Marc B. Parlange

Provost and Senior Vice-President
Chancellery, 27 Chancellors Walk, Clayton Campus
Monash University, VIC, 3800, Australia

Personal

Born, July 5, 1962, in Providence, R.I., USA, Married, two children
U.S. Citizen; Canadian & Australian Permanent Resident; Professional Engineer (B.C., Canada)

Higher Education

1990 **Ph.D.** Environmental Engineering, Cornell University, School of Civil & Environmental Engineering, Ithaca, NY, USA. *Advisor*, Professor Wilfried Brutsaert

1987 **M.S.** Agricultural Engineering, Cornell University, Dept. of Agricultural Engineering, USA. *Advisor*, Professor Tammo Steenhuis

1984 **B.S.** Applied Mathematics, Griffith University, School AES, Brisbane, Australia

University Faculty Appointments

2017 - **Professor**, Monash University, Dept. of Civil Engineering, Faculty of Engineering

2013 - 2017 **Professor,** University of British Columbia (UBC), Department of Civil Engineering, Faculty of Applied Science, Canada – (*Affiliate Professor 2019 – 2022*)

2004 - 2013 **Professor,** Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland
Environmental Eng., School of Architecture, Civil & Environmental Engineering, ENAC

1996 - 2004 **Professor**, Johns Hopkins University (JHU), USA
Department of Geography and Environmental Engineering, School of Engineering
Joint Appointments: Mechanical Engineering & Earth and Planetary Sciences
Center for Environmental and Applied Fluid Mechanics

1990 - 1996 **Assistant** (90-93) **& Associate Professor** (93-96), University of California, Davis, USA
Departments: Land, Air and Water Resources (College of Agricultural and Environmental Sciences) & Biological and Agricultural Engineering (College of Engineering)

University Administrative Experience

2017 - **Provost and Senior Vice-President**, Monash University, Australia

2013 - 2017 **Dean**, Faculty of Applied Science, (Engineering, Architecture, Planning, Nursing), UBC

2008 - 2013 **Dean**, School of Architecture, Civil and Environmental Engineering, EPFL

2004 - 2007 **Director**, Institute (Dept.) of Environmental Engineering, EPFL

2001 - 2004 **Chair**, Department of Geography and Environmental Engineering (DoGEE), JHU

Research Interests: Hydrology and Fluid Mechanics in the Environment

Land-atmosphere exchange; Atmospheric Boundary Layer; Large Eddy Simulation; Turbulence; Water Resources; Hurricanes; Coastal & Urban Environments; Wind Engineering & Energy; Snow Physics.

Honors and Awards

2020	Hydrologic Sciences Medal, American Meteorological Society (Centennial)
2020	Fellow, American Meteorological Society
2017	Member, U.S. National Academy of Engineering
2017	Fellow, Canadian Academy of Engineering
2017	Distinguished Visiting Fellow, Cecil Green College, University of British Columbia
2017	UBC Teaching Award. *'Just desserts'*, Student Society (Alma Mater Society)
2015	Fellow, American Association for the Advancement of Science
2010	EPFL Excellence in Teaching Award, La Polysphere – Agepoly (Student Society)
2009	Hydrologic Sciences Award, American Geophysical Union
2006	Dalton Medal, European Geosciences Union
2004	NCAR Outstanding Publication Award **(**Joint with NCAR & JHU colleagues)
1998 - 2003	Affiliate Scientist, National Center for Atmospheric Research (NCAR), Boulder
1997	Macelwane Medal, American Geophysical Union
1997	Fellow, American Geophysical Union
1994 (July)	Japan Visiting Lecturer Award in Hydrology and Hydraulics (Organizer, Civil Engineering Research Institute, Sapporo)

Editorial and Science Foundation Appointments

2006 - 2013	Research Council Member, **Swiss Science Foundation**, (Div. 2: Mathematics, Natural and Engineering Sciences. Div. 4: Interdisciplinary.)
2004 - 2009	Editor in Chief, **Water Resources Research**
1997 - 2002	Editor, **Advances in Water Resources**
1994 - '97, '09 -'15	Editorial Board, **Advances in Water Resources**
1993 - 1997	Associate Editor, **Water Resources Research**

Visiting Appointments

2002 - 2003 Professeur Invité: EPFL

1991 - 2002 Visiting Scientist: National Center for Atmospheric Research
(July - Aug.) Boulder, CO (Host: Dr. Richard Katz)

Higher Education (*other*)

1984 - 1990 Graduate Research Assistant, Cornell University
1984 Internship – USDA/ARS, Sedimentation Laboratory, Oxford, MS.
1982 - 1984 Undergraduate Teaching Assistant, Math/Physics, Griffith University

Courses offered

UBC (2013 - 2017) Guest lectures in Engineering Hydrology

EPFL (2004 - 2013)

1. Environmental statistics
2. Analytical Hydrology
3. Hydrology for Engineers
4. Environmental Transport Phenomena
5. Engineering Design Project
6. Quantitative Methods
7. Fluid Mechanics

Johns Hopkins University (1996 – 2004)

1. Fluid mechanics
2. Environmental transport phenomena
3. Hydrology
4. Micrometeorology & the Atmospheric Boundary Layer
5. Vadose zone hydrology
6. Dynamic meteorology
7. Applied Math for Engineering
8. Seminars in Soils, Plants and Hydrology

University of California, Davis (1990 – 1996)

1. Evapotranspiration
2. Fluid Mechanics
3. Watershed Hydrology
4. Seminars in Soils, Plants and Micrometeorology

Selected Responsibilities at Monash (2017 -)

Provost & Senior Vice-President (June 2017 -) Chief Academic Officer of the University: Responsibilities: setting the University's academic strategy and priorities with view to improving the education and research performance of the University; oversight of faculties, academic related portfolios and university-wide centres and institutes oversight of academic staffing including recruitment, development, reward and recognition, policies and procedures; strategic leadership for the delivery of academic programs; identifying and cultivating interdisciplinary areas of excellence and collaboration.

Ten Faculties: Art, Design and Architecture; Arts; Business and Economics; Education; Engineering, Information Technology; Law; Medicine, Nursing and Health Sciences; Pharmacy and Pharmaceutical Sciences; Science: some 67’000 students in Australia, 4’000 academic & 6’000 professional staff

University Library; Monash Sustainable Development Institute (MSDI); Data Futures Institute; Monash University Accident Research Center (MUARC); World Mosquito Program (WMP); Inst. For Vector Borne Disease; Policy Futures Center.
Student Enrollment Planning (Domestic and International) and Tuition Pricing

Monash University Enterprise Bargaining
Scale and Focus – University implementation of the strategic plan (*Focus Monash*) operations
Graduate student program, Higher Degree by Research (HDR) – PhD., M.S.

University Research Strategy themes: **AI & Data Science**; **Better Governance and Policy**; **Health Sciences** [Monash Institute Medical Engineering, Antimicrobial Resistance Center, Monash - European Microbiology Lab.]; **Sustainable Development** [Monash Sustainable Development Institute, Energy Institute, Cities Institute, The Melbourne Experiment]
Monash Research Office & Infrastructure; University Research Platforms; Center & Institutes
International Networks of Excellence (U. Warrick, Penn State, UBC, Kings College, U. Newcastle, UCSD)
European Microbiology Laboratory [EMBL Australia: Australian lead]
Faculty and Graduate Affairs (Chair Promotions & Appointments)
University Academic Board
Committee on Inclusion and Diversity; Athena SWAN Committee
Board of 'Climate Works' (MSDI) & Monash Institute for Medical Engineering (MIME)
Boards: a) Monash Malaysia; b) IIT B – Monash Academy (Mumbai); c) Monash – Warwick Alliance
d) ARC Centre of Excellence for Mathematical & Statistical Frontiers; e) ARC Centre of Excellence in Exciton Science; f) ARC Centre of Excellence for Electromaterial Science; g) Monash Indonesia

Selected Responsibilities at UBC (2013 - 2017)

Dean, Faculty of Applied Science 2013 (September) – 2017 (June)
Six Departments: Chemical and Biological Engineering, Civil Engineering, Electrical and Computer Engineering, Materials Engineering, Mechanical Engineering, Mining Engineering;
Four Schools: School of Nursing, School of Community and Regional Planning, School of Architecture and Landscape Architecture, School of Engineering @ UBC Okanagan: Civil, Mechanical/Materials, Electrical Engineering.
Established School of Biomedical Engineering, joint with the Faculty of Medicine,
In total: some 8'000 students & 300 faculty.

