

Predictability of average temperatures using ensembles

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Abstract TBeing able to predict the future state of a system, given its present state, stands at the foundations of scientific knowledge with important implications from a theoretical and applicative point of view. However it is well established now that this cannot be accomplished in practice. One limitation is related to the unavoidable uncertainty in the initial condition. Therefore, from the point of view of predictability, we need to know how an error in the initial state of the system grows in time. Another huge point of interest is predictability by scale; namely, the impact that the scale of the studied domain has on the ability to predict the state of the system in question. We present some preliminary results of the predictability of average temperatures obtained from an ensemble scheme of the natural convection problem.

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