

# speakers



## Dr. Julian Aherne

Faculty Member  
Environmental and Resource Studies, Trent University,  
1600 West Bank Drive, Peterborough, Ontario  
K9J 7B8, CANADA  
Phone: 705-748-1011 Ext. 5351 email: julian.aherne@ucd.ie

Julian Aherne is a faculty member at Trent University in Peterborough, Ontario, Canada.

He obtained a B.A. from Trinity College, Dublin and a M.Appl. Sc. and Ph.D. from the University College Dublin. His research interests are in the areas of acidification, critical loads, water chemistry, atmospheric chemistry, forest biogeochemical cycling, hydrological and biogeochemical modelling, spatial modelling and mapping. His research experience includes critique of acid rain surface water acidification models; application of hydrological model (FORHYD) to forest ecosystem; application of steady state (PROFILE) and dynamic soil chemistry model (SAFE) to forest ecosystem; determination and mapping of critical loads for sulphur and nitrogen and critical levels of ozone for Ireland; acid-sensitive lake survey; mapping deposition of major ions in precipitation; mapping SO<sub>2</sub> and NO<sub>x</sub> emission in Ireland; mapping ammonia emission and deposition in Ireland.

## Dr. Brent Auvermann

Associate Professor of Biological and Agricultural Engineering  
Texas A&M University System  
6500 Amarillo Blvd., West Amarillo, TX 79106-1796  
Phone: 806-677-5663, email: b-auvermann@tamu.edu

Brent Auvermann has been on the faculty of the Biological and Agricultural Engineering Department at Texas A&M University for nearly 11 years, all of which have been spent at the Texas A&M Research and Extension Center in Amarillo, TX. His is a joint appointment between Extension (65%) and research (35%). He is also an adjunct faculty member of West Texas A&M University in Canyon, TX. Brent's research and technology-transfer programs focus on environmental systems engineering of concentrated livestock operations and their associated industries, with particular emphasis on air quality protection, carcass composting, biomass energy conversion and ecological footprinting of beef and dairy operations. Prior to his current faculty appointment, Brent studied agricultural engineering at Texas A&M and Colorado State University. Away from work, Brent is an avid mountain climber, youth soccer coach, Bible teacher, husband and father of three boys.

## Dr. Kathleen Belanger

Deputy Director,  
Yale Center for Perinatal, Pediatric and Environmental Epidemiology New Haven, CT, U.S.A.  
Phone: 203-764-9375, email: kathleen.belanger@yale.edu

Kathleen Belanger is a research scientist and since 2002 the Deputy Director of the Yale Center for Perinatal, Pediatric and Environmental Epidemiology at the Yale School of Medicine. She obtained a B.A. and M.Sc. in Biology and a PhD in Epidemiology. Her research interest lies in the field of perinatal epidemiology. Amongst many others she has conducted studies exploring asthma in children in relation to fine particle composition, indoor and outdoor NO<sub>2</sub>, indoor allergens, air contaminants, and maternal history of asthma. Since 1996 she has authored and co-authored more than 30 publications.

## Dr. Ralf Both

Dept. Head, Odour Measurement, Odour Assessment  
Landesumweltamt NRW Fachbereich  
32 - GerücheWallneyerstr. 6D 45133 Essen  
Phone: Tel.: +1 49 201 / 7995 1212  
Fax: +1 49 201 / 7995 1574  
email: ralf.both@lua.nrw.de  
web: <http://www.lua.nrw.de/luft/gerueche/gerueche.htm>

Ralph Both studied biology at the University of Gießen, Germany, and obtained his PhD in 1990. Since 1990 he has been working at the North Rhine Westphalia State Environment Agency on odour measurement and odour assessment issues. He is the Department Head, Odour measurement, Odour assessment at the North Rhine Westphalia State Environment Agency. He has conducted several investigations on quality requirements for odour measurements and on exposure-response relationships (field measurements, annoyance/offensiveness). He is responsible for odour regulation, and adaptation to single cases in North Rhine Westphalia and is also as a member of an odour specialist group for Germany. He works with the VDI (The Association of German Engineers) expert groups for olfactometry and field measurements. As a member of the VDI advisory board "Environmental quality" he is responsible for the scientific steering of odour working groups of the VDI. He is a member of the European working group on olfactometry (European Norm 13725) and an assigned member of a new European working group on odour measurements in the field. Since 1990 he has published approximately 40 publications and regularly attends and is a member of scientific committees for international conferences on odour issues.