University Senate, 2013 – 2017
Member, e@UBC Advisory Board, 2016 – 2017
Member, Search committee, Entrepreneur in Residence, 2016
Member, University Sustainability Board, 2013 – 2016
Member, Advisory team, Biomedical Engineering Student Team, 2015 - 2017
Member, Graduate Programs in Engineering, Atmospheric Sciences and Applied Mathematics
Member, Consortium de recherche et d'innovation en aérospatiale au Québec (CARIC), 2014 - 2017
Member, Executive board: Institute for Sustainable Extractive Industries, 2013 – 2015

Selected Responsibilities at EPFL (2004 - 2013)

ENAC School Dean 2008 (January) – 2013 (August)

Four Institutes: Architecture, Civil Engineering, Environmental Engineering, Urban Systems.
In total: some 2'000 students, 85 faculty.

Director Environmental Engineering Institute 2004 - 2007
Member, Graduate Board, Doctoral Program in Mechanics, 2009 - 2013
Chair, Academic Advisory Board, Landolt Chair for a Sustainable Future, 2008 – 2013
Chair, Science Review Committee, MIR – Lac Leman Project, 2010 - 2011
Member, Expert Committee, International Centre for Earth Simulation Foundation, 2010 – 2012

Laboratory Spin-Off Company: Sensorscope (Environmental wireless sensing network)
Organizer, EPFL Research Day on Environmental Sustainability (seminar visit of Al Gore), 2008
Member, Planning Board, EPF Competence Center for Environmental Sustainability, 2005 - 2007
Member, 'Direction' of School of Architecture, Civil and Environmental Engineering, 2006 - 2007
Member or chair, PhD student exam commissions, Graduate groups: Civil and Environmental Engineering, Mechanics, Communication Systems; 2004 -
Co-Chair, Bois Chamblard Environmental Biodiversity Science Steering Board, 2005 - 2007
Seminar Organizer, 'EPFL Environmental Engineering Seminar Series', 2004 - 2007
Scientific Advisor, Press Polytechnique Lausanne 2004 - 2007
Member, EPFL Masters Fellowship Selection Committee 2005 - 2008

Selected Responsibilities at Johns Hopkins University (1996 – 2004)

Chair Department of Geography and Environmental Engineering 2001 (July) – 2004 (June)
Co-Chair, School of Engineering, Engineering Faculty Assembly, 2000 - 2002
Chair, Johns Hopkins University Board of Review, 1999-2002
Seminar Coordinator, Center for Environmental and Applied Fluid Mechanics, '98 -'00, '03 -'04
Co-Organizer, JHU Student Symposium in Environmental Fluid Mechanics, 2002, 2003, 2004
Foundation Director, Environmental Engineering Undergraduate Program, JHU 2000 – 2002
[Environmental Engineering Programs, top ten US News ranking]
Member, Graduate Fellowship Committee in Environmental Engineering, JHU 1996 - 2002
Member, Advisory Group, Center for Environmental and Applied Fluids, JHU 1996 - 2004
Chair or Member, ad-hoc promotion committees (10 JHU); Chair, Computer Committee, DoGEE, JHU 1996 – 2001; Co-Chair, Scientific Computing Initiative, Engineering School, JHU 1999 - 2000

Selected Responsibilities at the University of California, Davis (1990 – 1996)

Chair, Graduate Admissions, Hydrology Graduate Group, UC Davis, 1993 - 1996
Chair, Field Committee (Agricultural Farm:- Campbell Tract), LAWR, UC Davis 1993 - 1996
Chair and Member, Ad-hoc promotion review committees (3 UC Davis)

International Conferences Organized

Co-Chair with Andrea Rinaldo, Latsis Symposium in Ecohydrology and Environmental Sustainability, EPFL, October 17 - 20, 2010

Chair, Landolt Conference for a Sustainable Future, EPFL, September 26, 2008

Co-Chair with Haydee Salmun, Charles Meneveau, Johns Hopkins Conference in Environmental Fluid Mechanics, April 2 - 4, 1998 *Tribute for Professor Owen Phillips*

Co-Chair with Jan Hopmans, UC Davis Conference in Vadose Zone Hydrology, Sept. 6 - 8, 1995
Tribute for Professors Donald Nielsen and James Biggar

Membership in Professional Societies and Academies

US National Academy of Engineering; Canadian Academy of Engineering (Fellow); Engineers and Geoscientists, British Columbia, EGBC (Professional Engineer, Licence: 42087), American Geophysical Union (Fellow); European Geosciences Union (Life Member); American Society of Civil Engineers; American Meteorological Society (Fellow); American Association for the Advancement of Science (Fellow); International Association of Hydrological Sciences; International Union of Geodesy and Geophysics (Swiss President, '10-'13); Société Suisse des ingénieurs et des architectes (section vaud)

Selected Service in Professional Organizations

Canadian National Council of Deans of Engineering and Applied Science (NCDEAS)

NCDEAS vice-chair, 2015 – 2017; Chair elect 2017
Dean's Liaison Committee with the Canadian Engineering Accreditation Board, 2014 – 2017

American Geophysical Union

Member, College of Fellows, New Frontiers Committee, 2019 –
Member, AGU Partnership Task Force 2021 -
Member, AGU Publications Committee (WRR liaison), 2015 – 2020
Member, Macelwane Award Committee, 2015 – 2019
Member, AGU Centennial Task Force Committee, 2015 - 2016
Chair, Horton Medal Committee, AGU, 2004 - 2006
Member, Horton Medal Committee, AGU, 2002 - 2004
Member, Biogeosciences Foundation Committee, AGU 1999 – 2001
Elected Secretary, Hydrology Section, American Geophysical Union, 1998 - 2000
Member, Water Resources Research Committee, AGU, 1996
Chair, Large Scale Field Experimentation Committee, AGU, 1994 - 1996
Member, AGU, Large Scale Field Experimentation Committee, 1991 - 1996; 2008 -
Annual Session Co-Organizer, Hydrology and Atmospheric Sections, AGU, 1991 -

U.S. National Research Council

Member, International Union committee on Soil Science, 2003 - 2005
Member, Committee on Hydrologic Sciences, 1997 - 2001

European Geosciences Union

Member, Dalton Medal Committee, 2007 – 2009
Annual Session Co-Organizer in Hydrology and Nonlinear Processes, 2002 -

U.S. National Science Foundation, U.S. Department of Agriculture & NASA

Member, ad hoc, Research proposal review panels, 1999 - 2004

American Meteorological Society: Member, Hydrology Committee, 1997 – 2000

Selected Service in other Universities

External member PhD examination committee

Lyon – Cemagref, Grenoble University, Environmental Engineering, 2011
Grenoble University, Fluid Mechanics, 2010
KU Leuven, Civil Engineering, 2010
MIT, Civil and Environmental Engineering, 2009
University of Porto, Portugal, Mechanical Engineering, 2008
Wageningen University, The Netherlands, Hydrology, 2007
Univ. Trento, Civil and Environmental Engineering, (4 Dissertations), 2007
University of Western Australia, Water Resources, Perth, 2002
University of Uppsala, Hydrology, Sweden, 2000

External member Faculty Search Committees

Member, WSL Director (ETH domain), Zurich, 2006 – 2007
Member, EAWAG Director (ETH domain), Zurich, 2004 – 2006
Member, Professor search, ETH Zurich, 2004 – 2005; Environmental Engineering
Member, Professor search, EPFL, 2002 – 2004; Civil and Environmental Engineering

