Post doctoral fellowship, duration: 24 months (INRA, France)
AgMIP maize multi-modeling

INRA is looking for a full-time post-doctoral scientist to manage the multi-modeling activity of the AgMIP international project for the maize crop.

The work will be performed in the framework of the Agricultural Model Intercomparison and Improvement Project (AgMIP) , a distributed climate-scenario simulation exercise for model intercomparison and future climate change assessments, relying on the participation of multiple crop and agricultural trade modeling groups around the world. Historical results will spur model improvement and interaction among major modeling groups, while results for the future will lead directly to testing adaptation strategies across a range of scales.
The general aim of the project is to bring together climatologists, agronomists and economists to depict the projected impact of climate change on food availability in the near, mid and long terms (until the end of the century). Climate change projections and embedded uncertainties have been documented using several meteorological models applied to various scenarios of greenhouse gas emission. Similarly, AGMIP wants to produce data on the impact of various climate change scenarios using several crop simulation models in order to properly assess productivity values and uncertainties around them. AgMIP will act as a demonstration of a multi-scale and transdisciplinary impact assessment utilizing the latest methods for climate and agricultural scenario generation. To achieve that, the project aims at using and improving a number of crop models for the main staple food productions (wheat, maize, rice, animal production.)

Maize is one of the strategic crops in the world along with wheat and rice. It therefore deserves special attention. The postdoctoral position will consist in helping, coordinating, and supervising the work of approximately 10-15 maize modelling groups involved in the project. Though AgMIP project aims at assessing regional yields, the post-doc work will be focused on the first AgMIP local phase, addressing various agricultural, edaphic and climatic environments throughout the world (US, Central America, South America, Europe, sub-Sahelian Africa, India, China, Australia)
The work will be partitioned in several successive phases, devoted to model inter-comparison, sensitivity analysis, calibration, improvement and future projection assessment at the field scale. Important issues will be to participate in the onset of the simulation protocols with the maize leader team, to make sure that all the data sets available collected to run and calibrate the models in the various regions can be used by the different models, to help in integrating consensually decided innovations in all models. to ensure the operational communication between the climate and IT (Information Technology) groups and the maize modeling groups (concerning particularly input and output formats), to make sure that each group has full access to the outputs of the common work, to perform the appropriate statistical treatments on those outputs. In addition, he (or she) will participate to the writing efforts of scientific papers relying on this maize multi-modeling study aiming at being taken into consideration for the 5th IPCC report. The post doc will likely participate to international events forecasted within the AgMIP project

Diploma: PhD or equivalent.
Expected skills: crop modelling; crop physiology; agro-climatology, statistics;.
A good level in English (spoken and written) is required.
Persons to contact: nadine.brisson@avignon.inra.fr or jean-louis.durand@lusignan.inra.fr
AGMIP website: http://www.agmip.org/

Location: Near Paris (with perhaps the first 3 months in Avignon or Lusignan ???)
Duration: 24 months
Starting: before summer
Net income: level INRA IR2 (2 695 € per month)