## Dr. J Neil Cape

Professor and Head of Site  
Centre for Ecology & Hydrology, Edinburgh Research Station,  
Bush Estate, Penicuik, Midlothian EH26 0QB  
Phone: +44 (0) 131 445 8533 (direct), email: jnc@ceh.ac.uk

Professor Cape is an environmental chemist, and deputy leader of the Atmospheric Sciences Section at CEH Edinburgh, with over 25 years experience in research on the atmospheric processes controlling air pollutants (in rain and cloud, as gases and particles), and their effects on vegetation. He has a particular interest in the processes that occur on leaf surfaces, and the way in which these modify deposition of pollutants from the atmosphere. His research includes both laboratory and field studies, and has usually been as part of a multi-disciplinary team, under contract to a UK government department or the European Union.

He works closely with the School of Chemistry at Edinburgh University, where he is an Honorary Professor. He is a Fellow of the Royal Society of Chemistry and Member of the British Ecological Society and the Society of Environmental Toxicology and Chemistry, and has published over 120 peer-reviewed papers covering research from gas-phase reaction kinetics to plant physiology.

## Dr. Mary Anne Carroll

Professor, Atmospheric, Oceanic and Space Sciences; Chemistry;  
Geological Sciences; Director,  
PROPHET Executive Director, BART  
University of Michigan, Department of Atmospheric,  
Oceanic, and Space Sciences,  
2455 Hayward Street Ann Arbor, MI 48109-2143  
Phone: (734) 763-4066, email: mcarroll@umich.edu

Mary Anne Carroll is the director of the Program for Research on Oxidants: PHotochemistry, Emissions and Transport (PROPHET), executive director of the Biosphere-Atmosphere Research and Training Program (BART), and a professor of Atmospheric, Oceanic and Space Sciences, Chemistry, and Geological Sciences at the University of Michigan. Her areas of interest include oxidant photochemistry, distribution, and trends; atmosphere-forest exchange of reactive nitrogen (a factor in carbon storage); and the impacts of air pollutants on ecosystem function and emissions. Dr. Carroll served as editor for the Journal of Geophysical Research-Atmospheres from 1997 to 2000, is a past member of the U. S. National Research Council's Committee on Geophysical and Environmental Data and Committee on Atmospheric Chemistry, and a current member of its Board on Atmospheric Sciences and Climate. She is also a member of the iLEAPS Science Steering Committee (Integrated Land Ecosystem-Atmosphere Processes Study, an IGBP Project). Dr. Carroll received her Sc.D. in atmospheric chemistry from the Massachusetts Institute of Technology

## Dr. Bridget Emmett

Head of Site, Centre for Ecology and Hydrology (CEH) Bangor station,  
Deputy Director of the CEH Biogeochemistry Program  
Orton Building, Deincol Road, Bangor Gwynedd LL57 2UP  
Phone: +1 44 (1248) 370045, email: bae@ceh.ac.uk

Bridget Emmett is the Head of Site at the Centre for Ecology and Hydrology (CEH) Bangor station (<http://www.ceh.ac.uk/sections/bef/bef.html>) and Deputy Director of the CEH Biogeochemistry Program. She also acts a Coordinator for soils research within CEH. She obtained a BSc in Plant Science from the University of Aberdeen in 1985 and a PhD (Soil Ecology) from the University of Exeter in 1990. Her current work is as a biogeochemist and ecosystem scientist. She acts a project manager for a large consortium working on UK Research into Eutrophication and Acidification of Terrestrial Ecosystems (<http://bangor.ceh.ac.uk/terrestrial-umbrella/>) and is responsible for a national soils monitoring programme which is a component of the CEH Countryside Survey ([www.cs2000.org.uk](http://www.cs2000.org.uk)). Current personal research includes impacts of nitrogen deposition on soils processes and vegetation composition including development of linked soil-vegetation models, impact of grazing on soil functions and impacts of climate change in shrublands. She has been involved in various European Union projects over the last 15 years, currently the newly funded NITROEUROPE project (<http://www.neu.ceh.ac.uk/>) looking at the nitrogen cycle and its influence on the European greenhouse gas balance. She is involved in various ongoing collaborative projects linking European and N America research focussed on nitrogen modelling, 15N isotopic studies (natural abundance and enriched) and both rainfall and nitrogen ecosystem manipulation experiments.