External Research and Review Committees

Member, University of Notre Dame, Civil and Environmental Engineering & Geology, 2020
Member, British Columbia Consulting Engineers Awards Committee, 2016, 2017
Member, Princeton School of Engineering and Applied Science Review Committee, 2015.
Member, L'Oreal Women in Science Selection Committee, 2015.
Member, External Comite d'Audit; Universite Jean Monnet, St. Etienne, 2014 -
Member, Assessment Board, Environmental Engineering, DTU, Copenhagen, 2013.
Member, Advisory Board, Dept. of Civil and Environmental Engineering, Princeton Univ., 2013 -
Member, External Assessment Committee, Laboratoire des Ecoulements Géophysiques et Industriels (LEGI), University of Grenoble, 2010.
Member, External Assessment Committee, Laboratoire d'étude des Transferts en Hydrologie et Environnement (LTHE), University of Grenoble, 2010
Member, St. Anthony Falls University of Minnesota External Academic Review Board, 2006
Member, Committee for assessment of the TU Delft Research Centers, 2006
Member, Remote sensing research review committee, German National Science Foundation, 2006
Co-Chair, Education and Research Unit, Hazards and Risks, (ETH Center for Competence in Environmental Sustainability, Management Committee), 2005 - 2008
Panel Member, Italian Committee for the evaluation of research (Civil Engineering), 2005
External Member, Committee for Energy and the Environment, Princeton University, 2003 - 2005
Foreign Advisor, Dutch Royal Academy study in Hydrology, 2003
Member, Advisory Committee, University of North Carolina, Institute of Math Science 2002 - 2006
Chair, Committee on Measurement Technology, Consortium of Universities for the Advancement of Hydrologic Science, 2000 - 2002
Secretary, Western USDA Soil Physics Project W-188, 1993 - 1994

Journal Reviewer

Water Resources Research, Journal of the Atmospheric Sciences, Boundary Layer Meteorology, Journal of Hydrometeorology, Advances in Water Resources, Journal of Applied Meteorology and Climatology, Journal of Fluid Mechanics, Geophysical Research Letters, Journal of Hydrology, Journal of Geophysical Research – Atmospheres, Soil Sciences Society of America Journal, Soil Science, ASCE J. Hydrologic Engineering, Agricultural and Forest Meteorology, Journal of Glaciology, Hydrological Processes, Journal of Wind Engineering and Industrial Aerodynamics, Journal of Hydrometeorology, Journal of Climate, The National Academies: Sciences, Engineering, Medicine.

Proposal Reviewer

NSF, USDA, NASA, NSERC, Swiss, German, Italian, Australian, Georgian, U.K., Israel, EU - Science Foundations; ETH domain Competence Centers in Environmental Sustainability & Energy and Materials.

Ph.D. Students (year of graduation, present position, thesis title; 25 completed)

Gabriel Katul (UCD), 1993, Distinguished University Professor, School of the Environment, Duke University, "Coupled processes near the land-atmosphere interface"

William Eichinger (UCD), 1995, Professor, Civil and Environmental Engineering, University of Iowa, "Pacific Ocean – Atmosphere feedbacks", Fellowship Los Alamos 94-95

John Albertson (UCD), 1996, Professor, Civil and Environmental Engineering, Cornell University, "Large eddy simulation of land-atmosphere interaction", Fellowship NASA 94-96.

Jozsef Szilagyi (UCD), 1997, Professor, University of Nebraska, School of Natural Resources & Budapest University of Technology and Economics, Department of Hydraulic and Water Resources Engineering, Hungary, "A semi-distributed watershed model"

Tony Cahill (JHU), 1998, Associate Professor, Civil and Environmental Eng., Texas A&M University, "Hydrology at the land-atmosphere interface", Fellowship NASA 96-98; USDA 94-96

Fernando Porte-Agel (JHU), 1999, Professor, School of Architecture, Civil and Environmental Engineering, EPFL, previously Associate Professor, Civil Eng., Univ. of Minnesota, "Subgrid-scale modeling for the atmospheric boundary layer", Co-advised with Charles Meneveau, Fellowship JHU 96-97

Markus Pahlow (JHU), 2002, Senior Lecturer, University of Canterbury, Christchurch, New Zealand, "Atmospheric boundary layer dynamics and optical technologies to obtain extinction profiles from elastic lidar'

Jan Kleissl (JHU), 2004, Professor, University of California, San Diego, Mechanical Engineering, 'Field experimental study of the Smagorinsky model and application to large eddy simulation' Co-advised with Charles Meneveau

Elie Bou-Zeid (JHU), 2005, Professor, Princeton University, Civil and Environmental Engineering, 'A lagrangian scale dependent dynamic subgrid-scale model: parameterization of surface variability', Co-advised with Charles Meneveau, Wolman Fellowship JHU, '01-'02.

Mariana Adam (JHU), 2005, British Meteorological Office, Director Lidar Group, 'Elastic lidar techniques for aerosol measurement'

Chad Higgins (JHU), 2007, Associate Professor, Oregon State University, Biological and Ecological Engineering, 'Geometric Alignments in Atmospheric Boundary Layer Turbulence and Large Eddy Simulation' Co-advised with Charles Meneveau, EPA STAR Fellowship '01-'04

Vijayant Kumar (JHU), 2008, Vice-President, Data Science and Engineering, Sentient Science, Boston, Mass. 'Land-atmosphere exchange from remote sensing and large eddy simulation' Co-advised with Charles Meneveau, Wolman Fellowship JHU '02- '03

Marcelo Chamecki (JHU), 2008, Professor, University of California, Los Angeles, 'Dispersion of pollen into the atmosphere' Co-advised with Charles Meneveau, Wolman Fellowship JHU '03- '04

Martin Froidevaux (EPFL), 2010, Clean Energy Consulting Firm 'Surface layer humidity from raman

lidar', Co-advised with Valentin Simeonov

Nikki Vercauteren (EPFL), 2010, Associate Professor in Meteorology at the University of Oslo 'Evaporation from open water bodies'

Marc Calaf Bracons (EPFL), 2011, Associate Professor, Mechanical Eng. Univ. Utah, 'Study of a fully developed wind turbine array boundary layer', Co-advised with Charles Meneveau

Daniel Nadeau (EPFL), 2011, Associate Professor, Laval University, Quebec City, Civil and Water Eng., 'Atmospheric boundary layer dynamics of transitioning flows over complex terrain'.

Theophile Mande (EPFL), 2014, Water Resources Engineer, Burkina Faso, 'Hydrology of the Sudanian Savanna in West Africa, Burkina Faso'

Francesco Ciocca (EPFL), 2014, Research Engineer, Marie Curie Research Fellow, Silixa Ltd and University of Birmingham, 'Physics of water vapor transport in soils, influence of diurnal cycle', Co-advised with Ivan Lunatti

Natalie Ceperley, (EPFL), 2014, Research Associate, University of Bern, 'Ecohydrology in water limited Savanna ecosystems'

Marc Diebold, (EPFL), 2014, Senior Hydraulic Engineer, HYDRIQUE Ingenieurs, Mont-sur-Lausanne, Switzerland, 'Turbulent air flow over snow and rugged topography'

Raphael Mutzner (EPFL), 2015, Head Operational Forecast, HYDRIQUE Ingenieurs, Mont-sur-Lausanne, Switzerland, 'Hydrology in high Alpine Environments'

Holly Jane Oldroyd (EPFL), 2015, Assistant Professor, UC Davis, 'Atmospheric turbulence over steep alpine slopes'

Marco G. Giometto (EPFL), 2016, Assistant Professor, Columbia University, Civil Engineering and Engineering Mechanics, 'Theoretical and numerical studies of atmospheric boundary-layer flows over complex terrain' **Best Thesis Award: EPFL Mechanics Doctoral School for 2016**

Varum Sharma (EPFL), 2018, Post-doctoral Associate, SLF – EPFL, 'Wind-energy in mountain environments', Co-advised with M. Lehning

Manuel Schmid (UBC/Monash), 'Turbulence in the Atmospheric boundary layer' (Start 2016), Co-advised with Marco Giometto (Columbia) & Greg Lawrence (UBC)

Kelsey Everard (UBC/Monash), 'Katabatic flows: simulation and experiment' (Start 2017), Co-advised with Greg Lawrence

Shefali Verma (Monash – IITB Academy), 'Large Eddy Simulation for land-atmosphere exchange' (Start 2020), Co-advised with Basudev Biswal (IITB)

Abdul Mateen (Monash – IITB Academy), 'Large Eddy Simulation for complex landscapes' (Start 2020), Co-advised with Basudev Biswal (IITB)

M.S. Students (Univ., year of graduation, present position, thesis title; 28 completed):

Curtis Nicholson (UCD), 1992, Water Resources Engineer, Seattle, WA
"Urban water quality runoff model"

Nida Hosn (UCD), 1993, Environmental Engineer/ Lawyer, L.A., CA
"Heat and water flow in unsaturated soils at the land-atmosphere interface"

