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CFCAS News

Canadian Foundation for Climate and Atmospheric Sciences

Executive Director's Message

The 2008 CFCAS grants competition brings CFCAS's total 10-year investment in Canadian research and scholarship to over $115 million. The scientific knowledge generated by this research supports environmental policy and decision making and helps promote the health of the Canadian economy and people. Besides advancing climate and atmospheric science at a time of stagnating research budgets, this contribution has also fostered the all-important development of future researchers in a field where there is a recognized shortage of specialists. In August 2008, CFCAS presented a brief to the House of Commons Finance Committee, which was conducting pre-budget consultations. The brief emphasized the importance of continuing, expanded support for the atmospheric and oceanic research community.

Dawn Conway

Foundation News

CFCAS announces new grants

CFCAS recently invested $5.5 million in new grants to support two-year research projects and to supplement the outreach and communications budgets of research networks. This final competition under the Foundation's current mandate was funded entirely from interest revenues on CFCAS investments. The grants will help increase knowledge and training in areas of strategic importance: air quality, northern conditions, weather prediction and forecasting, climate change and water resources. The research results will also help guide environmental policy and adaptation strategies. See page 2 for a list of awards.

CFCAS welcomes new Board members

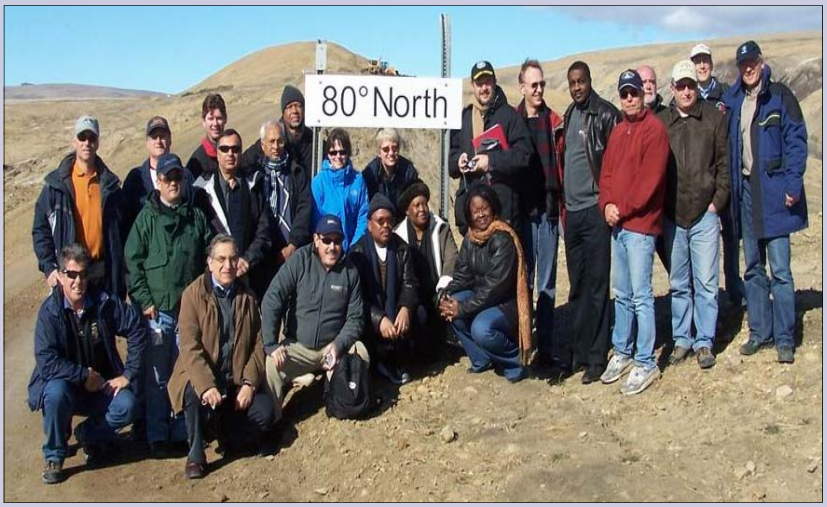
CFCAS welcomes Lawrence Mysak, Kimberly Strong and Maurice Levasseur to its Board of Trustees. Andrew Bush, president of CMOS, becomes an ex-officio member of the Board.

CFCAS to host Arctic symposium

CFCAS will host an Arctic symposium at Ottawa's Fairmont Château Laurier hotel on November 25, 2008. The symposium will highlight northern issues and research supported in connection with International Polar Year. For more information, contact CFCAS.

Research News

CANDAC-PEARL receives visit from foreign diplomats



On June 24, 2008 the Canadian Network for the Detection of Atmospheric Change (CANDAC) welcomed 25 visitors to the state-of-the-art Polar Environment Atmospheric Research Laboratory (PEARL) at Eureka, Nunavut, as part of the Northern Diplomatic Tour 2008. Diplomats representing 16 countries enjoyed balmy summertime weather around 10°C. Scientists explained the research taking place at the facility and its relevance to Canadian policy and decision makers. His Excellency Matthias Martin Höpfner, Ambassador of the Federal Republic of Germany, presented the PEARL team with a commemorative medal.