## Dr. Chris Evans

Biogeochemical Modeler Centre for Ecology Hydrology,  
Orton Building, Deiniol Road, Bangor, Gwynedd, LL57 2UP  
Phone: 44 01248 370045, e-mail: cev@ceh.ac.

Chris Evans is a catchment bio-geochemist, working for the UK Centre for Ecology and Hydrology (CEH) in Bangor, Wales. He started out doing a PhD on episodic acidification of streams in the Northeast United States based (not very conveniently) at the University of East Anglia in Norwich, UK. Since then he has worked for the CEH studying a wide range of processes relating to the chemical and biological cycling of upland soils and waters. His interest in acidification and recovery continues with work on modelling and analysing long-term trends in acid-sensitive upland ecosystems. He is also involved in several studies of nitrogen and carbon cycling in upland soils, particularly with regard to the controls on nitrate and dissolved organic carbon loss to surface waters. He leads the Critical Loads and Dynamic Modelling contract for Defra, the UK Government's environment department, which feeds into the UNECE Convention on Long Range Transboundary Air Pollution. He also contributes to a range of projects examining the effects of climate change and other environmental drivers on biogeochemical processes, such as the EU EuroImpacts project.

## Dr. Per Gunderson

Professor, Danish Centre for Forest, Landscape and Planning  
Hoersholm Kongevej 11DJ-2970 Hoersholm, Denmark  
Phone: +45 (3528) 1678, e-mail: pgu@kvl.dk

Per Gunderson recently became Professor at the Danish Centre for Forest, Landscape and Planning (Forest & Landscape Denmark), The Royal Veterinary and Agricultural University (KVL). He obtained a PhD (Environmental Sciences and Ecology) in 1989 from the Technical University of Denmark, from where he also got his MSc. His experience includes ecosystem scale experiments, field techniques, use of <sup>15</sup>N tracers, nitrogen cycling, carbon sequestration and water protection. Recent research projects focus on carbon-nitrogen interactions in soils (coordinator of the EU CNTER project), fate and effects of nitrogen deposition in forests, environmental changes from afforestation on agricultural soils, effects of climate change on nutrient dynamics and plant-soil interaction and N cycling in subtropical forest in China. He has been involved in a number of European Union projects (EXMAN, NITREX, CLIMOOR, INCA, AFFOREST, CNTER and NitroEurope) over the last 15 years as well synthesis activities related to nitrogen with groups in USA.

## Dr. Ahmed Idriss

Senior Manager, Science Unit, Alberta Environment,  
Oxbridge Place, 9820 - 106 Street, Edmonton, AB, T5K 2J6  
Phone: 780 427-6866 email: ahmed.idriss@gov.ab.ca

Ahmed Idriss is the Manager for Science Unit, Environmental Assurance, Alberta Environment. He holds a Ph.D. in Environmental Engineering from the University of Guelph, Ontario and is a professional engineer registered in Alberta. Ahmed has more than 18 years of multi-disciplinary experience in the environmental field with specialization in air quality and air pollution control. He has worked with Alberta Environment environmental impact assessments, strategy development, research and public consultation.

Ahmed also sits on the Edmonton Branch of the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA) and has been awarded the Queen's Golden Jubilee Medal by the Governor General for his roles and contribution to the community.

## Barry Jessiman

Section Head, Air Quality Assessment Section  
Health Canada, FUEL AND AIR QUALITY ASSESSMENT SECTION 269  
Laurier Avenue W Ottawa, Ontario Canada ,K1A 0K9  
Phone:(613) 952-0406, email: barry\_jessiman@hc-sc.gc.ca

Barry Jessiman has been Section Head of the Air Quality Assessment Section for the past 12 years, and is responsible for leading risk assessments for ambient air pollutants. The Section is currently involved in major updates for particulate matter and ozone, and is also working on assessments of nitrogen oxide and manganese. Other smog related pollutants as well as some air toxics are also being investigated. Mr. Jessiman also is advisor on indoor air risk assessments and fuel and energy risk and benefit assessments within the Air Health Effects Division, and senior advisor on air health science issues. Previous to his work in air, he was a risk assessment specialist for contaminated sites and developed methods to assess the environmental impact of marine oil spills and methods for their remediation.