Noah Najarian (UCD), 1994, High School Teacher, NY, NY
"Unsaturated soil hydraulic parameters from disc tension infiltrometer experiments"

Teresa Ortenburger (UCD), 1995, Artist/ Environmental Safety Specialist, San Francisco, CA
"Lidar measurements of atmospheric boundary layer dynamics over an urban site"

Brad Moore (UCD), 1996, Water Resources Engineer, Sacramento, CA
"Bare soil evaporation: relation to near surface soil moisture and potential evaporation"

Ann Fridlind (UCD), 1996, Graduate Student, Stanford, CA, now NASA (non-thesis option)

Elizabeth Jacobs (JHU), 2000, Environmental Engineer, Pitt., PA (non-thesis option)

Lisa Koch (JHU), 2001, Environmental Engineer, Chicago, Illinois
"Lattice Boltzmann method studies of transport in porous media"

Evangelia Diapouli (JHU), 2001, Environmental Engineer, Athens, Greece,
"Estimation of the atmospheric extinction coefficient from single-wavelength lidar"

Sharon Palmer (JHU), 2002, Environmental Engineer, Atlanta, Georgia
"Determination of atmospheric boundary layer height from elastic backscatter lidar"

Alicia Joseph (JHU), 2004, Graduate Student, University of Maryland (non-thesis option)

Jan Overney (EPFL), 2006, Graduate Student, EPFL, Chemical Engineering
"Simulation of blowing snow"

Florian Habermacher (EPFL), 2006, Graduate Student, U. St. Gallen, Environmental Economics
"Numerical simulation of soil moisture and heat transfer for Land-Atmosphere exchange"

Vitor Silva (EPFL), 2006, Graduate Student, EPFL, Architecture, "Introduction a l'hypothese d'ergodicite et aux measures lidar"

Gian-Duri Lieberherr (EPFL), 2010, Swiss Civil Service, WSL, Zurich, "Modeling snow drift in the turbulent boundary layer"

Romain Mage (EPFL), 2010, Environmental Engineer, Sion, CH, "Developpement de methods de modelisation des flux turbulent dans un environnement alpin en utilisant des reseaux de stations micrometeologique" (Joint Advisor: Eric Pardyjak)

Malik Matthey (EPFL), 2010, Environmental Engineer, Lyon, France, "Stream temperature Modeling using fiber optic distributed temperature measurements in a sub-Saharan watershed, Burkina Faso" (Joint Advisors: Scott Tyler, Theo Mande)

Lucille Verrot (EPFL), 2010, Engineers without borders, Benin, 'Determination d'un modele d'humidite du sol pour le mil" (Joint Advisor: Natalie Ceperley)

Nicolas Sommer (EPFL), 2011, Engineer Meteo Suisse - Switzerland, 'Atmospheric turbulence in steep terrain during the morning radiation transition': Awarded the Luce Grivat prize 2011 for the best MS Thesis in Environmental Engineering. (Joint Advisor: Daniel Nadeau)

Guillaume Jean Abel Andre Thouvenin (EPFL – Ecole Polytechnique Paris), 2012, Engineer – Switzerland, 'Atmospheric flows over large wind farms' (Joint advisor: Marc Calaf)

Pierre-Adil Abdelmoula (EPFL), 2012, Engineer – Switzerland, 'Dynamics of trees on the hydrologic cycle of African Savanna' (Joint advisors: Natalie Ceperley, Theo Mande)

Christine Weidman (EPFL), 2012, Engineer – Switzerland, 'Precipitation spatial variability in African Savanna' (Joint advisors: Natalie Ceperley, Theo Mande)

Maoya Bassiouni (EPFL), 2012, Engineer – USGS, Hawaii, 'Understanding the controls of land-surface properties on evapotranspiration during the growing season of a Sudanian Savanna' (Joint advisors: Natalie Ceperley, Theo Mande)

Alain Fuglister (EPFL), 2013, Engineer, 'Erosion modeling in a semi-arid water catchment in Burkina Faso' (Joint Advisors: Marc Bierkens, Rens van Beek)

Varum Sharma (EPFL), 2013, now PhD student, 'Large Eddy Simulation of Wind Farms and the Atmospheric Boundary Layer' (Joint advisors: Marc Calaf, Michael Lehning)

Pascal Egli, (ETHZ/UBC), 2014, 'Flow over city environments: the effect of urban forest canopy', now PhD student University of Lausanne. (Joint advisor: Marco Giometto, Andreas Christen)

Manuel Schmid, (EPFL/UBC), 2015, 'Formulation of new immersed boundary method for fluid-structure interactions in LES' (Joint advisors: Jan Hesthaven, Marco Giometto)

Valentine Arrieta, (EPFL/UBC), 2016, 'Recession hydrograph analysis and watershed geomorphology' (Joint advisors: Steven Weijs, Andrea Rinaldo)

Postdoctoral Associates (current position and research topics; 24 completed)

Marcus Folegatti (UCD), 1992, Professor, University Sao Paolo, Brazil; 'Soil moisture dynamics'

Chia-Ren Chu (UCD), 1992-1993, Professor, Civil Eng., National Central University, Taiwan; 'Turbulence in the lower atmosphere'

Fabrizio Ungaro (UCD), 1995-1996, Consiglio Nazionale delle Ricerche, Florence, Italy 'Optimal determination of soil hydraulic parameters'

Yu-Heng Tseng (JHU), 2003 – 2004, Scientist, National Center for Atmospheric Research, Boulder, CO; 'Large Eddy Simulation for urban flows' Co-advisor C. Meneveau

Wusi Yue (JHU), 2003 – 2007, Senior Engineer, GSE Systems Inc. Baltimore 'Large Eddy Simulation for canopy flows', Co-advisor C. Meneveau (JHU)

Ilja van Meerveld (EPFL), 2004 – 2006, Lecturer, University of Zurich, Switzerland
'Erosion of soils: experiments and models'

Ben Rogers (EPFL), 2005, Senior Lecturer, University of Manchester, UK 'Large Eddy Simulation'

Elie Bou-Zeid (EPFL), 2005 - 2008, Professor, Princeton University, Civil and Environmental Engineering, 'Field studies of subgrid-scale physics', (Latsis Award, 2009.)

Ilya Serikov (EPFL), 2005 –2008, Max Plank Hamburg, 'Design of an atmospheric boundary layer lidar for temperature and humidity', Co-advisor Valentin Simeonov

Pablo Ristori (EPFL), 2007 - 2008, Assistant Professor, Argentina, 'Design, implementation and testing of ABL lidar', Co-advisor Valentin Simeonov

Ivan Lunati (EPFL), 2008 – 2009, Assistant Professor - FNS, Univ. Lausanne, 'Geological Engineering'

Hendrick Huwald (EPFL), 2005 – 2009, Research Engineer, EPFL, 'Snow/Ice–Atmosphere Interaction'

Silvia Simoni (EPFL), 2008 – 2010, Consulting Engineer, Start-up Firm on Natural Hazards (Mountain-eering), Italy 'Watershed modeling and data assimilation'

Vincent Luyet (EPFL), 2007 – 2009, Senior Engineer, Environmental Engineering Swiss Firm, Valais, CH, 'Design of the Swiss Experiment – education and outreach to middle and high schools'

Simone Padoan (EPFL), 2008 - 2010, Assistant Professor, Bocconi University of Milan, 'Extreme value statistics for hydrology'

Chad Higgins (EPFL), 2007 - 2011, Associate Professor, Oregon State University, 'Land-atmosphere exchange physics'

Megan Daniels (EPFL), 2010 - 2012, Research Scientist, Livermore National Laboratory, 'Mesoscale transport processes'

Marcus Hultmark (EPFL), 2011 - 2012, Associate Professor, Mechanical Engineering, Princeton University, 'Atmospheric boundary Layer turbulence measurement'

Marc Calaf Bracons (EPFL), 2011 - 2013, Associate Professor, Mechanical Engineering, University of Utah, 'Atmospheric boundary layer turbulence and LES wall models'

Steven Weijs (EPFL), 2011 - 2014, Assistant Professor, Civil Engineering, University of British Columbia, 'Information theory for hydrologic sciences'.

