GRADUATE RESEARCH OPPORTUNITIES IN APPLIED SCIENCE

Effects of Hydroelectric Operations in Canadian Aquatic Ecosystems

NSERC's HydroNet is a national research network aimed at promoting sustainable hydropower and healthy aquatic ecosystems in Canada. The general objectives of the network are to acquire new knowledge, and to develop new tools, to better assess, minimize, and mitigate the effects of hydropower on fish and their habitats. This network involves 14 academic scientists and a strong partnership with Fisheries and Oceans Canada (6 scientists) and 3 major hydroelectric companies (Nalcor, Manitoba Hydro, and BC Hydro). The network will receive close to $8 million from NSERC and from its partners over 5 years and will offer unique interdisciplinary training opportunities.

Following is a list of graduate positions, at the M.Sc., M. Eng., and Ph.D. levels, that will be filled over the next 2 years (beginning as early as spring 2010). If you are bright and enjoy a challenge involving field and laboratory research in areas that combine fundamental and applied sciences, send your CV and a statement of interest to contact individuals.

- Modelling strategies to estimate the productive capacity of fish habitats in rivers; D. Boisclair and P. Legendre (Daniel.Boisclair@UMontreal.ca, U. de Montréal)
- Hydroacoustic-GIS integrated mapping of fish habitat and distribution in lakes and reservoirs; G. Rose (Memorial U., George.Rose@mi.mun.ca) and D. Boisclair (U. de Montréal)
- Evolution and dynamics of river geomorphology; M. Lapointe (McGill U., Michel.Lapointe@mcgill.ca) and B. Eaton (U. of British-Columbia)
- Oxygen stable isotopes and thermal ecology of salmonid fishes; M. Power (U. of Waterloo, m3power@sciborg.uwaterloo.ca) and R. Randall (DFO-Burlington)
- Effects of nutrients on the productive capacity of fish habitats in rivers; J. Rasmussen (U. of Lethbridge, Joseph.Rasmussen@ULeth.ca) and D. Boisclair (U. de Montréal)
- Effect of population density and phenotype on habitat selection by fish in rivers; D. Boisclair and P. Legendre (U. de Montréal, Daniel.Boisclair@UMontreal.ca,) and K. Smokorowski (DFO, Sault-Sainte-Marie)
- Modelling fish habitat quality in the littoral zones of lakes and reservoirs; D. Boisclair and P. Legendre (U. de Montréal, Daniel.Boisclair@UMontreal.ca)
- Mapping physical attributes of lakes and reservoirs with airborne imagery; N. Bergeron (INRS-ETE, Normand.Bergeron@ETE.INRS.ca), M. Lapointe (McGill U.), and C. Katopodis (DFO, Winnipeg)
- Statistical and mechanistic modelling of the thermal regime of rivers; A. Saint-Hilaire and N. Bergeron (INRS-ETE, Andre.Saint-Hilaire@ETE.INRS.ca)
- Relationship between community structures and production rates in rivers; J. Rasmussen (University of Lethbridge, Joseph.Rasmussen@uleth.ca) and D. Boisclair (U. de Montréal)
- Effect of flow regimes on the productive capacity of fish habitats in rivers; M. Lapointe (McGill U., Michel.Lapointe@mcgill.ca) and M. Power (U. of Waterloo)
- Winter survival of riverine fishes; R. Cunjak (U. of New-Brunswick and Canadian Rivers Institute, cunjak@unb.ca) and K. Clarke (DFO, NL)
- Effect of regulated flow on river ice regimes; F. Hicks (U. Alberta, faye.hicks@ualberta.ca) and M. Loewen (U. of Alberta)
- Assessment of fish entrainment risk at hydropower intakes; S. Cooke (Carleton U., Steven_Cooke@Carleton.ca), D. Zhu (U. of Alberta, david.zhu@ualberta.ca), P. Higgins, and A. Leake (BC Hydro)