosciences, Tsukuba University)
Dave Tarboton (Dept. of Civil Engineering, Utah State University)
Colin Taylor (Dept. of Geography, Trent University)
Doerthe Tetzlaff (Dept. of Geography, University of Aberdeen)
Sidey Timmins (Oak Ridge National Lab)
Peter Troch (Dept. of Water Resources, University of Arizona)
Yoshio Tsuboyama (Japan Forestry and Forest Products Research Center, Tsukuba)
Stefan Uhlenbrook (UNESCO IHE, Delft)
Mike Unsworth (COAS, OSU)
Henny van Lanen (Wageningen University)
Thorsten Wagener (Dept. of Civil and Environmental Engineering, Penn State University)
Andrew Western (Dept. of Civil Engineering, University of Melbourne)
Steve Williams (NCAR, Boulder)
Ross Woods (National Water and Atmospheric Research Center, Christchurch, New Zealand)
Rick Woodsmith (US Forest Service, Wenatchee Research Station)
Dave Wolock (U.S. Geological Survey, Lawrence)