Natalie Ceperley (UBC), 2015 – 2016, Research Associate, University of Bern, 'Ecohydrology of West African Savanna'

Theo Mande (UBC), 2015 – 2016, Water Resources Engineer, Burkina Faso, 'Ecohydrology of West African Savanna'

Scott Salesky (UBC), 2014 – 2017, Assistant Professor, University of Oklahoma, 'LES and transport of particles in the lower atmosphere'

Marco Giometto (UBC), 2016 – 2017, Assistant Professor, Columbia University, 'Large Eddy Simulation of the Atmospheric Boundary Layer'

Mostafa Momen (Monash & Columbia), 2019, Assistant Professor, University of Houston, 'Turbulence in Hurricanes'

Chaoxun Hang (Monash), 2017 – 2020 (November), Assistant Professor, Shanghai Jiao Tong University, 'Drainage Flows in Complex Terrain, formulation of wall models'

Formal Advisor to EPFL - PhD students

Christine Groot Zwaaftink, SLF - Davos, 2013, Primary Advisor: M. Lehning, Reducing inaccuracies of drifting snow modelling in Alpine terrain

Benjamin Walter, SLF - Davos, 2012, Primary Advisor: M. Lehning, Sheltering effect of vegetation against soil erosion and snow transport

Fereshteh Bagherimiyab, EPFL, 2012, Primary Advisor: U. Lemmin, Turbulence and coherent structures in gravel rivers

Rebeca Mott, SLF – Davos, 2011, Primary Advisor: M. Lehning, Understanding small scale variability of the mountain snow cover

Balazs Szintai, MeteoSwiss - Zurich, 2010, Primary Advisor: M. Rotach, Improving the Turbulence Coupling between High Resolution Numerical Weather Prediction Models and Lagrangian Particle Dispersion Models

Marcel Batlome, 2010, Primary Advisor: V. Simeonov, Development of the Jungfraujoch UV DIAL Lidar to Observe the Vertical Ozone Distribution in the Context of Stratosphere Troposphere Exchange and Long-Range Transport

Todor Dinoev, 2009, Primary Advisor: V. Simeonov, Automated Raman Lidar for Day and Night Operational Observation of Tropospheric Water Vapor

Francoise Faure, SLF, 2008. Primary Advisor: M. Lehning, Microscale airflow simulations over complex Alpine terrain

Pablo Ristori, 2007, Primary Advisor: V. Simeonov, Development of a high spatial and temporal resolution Raman lidar for turbulent observations

Hosted Sabbatical and Long Term Visitors

Han Stricker, Wageningan University, 1994 – 1995; Gerard Kiely, University College Cork, 1995 – 1996; Fernando Porte-Agel, University of Minnesota, 2004 – 2005; John Selker, Oregon State University, 2005 – 2006; Shamuel Assouline, Volcani Center, 2005 – 2006; Francois Morel, Princeton University, 2005 – 2006; Anne Kraepiel, Princeton University, 2005 – 2006; Robert Anex, Iowa State University, 2005 – 2006; Chris Duffy, Penn State University, 2006 – 2007; Scott Tyler, University of Nevada, Reno, 2006 – 2007, 2009; Grace Brush, Johns Hopkins University, 2007 – 2008; Von Walden, University of Idaho, 2007 – 2008; Amilcare Porporato, Duke University, 2008 – 2009; Wilfried Brutsaert, Cornell University, 2008; Ronald Calhoun, Arizona State University, 2008 – 2009; Keith Beven, University of Lancaster, 2008; Eric Pardyjak, University of Utah, 2009 – 2010; Anne Nolin, Oregon State University, 2009 – 2010; Steve Drake, Oregon State University, 2009 – 2010; Nick van de Giesen, Delft University, 2010; Wilfried Brutsaert, Cornell University, 2010; Greg Characklis, University of North Carolina 2010 – 2011; Paolo D'Odorico, University of Virginia 2011; Jan Hopmans, UC Davis 2011; Chris Williams, Clark University 2011; Andreas Christen, University of British Columbia 2012 – 2013; Charles Meneveau, Johns Hopkins University, 2013; Gabriel Katul, Duke University, 2013; Susan Gaskin, McGill University, 2013 – 2014; A. Schleiss, EPFL, 2014; Elie Bou-Zeid, Princeton University, 2015; Robert Stoll, University of Utah, 2016 – 2017.

Publications

Journal Articles:

(h index = 53 Web of Science; h = 70 Google Scholar)

215. Momen M., M.B. Parlange, and M. Giometto, 2021, Scrambling and reorientation of classical atmospheric boundary layer turbulence in hurricane winds, *Geophysical Research Letters*, *in press.*

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208. Margairaz, F., M.G. Giometto, M.B. Parlange, and M. Calaf, 2018, Comparison of dealiasing schemes in large-eddy simulation for the atmospheric boundary-layer flow, Geoscientific Model Development 11(10): 4069-4084.

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206. Li Q., E. Bou-Zeid, N. Vercauteren, and M. Parlange, 2018, Signatures of Air-Wave Interactions over a Lake, Boundary Layer Meteorology, 167(3):445-468.

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process driving mass transport and energy exchange in the soil-plant-atmosphere-climate system, Reviews of Geophysics, Vol. 50, RG3002, 25 PP., 2012, doi:10.1029/2011RG000366.

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Book Chapters:

14. Pardyjak, E., C. Higgins, and M.B. Parlange, 2012, Atmospheric Flux Measurements, in Handbook of Environmental Fluid Mechanics, *Volume Two: Systems, Pollution Modeling, and Measurements*, H.J. Fernando, Editor, CRC press,

13. Ceperley, N., A. Repetti, and M. Parlange, 2012, Application of soil moisture model to Marula (Sclerocarya birrea): Millet (Pennisetum glaucum) agroforestry system in Burkina Faso, Springer-Verlag, Technologies and Innovations for Development: Scientific Cooperation for a Sustainable Future, (J.-C Bolay, M.M. Schmid, G. Tejada, and E. Hazboun, Eds), 211- 229, 333 pp.

12. Lehning, M., N. Dawes, M. Bavay, M. Parlange, S. Nath and F. Zhao, 2009, Instrumenting the Earth: Next-generation sensor networks and environmental science, Microsoft Research, in: The Fourth Paradigm: Data-intensive scientific discovery, in tribute to Jim Gray, (T. Hey, S. Tansley and K. Tolle, Editors), 45-54, 252 pp.

11. Higgins, C., C. Meneveau, and M.B. Parlange, 2004, Energy dissipation in LES: dependence on flow structure and effects of eigenvector alignments, Cambridge University Press, in: Atmospheric Turbulence and Mesoscale Meteorology, *Tribute to Doug Lilly* (E. Federovich, R. Rotunno, B. Stevens, Editors), 51-70, 240pp.

10. Eichinger, W.E., M.B. Parlange, and G.G. Katul, 2001, Lidar measurements of the dimensionless humidity gradient in an unstably stratified atmosphere, American Geophysical Union, Models and observations of land-atmosphere interaction. (V. Lakshmi, J. Albertson, and J. Schaake, Eds), 7-13.

9. Ungaro, F., A.T. Cahill, M.B. Parlange, D.R. Nielsen, and M. Mata, 1999, Determination of field-scale hydraulic parameters using a nonlinear filter with quantitative spatial analysis, in: Characterization and measurement of the hydraulic properties of unsaturated porous media (2), (M. Th. Van Genuchten, F.J. Leij, and L. Wu, Editors),USDA, Riverside CA, 1367-1375.

8. Meneveau, C., J. O'Neil, F. Porte-Agel, S. Cerutti, and M.B. Parlange, 1999, Physics and Modeling of small scale turbulence for large eddy simulation, in: Trends in Mathematics, Birkhauser Verlag Basel/ Switzerland, 221-231.

7. Meneveau, C., F. Porte-Agel, and M.B. Parlange, 1999, Accounting for scale-dependence in the dynamic smagorinski model, in: Recent advances in DNS and LES, (D. Knight and L. Sakell, Editors), Kluwer Academic Publishers' Dordrecht/Boston, 317-328.

6. Parlange, M.B., J.D. Albertson, W.E. Eichinger, and A.T. Cahill, 1999, Evaporation: Use of fast response turbulence sensors, raman lidar and passive microwave remote sensing, in: Vadose Zone Hydrology: Cutting across disciplines (M.B. Parlange and J.W. Hopmans, Editors), Oxford University Press, 260-278.