## Dr. Sagar Krupa

Professor  
Dept. of Plant Pathology, College of Agriculture, Food and Environmental Sciences, 495 Borlaug Hall 1991 Upper Buford Circle, St. Paul, MN 55108-6030  
Phone: 612-625-7294, email: krupa001@umn.edu

Dr. Sagar Krupa received his Fil-Dr. (hab.) from the University of Uppsala, Sweden in 1972. He is a Professor in the Department of Plant Pathology at the University of Minnesota, St. Paul.

During the last 34 years, Prof. Krupa has conducted interdisciplinary research on atmospheric processes and their impacts on crops and forests. His most recent studies emphasize the characterization of the air quality at a regional scale, modeling and validating air pollution-vegetation effect relationships under real world, ambient conditions. In addition, he has also been addressing issues relevant to "climate change". He has published more than 140 technical journal articles and book chapters and in addition, 10 books, most recently on Elevated Ultraviolet (UV)-B Radiation and Agriculture. His textbook, Air Pollution, People and Plants: An Introduction (1997), for beginning college students, has also been translated into Spanish. He has been conducting air quality studies in Alberta since 1976 and was a Senior Scientist at the Alberta Environmental Services during 1983-1984. He served as the Science Coordinator for the \$5.3 million Alberta Government-Industry Acidic Deposition Research Program (ADRP) and as a technical consultant to the Committee on Protecting the Earth's Atmosphere of the German Parliament and to the UN-Food & Agricultural Organization (FAO). He has been an Associate Editor of the journal Environmental Pollution since 1986 and is the Editor-in-Chief of the Book Series, Developments in Environmental Science (both by Elsevier Science, Amsterdam, The Netherlands). He is a Fellow of the International Air & Waste Management Association and was a distinguished International Visiting Professor of the Academy of Sciences, Mexico.

## Len Kryzanowski

Nutrient Management Specialist,  
Alberta Agriculture, Food & Rural Development, Environmental Practices  
Unit, Technical Services Division,  
Room 306, J.G. O'Donoghue Building,  
7000 - 113 Street, Edmonton, AB, Canada, T6H 5T6  
Phone: (780) 422-1252, e-mail: len.kryzanowski@gov.ab.ca

Len Kryzanowski is the provincial Nutrient Management Specialist for Alberta Agriculture, Food and Rural Development. He completed his B.Sc. in Agriculture, Agronomy (1977), and M.Sc. Soil Science, Soil Fertility (1982) at the University of Alberta. He is currently working on his Ph.D. on modeling landscape dynamics for precision agriculture. His 26 years of research and extension work with the department focused on various aspects of nutrient management, including soil testing, nutrient calibrations, fertilizer recommendations, soil and crop diagnostics for agricultural crops, and development of Decision Support Systems for nutrient management and crop adaptation. Other areas of research include nutrient management for precision agriculture, the use of agronomic simulation models, manure management, and greenhouse gas emissions from agricultural soils. Other interests include gardening, photography and volunteering for the Edmonton Folk Music Festival.

## Dr. Paul Makar

Research Scientist  
Environment Canada, Modelling and Integration Research, 4905 Dufferin  
Street, Downsview, Ontario, Canada , M3H 5T4  
Phone:(416) 739-4692, email: paul.makar@ec.gc.ca

Dr. Paul A. Makar holds a B.Sc. in Geophysics from the University of British Columbia (1986), a Dip. Meteorology degree from Dalhousie University (1987) a M.Sc in Atmospheric Physics from the University of Toronto (1989), and a PhD in Air Pollution Modeling from the Centre for Research in Earth and Space Science, York University(1994). He worked as a Post-Doctoral Fellow at the Air Quality Research Branch at Environment Canada from 1994-1996 and as a Research Scientist with the Air Quality Research Branch at Environment Canada since 1997-present. His current research includes: Development of AURAMS and its successor, GEM-MACH, regional Air-Quality Models. He is a specialist in the theory and numerical implementation of all aspects of gas and heterogeneous chemical systems, and chemistry-boundary layer interactions. In addition to being the co-principal investigator of the recent PrAIRie2005 study in Edmonton, Dr. Makar's most recent work has been on the parameterization of urban heat islands in weather and air-quality models. The AURAMS model developed by Dr. Makar and his collaborators is used by the Canadian Government for environmental policy scenarios, and air-quality forecasting.

