

**Séminaire 20 Mai 2011 11h / Seminar May 20th 2011 11h**

**Conférencier/Lecturer:** Hai Lin

**Sujet/Subject:** The CMC Monthly Forecasting System

**Présentation/Presentation:** Anglais / English

**Lieu/Room:** Salle des vents (Dorval)

**wiki:** [https://wiki.cmc.ec.gc.ca/wiki/RPN\\_Seminars](https://wiki.cmc.ec.gc.ca/wiki/RPN_Seminars)

**iweb:** <http://web-mrb.cmc.ec.gc.ca/mrb/rpn/SEM/>

**web:** <http://collaboration.cmc.ec.gc.ca/science/rpn/SEM/index.php>

**Abstract**

The current operational monthly forecasts of surface air temperature in Canada are based on the first month output of the seasonal forecasting system (SFS) which is a four-atmospheric-model ensemble prediction system. Its forecast skill is limited by the fact that the SFS was designed to capture signals of seasonal time scales coming from anomalies in boundary conditions, such as sea surface temperature. Even with the upcoming upgrade of the SFS to a two-coupled-model ensemble prediction system, the forecast skill of the first month is not improved. We therefore plan to separate the monthly forecasts from the SFS, and base the monthly forecasting system on the global EPS. With data assimilation of ensemble Kalman filter and persistent SST anomalies added to the time-evolving boundary condition climate, the new MFS is to maximize signals from both initial and boundary conditions. Once a week, the EPS integrations will be extended to 35 days. A model climatology generated with a 5-member hindcast for the same date of past 12 years will be used to calibrate the real-time monthly forecast. This MFS would be the first step toward a monthly forecasting system with the GEM model coupled with an ocean-ice system based on the NEMO ocean model.