5. Albertson, J., G. Kiely and M.B. Parlange, 1996, Surface fluxes of momentum, heat and water vapor, in: Radiation and Water in the Climate System: Remote Measurements, (E. Raschke, Editor), NATO ASI Series 1: Global Environmental Change, Springer-Verlag pp. 59-82.

4. Nielsen, D.R., O. Wendroth, and M.B. Parlange, 1995, Opportunities for examining on-farm variability. In: Site-Specific Management for Agricultural Systems, ASA-CSSA-SSSA, Madison, WI, Chpt. 9, 95-132.

3. Nielsen, D.R., O. Wendroth and M.B. Parlange, 1994, Developing site-specific technologies for sustaining agriculture and our environment. In: Management of Land and Water Resources for Sustainable Environment (G. Narayanasamy, Editor), Agric. and Envir., Indian Soc. Soil Sci., New Delhi, 42-79.

2. Katul, G.G., J.D. Albertson, C.R. Chu and M.B. Parlange. 1994. Intermittency in Atmospheric Turbulence Using an Orthonormal Wavelet Representation. In: Wavelets in Geophysics (E. Foufoula-Georgiou and P. Kumar, Editors), Academic Press, pp. 81-105.

1. Romkens, M. J. M., R.L. Baumhardt, J.-Y Parlange, F. D. Whisler, M.B. Parlange, and S.N. Prasad. 1986. Effect of rainfall characteristics on seal hydraulic conductance, In: Assessment of Soil Surface Sealing and Crusting (F. Callebaut, D. Gabriels, and M. De Boodt, Editors), Ghent University Press, Belgium, 228-235.

Comments and Replies:

1. Stagnitti, F., M. B. Parlange, T. S. Steenhuis, and J.-Y Parlange, 1987, Reply to comment on "Drainage from a uniform soil layer on a hillslope" by Hurley and Pantelis, Water Resources Research, 23:1704.

2. Cahill, A.T. and M.B. Parlange, 2000, Reply to comment on "On water vapor transport in field soils" by Or and Wraith, Water Resources Research, 36(10):3107-3110.

3. Barry D.A., J.-Y Parlange, W.L. Hogarth, R.S. Govindaraju, M.B. Parlange, D. Lockington, and L. Li, 2000, Comment on "Modeling transient stream/aquifer interaction with the non-linear Boussinesq equation and its analytical solution" by Serrano S.E., S.R.Workman, 1998, Journal of Hydrology, 235: (3-4) 289-292. Rejoinder to reply, p. 297.

4. Parlange, J.-Y, D. Lockington, G. Sander, W.L. Hogarth, D.A. Barry, L. Li, M.B. Parlange and R.G. Govindaraju, 2001, Comments on "Exact solution for horizontal redistribution by general similarity", Soil Science Society of America Journal, 65(3): 957-958.

5. Parlange J.-Y, D.A. Barry, W.L. Hogarth, R.S. Govindaraju, M.B. Parlange, and D. Lockington, 2004, Reply to the "Comments on 'On an exact analytical solution of the Boussinesq equation'", TiPM52, 389-394, 2003, Transport in Porous Media, 56(1):113-116.

Funded Research Projects:

ARC-linkage grant (with Woodside and Chevron), Title: Turbulence from tropical cyclones and near and offshore structures, 2020 – 2024, PI Mark Thompson, CI, David Burton, Marco Giometto (Columbia)

NSERC, discovery grant, Title: Land-atmosphere interaction over complex terrain: Hydrology and large-eddy simulation, 2015 – 2020.

CFI, Instrumentation grant, Title: Integrative laboratory for atmospheric research on greenhouse gas exchange at the landscape scale, PI Andrea Christian, 2015.

Swiss NSF, Title: Hydrologic and Large-Eddy Simulation studies with *in-situ* observations of land-atmosphere exchange and runoff generation in high alpine watersheds, 2011 – 2014.

US NSF-Physical Meteorology**,** Title: Large-Eddy-Simulation studies and in-situ observations of land atmosphere exchanges in large wind farms, 2011 – 2014, Co-I, PI: Charles Meneveau (JHU).

Velux Foundation, Title: Ecohydrology of water limited Savanna in Burkina-Faso, 2008 – 2012, Co-I with Alexandre Repetti (EPFL).

NCCR/Mobile Information Communication Systems (MICS), Title: Wireless technology for watershed hydrology, M. Vetterli, M.B. Parlange, G. Berrenetxea, 2010 – 2012.

NCCR/Mobile Information Communication Systems (MICS), Title: Development of field methods to obtain river discharge and sediment transport, E. Charbon, P. Fua, S. Susstrand, M. Vetterli, M.B. Parlange, G. Berrenetxea, 2010 – 2012.

Swiss NSF, Title: Coupled heat and water transport in soils, 2009 – 2012, Co-I with Ivan Lunati (UNIL)

Swiss NSF, Title: Large Eddy Simulation of atmospheric flows over complex alpine terrain, Funding Extension, 2009 – 2011.

Swiss NSF, Title: Scale effects and heterogeneity in land-atmosphere interactions: Simulations studies, field validations and parameterizations, 2008 – 2011.

FP-7, EU Science Foundation, Information and Communication Technologies,
Title: HYDROSYS: Advanced spatial analysis tools for on-site environmental monitoring and management, Co-I with colleagues from EPFL, TU Graz, WSL, U. Cambridge, 2008 – 2012.

Microsoft E-science, Title: Joint EPFL/Microsoft project for the Swiss Experiment, Co-I with Karl Aberer and Martin Vetterli from EPFL and Fabrizio Gagliardi and colleagues from Microsoft Res., 2007 – 2009.

Swiss Federal Institute of Technology-Center for Competence in Environment and Sustainability (CCES), Title: Spatial extremes and environmental sustainability: Statistical methods and applications in geophysics and the environment, Co-I with colleagues from EPFL, ETHZ and WSL, 2007 – 2010.

Swiss Federal Institute of Technology-Center for Competence in Environment and Sustainability (CCES), Title: 'The Swiss Experiment', Co-I with colleagues from WSL, EPFL, ETHZ and EAWAG, 2006 – 2007; 2009 – 2011.

US NSF (Hydrology and Atmospheric Sciences), Title: Scale Effects And Heterogeneity In Land-Atmosphere Interactions: Large Eddy Simulation Studies And Parameterizations, C. Meneveau, M.B. Parlange, 2006 – 2009.

Swiss NSF, Title: Large Eddy Simulation of atmospheric flows over complex alpine terrain, M.B. Parlange, 2005 – 2008.

Swiss NSF, Title: Alpine field experiments for SGS parameterizations in LES, M.B. Parlange, 2005 – 2007.

NCCR/Mobile Information Communication Systems (MICS), Title: Wireless technology for environmental applications, M. Vetterli, Karl Aberer, M.B. Parlange, Guillermo Berrenetxea, 2005 – 2009. Research team: Thierry Varidel, Mounir Krichane, Michel Bystranowski, Sébastien Dufey, Julien Mizzo, Davis Daidie, Thierry Betholet, Muhammad Shuaib Siddiqui, Olivier Couach.

USDA, Title: Flux of Nitrogen in Agricultural Systems, PI Tammo Steenhuis, '04-'06.

NSF Water Cycle Program, Title: Evaporation and the Atmospheric Boundary Layer Over Hilly Terrain: Instrumentation, Experimentation and Simulation, M.B. Parlange, M. Thomas, C. Meneveau, 2003 – 2006.

NSF Biocomplexity Program, Title: Instrumentation to measure the emission and transport of biological aerosols into the atmosphere: Linking across scales from Microns to Kilometers. M.B. Parlange, G. Brush, S. Chen, J. Katz, R. Ghanem, C. Meneveau, 2001- 2006.

NSF Collaborations in Mathematical Geosciences Program, Title: Renormalized Numerical Simulation in the Environment. S.Y. Chen, C. Meneveau, D. Naiman, J.-S. Pang, M.B. Parlange, 2002 – 2005.

NSF Physical Meteorology Program, Title: SGS2000: Analysis of Field Experimental Data to Elucidate Fundamental Physics in Parameterizations for Large – Eddy Simulations. C. Meneveau, M.B. Parlange, 2002 - 2004.

NSF Environmental Engineering Program, Title: Measurements of Particle Emissions from the World Trade Center Site in NYC. M.B. Parlange, J. Katz, 2002 – 2003.