## Dr. Karen McDonald

Director, Environmental Health  
Concordia University College of Alberta,  
10537 - 44 Street, Edmonton, AB, T6A 1W1  
Phone: (780) 413-7812; e-mail: karen.mcdonald@concordia.ab.ca

Dr. Karen McDonald is the Director of Environmental Health at Concordia University College of Alberta. She has significant national and international experience in the area of atmospheric science. Her current focus is on particulate matter and visibility reduction. She participates in risk assessment by supporting communities affected by large industrial developments.

## David Niemi

Head, Emissions Inventory Reporting and Outreach  
Environment Canada, Criteria Air Contaminants,  
351 St Joseph Boulevard, Gatineau, Quebec Canada ,K1A 0H3  
Phone:(819) 994-6142, e-mail david.niemi@ec.gc.ca

David Niemi is a graduate from the University of Manitoba in Civil Engineering. He has been working with Environment Canada since 1994. David's work with Environment Canada has focused on the development and improvement of Criteria Air Contaminant and selected toxics emissions inventories to support federal, provincial / territorial, and international programs. David has worked extensively with provincial and US emissions inventory experts as well as ambient air quality modellers in the development and improvements to the emissions inventories.

## Dr. Joe Schwarcz

Director  
McGill University Office for Science and Society,  
801 Sherbrooke St. W., Montreal, H3A 2K6  
Phone: 514-398-6238, e-mail: joe.schwarcz@mcgill.ca

Dr. Joe Schwarcz (PhD McGill 1973) is Director of McGill University's Office for Science and Society, which is dedicated to demystifying science for the public, the media and students. Dr Schwarcz also teaches a variety of courses with emphasis on health issues and on the application of chemistry to everyday life. He is well known for his informative and entertaining public lectures on topics ranging from the chemistry of love to the science of aging. Professor Schwarcz has received numerous awards for teaching chemistry and for interpreting science for the public. Among these are the Royal Society of Canada's McNeil Award and the American Chemical Society's prestigious Grady-Stack Award. Previous winners of the Grady-Stack have included famed science writer Isaac Asimov, New York Times columnist Walter Sullivan and Don Herbert of TV's "Mr. Wizard" fame. Dr. Schwarcz is the only non-American ever to be honored with this prize. His latest award is the Royal Canadian Institute's Sandford Fleming Medal. Dr. Schwarcz was also awarded an honorary Doctorate degree by Athabasca University in the spring of 2002.

"Dr. Joe" appears on the Canadian Discovery Channel, TV Ontario, Global Television, CBC-TV, CTV-TV and various radio stations. He hosts the "Dr. Joe Show" on Montreal's CJAD and Toronto's CFRB every Sunday from 3-4 PM. He was also the host of "Science To Go," a 13 episode show on the

Discovery Channel that focused on common foods. Dr. Schwarcz writes a weekly newspaper column in the Montreal Gazette entitled "The Right Chemistry" as well as a monthly column in Canadian Chemical News. He was the chief consultant on the Reader's Digest best sellers "Foods That Harm, Foods That Heal" and "The Healing Power of Vitamins, Minerals and Herbs" and contributed the chemistry chapter to the best-selling "Mental Floss." His books "Radar, Hula Hoops and Playful Pigs," "The Genie in the Bottle," "That's The Way The Cookie Crumbles," "Dr. Joe and What You Didn't Know," "The Fly in the Ointment" and "Let Them Eat Flax" have been best sellers. The books have been translated into five languages and are sold around the world.

