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Forecasting the weather
- ensemble techniques
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Analysis of simulated change in mean and extreme climate conditions for Hungary using a transient PRECIS experiment 1951-2100

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This poster discusses the regional effects of global warming using regional climate model experiments from model PRECIS developed at the Hadley Centre of the UK Met Office and adapted at the Department of Meteorology, Eötvös Loránd University. Model experiments for different time slices with SRES A2 and B2 scenarios (1961-1990, 2071-2100) and a transient run with SRES A1B scenario (1950-2100) have been accomplished for the Carpathian Basin using 25 km horizontal resolution. For validation purposes we have used the E-OBS database. Special emphasis is given to the analysis of extreme climatic conditions using extreme climate indices and empirical probability of temperature and precipitation anomaly exceeding selected threshold values. The results suggest that the frequency of cold temperature extremes is projected to decrease significantly while warm extremes tend to occur more often in the future. In case of precipitation, the results based both on the mean and distribution changes and on the selected climate indices suggest a significantly drier climate in Hungary for the summer months by the end of the 21st century.