EPA Hazardous Center Program, Title: Center for Hazardous Substances in Urban Environments. PI- Bouwer, E. – JHU – a total of 6 sub- research projects (Research Project #2 Lidar measurements and large eddy simulations of plume dispersion in an urban boundary layer, M.B. Parlange, C. Meneveau), 2001-2006.

NSF Geosciences Program, Title: Infrastructure for the Advancement of Hydrologic Science, Roger C. Bales, J. S. Selker, U. Lall, M. B. Parlange, M. W. Williams, C. J. Duffy, 2001 – 2004.

NASA Hydrology Program, Title: Sensitivity of coupled land-atmospheric boundary layer dynamics to surface heterogeneity using a new generation Large Eddy Simulation model in conjunction with Pathfinder, EOS and other imagery. M.B. Parlange, C. Meneveau, JHU; W.Brutsaert, Cornell; M.Jasinski, NASA; T.Schmugge, USDA), 2000 –2003.

EPA Supersite Program, Title: Baltimore Supersite: Highly time and size resolved concentrations of urban PM2.5 and its constituents for resolution of sources and immune responses. PI J. Ondov – U. Maryland (Lidar Measurements of Local and Regional Winds, M.B. Parlange), 2000 – 2004.

NSF Hydrology Program, Title: Large Eddy simulation studies of land-atmosphere interaction over complex terrain, using new generation dynamic models. M.B. Parlange, C. Meneveau, National Science Foundation, 2000 – 2003.

UCAR/NCAR – Environmental and Societal Impacts Group, Title: Collaborative Research on Statistical Downscaling and Extremes in Hydrology and Climate. R. Katz, L. Mearns, M.B. Parlange, 1996-2002.

USDA/NRI, Title: Coupled heat and water transport in soils: Field and theoretical studies. M.B. Parlange, 1998-2001.

NSF Physical Meteorology Program, Title: Fundamental Investigation of Modeling for LES of Atmospheric Boundary Layer Flow near the Land-Atmosphere Interface. M.B. Parlange, C. Meneveau, 1998 – 2001.

JHU Internal Program, Development of Scanning Aerosol Lidar (JHU Engineering School - Applied Physics Program R&D collaboration), M.B. Parlange, 1997-1999.

EPA, Integrated Assessment of the Public Health Effects of Climate Change for the U.S. (EPA), PIs J. Patz, J.H. Ellis, Co-I, M.B. Parlange, 1996-1999.

UC Davis Internal Program, Construction, Testing and Application of a Tunable Diode Laser System for Measuring fluxes of Trace Gases into the Atmosphere (UC Davis Instrumentation Program), M.B. Parlange, W. E. Eichinger, D. Rolston, R. Shaw, R. Flocchini, 1996 – 1998.

NIEHS Superfund Program, Transport and Biodegradation of VOCs in the Vadose Zone, PI: D.E. Rolston, Co-I's G. Fogg, A. Jackman, M.B. Parlange, K. Scow, April 1, 1994 – March 30, 1998.

NSF Hydrology Program, Orthonormal Wavelet Analysis of Space-Scale Relationships in the Atmospheric boundary Layer over Complex Terrain, M.B. Parlange, 1993 – 1996.

UC – Los Alamos Program, Precipitation Modeling in the Western United State (INCOR-Los Alamos), M.B. Parlange, University of California Institutional Collaborative Research Program January 1, 1996 – December 31, 1996.

UC – Los Alamos Program, Land Surface Parameterizations for Climate and Hydrology Models (INCOR- Los Alamos), M.B. Parlange, W. Eichinger (Los Alamos); University of California Institutional Collaborative Research Program, 1994 – 1996.

Kearney Foundation of Soil Science, International Conference in Vadose Zone Hydrology: Cutting across disciplines, PIs: M.B. Parlange, J.W. Hopmans, 1994- 1995.

California – Water Resources Center, Coupled land-atmosphere heat and water vapor transport, M.B. Parlange, 1993-1995.

Desert Research Institute, Evaporation at Owens Lake Bed, PIs, M.B. Parlange, S. Tyler (UN-Reno), 1993- 1995.

University of California Institutional Collaborative Research Program (INCOR), Atmospheric Turbulence Measurement with LIDAR, M.B. Parlange, Co-I, W. Eichinger, (Los Alamos); 1991 – 1994.

U.S. Geological Survey - Water Resources Research Grants Program, Advection-Aridity Approach for Routine Evaporation Estimation and Subsurface Transport Simulation, P.I. M. B. Parlange, Co-I's D.R. Nielsen, J.W. Hopmans, 1992 – 1995.

Kearney Foundation of Soil Science, Volatilization Physics with LIDAR Systems, M.B. Parlange, 1992-1994.

USDA, Feasibility of Agroforestry Systems to Reduce Problem Agricultural Drain Waters, P.I. K. Tanji, Co-I's S. Gratten, M.B. Parlange, 1991-1993.

California State Salinity Drainage Task Force, Evapotranspiration Parameterization for Drainage Prediction and Reduction in Irrigation Water Management, PI: M.B. Parlange; 1990 – 1993.

California Agricultural Experiment Station - Temporary Hatch Funds, Turbulent Diffusion in Lower Atmosphere at Vegetation Surfaces, PI: R.H. Shaw, M.B. Parlange, 1991-1992.

California Agricultural Experiment Station – Hatch Funds, Water Management and Conservation in Western Irrigated Agriculture, M.B. Parlange, 1990 – 1996.

California – Water Resources Center, Land Surface Fluxes for Agricultural Water Resources, M.B. Parlange, 1991 – 1993.

Kearney Foundation, Development of evaporation models, M.B. Parlange, 1991- 1992.

Kearney Foundation, Infiltration in crusted soils, M.B. Parlange, 1990 – 1991.

Invited seminars and key note talks:

(not including invited and regular conference presentations, > 300)

2020 American Meteorological Society, Boston, MA, Centennial Meeting

School of Earth, Atmosphere and Environment, Monash University

2019 University of New South Wales, Global Water Institute and Civil Engineering

Griffith University, Australia Rivers Institute, Brisbane

Westlake International Symposium in Engineering, Plenary speaker, Hangzhou, China

Chinano, Conference and Expo, on Australia – China research, Suzhou, China

2018 Monash University, Civil Engineering Seminar Series

University of Warrick, Engineering and Applied Mathematics

2017 Monash University, Mechanical Engineering Fluids Seminar

2016 Cornell University, Norman R. Scott -- Biological and Environmental Engineering Lecture

University of Utah, Global Sustainability Lecture

Cornell University, Distinguished Lecture @ School of Civil and Environmental Engineering

Canadian Society of Mechanical Engineers (Key note: annual meeting, Okanagan)

Columbia University, Earth and Environmental Engineering

UBC Centennial: Water Ways: Understanding the Past, Navigating the Future

University of New South Wales, Civil Engineering

Monash University, Civil Engineering

University of Queensland, Civil Engineering

2015 Natural Risks and Hazards Conference, National Taiwan University

Graduate student symposium in Environmental and Hydrotechnical Engineering, UBC

Water Resources, Alberta Innovates, University of Calgary

La recherché hydrologique au Quebec, Opening talk (ETS)

Princeton University, Environmental Engineering

2014 Conference for a Clean Ganga, Delhi, India

Oregon State University, Ecohydrology conference dedicated to Richard Cuenca

National Center for Atmospheric Research, Boulder, Keynote at conference for Richard Katz

2013 Green College, University of British Columbia

Mathematics of Planet Earth, Australian Mathematical Sciences Institute, Melbourne

EMERGE Alpine Hydrology workshop at the University of Bozen-Bolzano

Ecohydrology Conference, Ben-Gurion University of the Negev, Israel

University of British Columbia, Civil Engineering

Princeton-Fung Conference on Future Cities, Shanghai, China

2012 Mobile Information Communication Systems- NCCR, 2012, Lausanne, Switzerland

University of Stockholm, Climate Center, Sweden

University of Oklahoma, Water Center Symposium

University of Oklahoma, NOAA, National Weather Center, Norman, OK

Gordon Conference- 2012, Flow in porous media, Les Diablerets, Switzerland

International Computational Water Resources Conference, University of Illinois -UC

