Graduate and Post-doctoral Opportunities in MAGS:

The MAGS Research Network comprises nearly eighty university and government scientists and is funded by NSERC, Environment Canada and private industry. There are great research opportunities in this exciting project for graduate studies (MSc and PhD) and post-doctoral research at affiliated universities and at government laboratories.

Advantages of graduate and post-doctoral research with MAGS include financial support, excellent research facilities, field experience, professional training, and access to state-of-the-art climate-hydrologic models, a common data pool and an effective administration to facilitate networking.

Examples of Research Areas in MAGS

Regional Climate Studies:
- Weather-climate links
- Large-scale and regional moisture cycling
- Physics governing the thermal responses of the basin
- Extremes and variability in seasonal climate
- Convection, lightning and their impacts over forested areas

Atmospheric Issues:
- Dynamics of synoptic and mesoscale disturbances
- Cloud processes and climate feedbacks
- Radar assessment of local climatological and orographic effects
- Energy and water balance, evaporation and thermal responses of lakes

Surface Issues:
- Hydrologic processes
- Deterministic modelling of river ice processes
- Remote-sensing of river ice break-up and coastal change
- Physically based hydrologic models for permafrost environments
- Hydro-climatic impacts on hydrologic processes and river regimes
- Hydrogeology and groundwater conditions

Simulations:
- Modelling surface water fluxes in boreal, tundra and alpine areas
- Blowing snow models
- Scaling of remotely sensed, in-situ and surface based field data to improve Canadian climate models
- Coupled atmospheric-surface-hydrologic models to simulate local environmental responses to large-scale atmospheric forcings

Please visit MAGS web site to view additional information related to areas of research within the MAGS Research Programme.

Partner Institutions - MAGS Research Programme

Universities
- École de technologie supérieure, Montréal - Construction Engineering
- Laval University, Sainte-Foy - Geography
- McGill University, Montreal - Atmospheric and Oceanic Sciences
- McMaster University, Hamilton - School of Geography and Geology
- Simon Fraser University, Burnaby - Geography
- University of Alberta, Edmonton - Earth and Atmospheric Sciences, Civil and Environmental Engineering
- University of Saskatchewan, Saskatoon - Geography
- University of Waterloo, Waterloo - Geography and Environmental Studies
- York University, North York - Earth and Atmospheric Sciences

For a complete listing of university researchers, their areas of research, and contact information, please visit the MAGS web site.

Government Laboratories

Environment Canada:
- Climate Research Branch - Meteorological Service of Canada, Downsview
- National Water Research Institute, Burlington and Saskatoon
- Prairie and Northern Region, Edmonton and Yellowknife
- Recherche en Prédiction Numérique - Meteorological Service of Canada, Dorval

NRCan: Canada Centre for Remote Sensing, Ottawa

Post-doctoral fellowships at government laboratories are administered by NSERC through the Visiting Fellowships in Canadian Government Laboratories program. Interested candidates should contact the appropriate government MAGS investigators and further information about the fellowship can be found at http://www.nserc.ca/programs/school2_e.htm.

There are government scientists with adjunct professorships at various universities. For a complete listing of government scientists, their areas of research, university affiliations, and contact information, please visit the MAGS web site.

Career Opportunities:

Experience gained from the MAGS Research Programme can lead to various employment opportunities. Graduate Students and Post-doctoral Fellows from MAGS have gone on to obtain gainful employment as university professors, government scientists, research associates, meteorologists, private consultants, GIS specialists, computer programmers, and research technicians.