CFCAS GRANTS 2008

Climate Change

- Probabilistic Forecasts of the Viability of Future Canadian Carbon Sinks (Damon Matthews, Concordia University)
- Controls of Freshwater and Oceanic Variability on CO^2 Update and Ocean Acidification at the East Canadian Shelf Area (Thomas Helmuth, Dalhousie University)
- Heterogeneity in Northern Climate Trends: Assessing the Role of Glacial Modulation (Irene Gregory-Eaves, McGill University)
- Permafrost Stability Analysis Using Downscaled GCM Simulations and Borehole Temperatures (Hugo Beltrami, St. Francis Xavier University)
- Assessment of Climate-Change Impacts on Canadian Water Resources Using Regional Climate Model Projections (Sushama Laxmi, Université du Québec à Montréal)
- Potential Impact of Climate Change and Climate Anomalies in the Water Resources of Western Canada: Adaptation Options and Reducing Vulnerability (Thian Yew Gan, University of Alberta)
- Atmospheric Predictability on Time Scales from Days to Seasons (Youmin Tang, University of Northern British Columbia)
- Reconstructing Labrador Current Variability During the Past Centuries Using Coralline Red Algal and Other Proxy Climate Data (Jochen Halfar, University of Toronto)
- Development of a Climatological Data Set from the Atmospheric Chemistry Experiment (ACE) Satellite Mission for Validating Atmospheric Model Simulations (Kaley Walker, University of Toronto)
- Inferring Gravity-Wave Drag Parameters from Data Assimilation (Theodore Shepherd, University of Toronto)
- Predictors of the Atmospheric Circulation Response to Transient Forcing: Applications to North American Seasonal Forecasts (Paul Kushner, University of Toronto)
- Paleo-synopses and Dynamics of Sea-ice Cover in the Arctic Ocean and Subarctic Canada During Critical Intervals of the Present Interglacial (Richard Peltier, University of Toronto)
- Projecting Changes in High Latitude Greenhouse Gas Sources and Sinks (Andrew Weaver, University of Victoria)
- Vegetation Feedbacks to High Latitude Climate Change (Katrin Meissner, University of Victoria)
- Multicloud and Multiscale Models for Tropical Convection and Equatorial Waves (Boualem Khouider, University of Victoria)
- Quantifying the Uncertainty in Modelled Estimates of Future Extreme Precipitation Events (Donald Burn, University of Waterloo)
- Response of Shallow Lakes and Ponds to Contemporary Climate Change in the Hudson Bay Lowland Near Churchill, Manitoba (Merrin Macrae, University of Waterloo)

Extreme Weather

- Tropical-Extratropical Interactions and Their Role in Subseasonal Weather Prediction in Canada (Hai Lin, McGill University)
- Merging Statistical-Postprocessing with Ensemble-Averaging Using Gene-Expression Programming (Roland Stull, University of British Columbia)
- Role of Soil Moisture Initialization on Seasonal Forecasts in Canada (Aaron Berg, University of Guelph)

Air Quality

- Interpretation and Evaluation of Satellite Remote Sensing for Canadian Air Quality (Randall Martin, Dalhousie University)
- Single Particle Mass Spectrometry Measurements at the Whistler Elevation Site (Allan Bertram, University of British Columbia)
- Photochemical Recycling of Nitrogen Oxides on Snow and Ice Surfaces (Hans Osthoff, University of Calgary)
- Heterogeneous Photochemistry: Effects on Atmospheric Radical Production and Air (James Donaldson, University of Toronto)
- Particle Nucleation and Growth: Elucidation of the Underlying Processes Through Measurement and Modeling of Temporal and Spatial Variability (Greg Evans, University of Toronto)
- Quantitative Characterization of the Impact of Environmental Factors on the Performance of Passive Air Samplers for Semi-Volatile Organic Compounds (Frank Wania, University of Toronto)
- Impact of Large-Scale Stratospheric Ozone Intrusions on Operational Air Quality Forecast Model Applications (David Tarasick, University of Western Ontario)
- Stable Carbon Isotope Ratio-based Studies of Particle Phase and Gas Phase Secondary Organic Compounds in the Atmosphere (Jochen Rudolph, York University)
- Canadian Air Quality in Past and Future Climates Within a Global Context (John McConnell, York University

Network Supplements

- Canadian Stratospheric Processes and their role in Climate (C-SPARC)
- Storm Studies in the Arctic (STAR)
- Canadian Carbon Program (CCP)
- Global Ocean-Atmosphere Prediction and Predictability (GOAPP)
- Improved Processes and Parameterisation for Prediction in Cold Regions / Western Canadian Cryospheric Network (IP3 / WC2N)
- Drought Research Initiative (DRI)
- Canadian Network for the Detection of Atmospheric Change (CANDAC)

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