Oregon State University, Water Resources Program

USGS (@Portland State University), Portland, Oregon

Hydrology Symposium in honor of W. Brutsaert / J.-Y Parlange, Cornell University

University of Grenoble, Institute of Glaciology and Snow, France

Ho Chi Minh City University of Technology, Vietnam

TU Vienna, Civil Engineering, Austria

2011 University of Bern, Climate Institute

Imperial College London (Turbulence series), England

Ecole des Ponts, ParisTech, France

Ecole Mohammadia d'Ingénieurs – Rabat (RESCIF meeting), Morocco

2010 Ecole Normale Supérieure de Lyon

Les Bisses Conference – Sion, Valais, CH

Cornell University, College of Agriculture and Life Sciences

Advances in Water Resources and Technology – Sion Valais, CH

Consortium of Universities for the Advancement of Hydrology, Boulder, CO

Meteo Suisse, Zurich

Ecohydrology Latsis Symposium, EPFL

2009 Swiss – South African Meeting in Hydrology and Biodiversity

University of Rome, La Sapienza (CNR-Princeton Hydrology Conference)

Scuola Normale Superiore di Pisa, European Large Eddy Simulation Conference (QLES2009)

University of Genoa, Faculty of Engineering

2008 ETH – Industry Dialog 2008, Swiss Re, Zurich

NCCR MICs Conference, Zurich

International Polar Foundation, Brussels

Beijing University, School of Engineering, China

Fudan University, Dept. of Environmental Engineering, China

Key Note Lecturer, St. Anthony Falls Lab. 75 Anniversary, Univ. Minnesota

Invited Lecture, ASCE – Mechanics Meeting, Minneapolis-St. Paul, Minn

Nokia Conference on wireless technologies, Lausanne

Summer School in Environmental Dynamics, Institute of Venice

2007 University of Zurich

University of Neuchatel

Key Note lecturer: Data Sharing and Interoperability, IPSN' 07 MIT, Cambridge Mass

University of Washington

NUS, Singapore

Energy Film Festival, Keynote talk, Lausanne/ EPFL

Latsis Symposium, ETHZurich

University of California, Berkeley, Hydrology meeting.

Wageningen University, The Netherlands

2006 European Research Community on Flow, Turbulence and Combustion (Swiss Meeting)

Hydrology and Fluid Mechanics Institutes, University of Grenoble, France

Forschungszentrum Julich, Agrosphere Institute, Germany

NCCR MICs Industry Conference, Lausanne

Dalton Lecture, Vienne, European Geosciences Union

Lecon Inaugurale, EPFL

2005 Meteo Suisse, Zurich

Paul Scherrer Institute, Switzerland

NCCR - MICs, Swiss Science Foundation

Swiss Conference on Environmental Sustainability – Lausanne (Olympic Museum)

Sino-Swiss Conference on Environmental Sustainability, Beijing

Chinese Academy of Sciences, Air Pollution Research Institute, Beijing

2004 American Association for the Advancement of Science, Wavelets in Geosciences, Seattle

EPA Center, Hazardous substances in Urban Environments, Baltimore

Dept. Civil and Environmental Engineering, University of Padua, Italy

Avalanche research center, WSL, Davos, Switzerland

Institute for Atmosphere and Climate, ETH, Zurich, Switzerland

2003 Institute of Fluid Dynamics, Mechanical and Process Engineering, ETH, Zurich

Hydrology & Water Resources Program, Wageningen University, The Netherlands

Dutch Royal Academy of Sciences, The Netherlands

Ecohydrology & Environmental Engineering Programs, Cornell University

European Geophysical Society (Prediction in Ungauged Basins), Nice, France

Aquatic Ecology Center, EAWAG; Kastanienbaum, Switzerland

Institute for Hydromechanics, Civil and Environmental Engineering, ETH, Zurich

Environmental Engineering, Perth, University of Western Australia

SAMSI, Inst. for Applied Math, Chapel Hill, University of North Carolina

2002 Institute for Hydromechanics, University of Karlsruhe, Germany

Potsdam Institute for Climate Impacts Research (PIK), Germany

NCAR Geophysical Turbulence Program, Subfilter scale processes, Boulder, CO

Applied Physics Lab., Johns Hopkins University

European Geophysical Society (Atmospheric Turbulence), Nice, France

SUNY- Stony Brook, College of Ocean and Atmospheric Sciences, NY

Meteo France, CNRM – Toulouse, France

Air Pollution Group, Swiss Federal Inst. Tech., Lausanne

2001 Iowa Institute of Hydraulics, Civil and Mechanical Engineering, University of Iowa

Center for Talented Youth Environment Day, Johns Hopkins University

Chapman Conference (AGU, Hillslope Hydrology, Sun River Oregon)

Environmental Engineering, Harvard University

Geophysical Fluid Dynamics Inst., Florida State University

2000 First Kirkham Conference, Iowa State University

Civil and Environmental Engineering, MIT

Atmospheric Technology Div., NCAR, Boulder CO

1999 Chemistry Department, University of Maryland, College Park

Boundary Layer Meteorology Program, NCAR, CO, Boulder

Conference on multiphase flow, Los Alamos National Laboratory, NM

NCAR-NOAA Conference on measurement and modeling of small scale turbulence, Boulder, CO

Hydrology Program, Uppsela University, Sweden

Hydrology Seminar Series, Oregon State University, Corvallis

Geophysics Program, Colorado School of Mines, Golden

Environmental Science and Engineering, Colorado School of Mines, Golden

Civil and Environmental Engineering, University of Wisconsin, Madison

Environmental and Water Resources Engineering, University of Colorado, Boulder

Hydrometeorology Program, University of Colorado, Boulder

1998 Keynote Opening Seminar, International Union of Soil Science, France, Montpellier

Geophysical Turbulence Program, Large Eddy Simulation Conference, NCAR, CO

Environmental Engineering Seminar Series, Johns Hopkins University

Environmental Science and Engineering Seminar Series, University of Delaware

Civil and Environmental Engineering, Princeton University

EAWAG & ETH Zurich, Switzerland

Earth and Planetary Science, Johns Hopkins University

1997 Earth Science Program, Boston University

Environmental Engineering Science, California Institute of Technology

Hydrology Laboratory, USDA/ARS Beltsville, MD

European Union Conference, Water Resources and Climate Change, U.C. Cork, Ireland

Hydrology Graduate Program, Duke University

1996 Hydrologic and Atmospheric Science Graduate Groups, University of California, Davis

Mechanical Engineering, Johns Hopkins University

Hydrology Seminar Series, Oregon State University, Corvallis

1995 Civil and Environmental Engineering, University of Iowa, Iowa City

Civil and Environmental Engineering, U. of Illinois, Urbana

Geography and Environmental Engineering, Johns Hopkins University

Civil and Environmental Engineering, Cornell University, Ithaca NY

ETH Conference, Soil and Water Quality Symposium, Monte Verte, Switzerland

Environmental Science, University of California, Riverside

Soil Science Society of America, Seattle Washington

1994 Civil Engineering Institute and Disaster Prevention Center, Sapporo, Japan

Civil Engineering, Hokkaido University, Sapporo, Japan

Environmental Science, University of Tsukuba, Japan

Civil Engineering, Chuo University, Tokyo, Japan

Civil Engineering, Tokyo Institute of Technology, Japan

Environmental Sciences Conference, Wageningen University, Netherlands

Atmospheric Science Program, Wageningen University, Netherlands

Climate Division, Livermore National Laboratory, CA

1993 Environmental Science, University of California, Berkeley

Hydrology Program, University of Nevada, Reno & DRI

Hydrology and Water Resources, Wageningen University, Netherlands

Davies Laboratory, CSIRO, Townsville, Australia

Geophysical Research Program, Los Alamos National Laboratory, NM

1992 NATO-ASI Conference on Migration and Fate of Pollutants, Acquafredda di Maratea, Italy

Joint Conference, University of California – MIT - French Grandes Ecoles, Paris, France

1991 Civil and Environmental Engineering, University of California, Berkeley

Atmospheric Science Program, Los Alamos National Laboratory, NM

1990 Geophysical Fluids Program, Florida State University, Tallahassee

Air Resources Board, California (AMS regional meeting, keynote lecture)

Land, Air and Water Resources, University of California, Davis

1989 USGS, Reston, VA

USGS, Denver, CO

Civil Engineering, Utah State University

Land, Air and Water Resources, University of California, Davis

Civil and Environmental Engineering, University of California, Berkeley

Civil Engineering, Princeton University