## Tim Smith

Senior Air Quality Engineer  
U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards,  
EPA/OAQPS Mail Code C539-04 Research Triangle Park, NC 27711  
Phone 919 541 4718, email: smith.tim@epa.gov

Tim Smith works in the Geographic Studies Group in EPA's Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina. Tim is a senior air quality engineer who has worked a number of years in EPA's programs for visibility and particulate matter, focusing on control measures related to particulate matter and precursors such as NO<sub>x</sub> and SO<sub>2</sub>. Tim has been with OAQPS for 16 years now, and has worked on a number of air toxics and program policy issues in addition to his current efforts related to particulate matter and precursors. Before joining OAQPS, Tim was a permit engineer at the Bay Area Air Quality Management District in San Francisco. Tim has also served on the staffs of EPA's regional offices in Chicago and San Francisco, and on the staff of the National Commission on Air Quality in Washington. Tim has a Master's degree in environmental engineering from the University of Illinois.

## Donna Tingley

Executive Director  
Clean Air Strategic Alliance (CASA),  
10035 108 St NW, Edmonton, AB, T5J 3E1, Canada  
Phone: 780-429-9793, email: dtingley@casahome.org, Web: www.casahome.org

Since 1999, Donna Tingley has been Executive Director of the Clean Air Strategic Alliance (CASA), a non-profit society, which supports a multi-stakeholder consensus process undertaking strategic air quality planning in Alberta. Prior to joining CASA, she was the Executive Director of the Environmental Law Centre where she worked for 15 years. Donna Tingley has written and lectured widely in environmental law and has been a member of a number of advisory committees including the Alberta Round Table on Environment and Economy. She was a member of the Joint Public Advisory Committee of the Commission for Environmental Cooperation of North America for two terms, from 1998 to 2004, holding the position of chair during 2004. She studied law at the University of Calgary and was admitted to the Law Society of Alberta in 1981.

## Dr. Shaun Watmough

Assistant Professor  
Department of Biology, Trent University, Symons Campus,  
1600 West Bank Drive, Peterborough, ON, K9J 7B8, Canada  
Phone: 705-748-1011 ext. 1647, email: swatmough@trentu.ca

Dr. Shaun Watmough obtained a B.Sc. from Liverpool John Moores University in 1990 and a

Ph.D. from Liverpool John Moores University in 1994. He currently works at Trent University in Peterborough, Ontario as an Assistant Professor. His research interests include Ecosystems. "Ecosystems are threatened by a multitude of environmental stresses ranging from disturbance at local scales to global climate change. I am interested in how ecosystems respond to environmental stress, which also requires a greater understanding of how stresses impact on ecosystems. My research focuses primarily on the impacts of acid rain, N deposition and climate change on forest and lake ecosystems. The research studies range from long-term catchment scale programs in Ontario, to short-term survey and experimental field studies in Ontario, Alberta and British Columbia. Information from these studies is used to develop predictive models (critical loads) that are used to estimate the response of ecosystems to environmental stresses."

## Peter Watson

Deputy Minister  
Office of the Deputy Minister, Alberta Environment,  
10th fl Petroleum Plaza South Tower, 9915-108 Street,  
Edmonton, AB, T5K 2G8, Canada  
Phone: 780 427-6236

Peter Watson has a B.Sc. in Civil Engineering from the University of Alberta and commenced his career with Alberta Environment in 1983 as a Water Rights Engineer. He has since held several different management positions over the past 20 years with AENV. Most recently, he was the Assistant Deputy Minister (ADM) of Environmental Assurance with Alberta Environment. In this role, he led the development of Water for Life: Alberta's Strategy for Sustainability as well as the development of Canada's first electronics recycling program. Mr. Watson also co-chaired the Federal/ Provincial/ Territorial Committee on Health and the Environment. He has been the president of the CASA Board of Directors and the Alberta Water Council since 2005. Prior to his appointment as ADM, Mr. Watson was the Director of Regional Services in Southern Alberta and responsible for delivery of approvals, compliance, environmental planning programs, as well as the operation of water management infrastructure. In addition to Mr. Watson's extensive experience he has been a member of the Association of Professional Engineers, Geologists and Geophysicists since 1985 and a member of the Canadian Water Resources Association since 1990. He has also been actively involved in the Provincial Government Employees United Way Campaign for a number of years, serving as Co-Chair, Chairman and Treasurer (1996-2000) in the Calgary and area campaign.