

Parametrizations and prediction

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Abstract

We consider the problem of climate change detection. The years taken into account and the annual mean temperature are denoted by $0, \dots, n$ and t_0, \dots, t_n , respectively. We propose to predict the temperature t_{n+1} using the data t_0, \dots, t_n . We construct a list of parametrizations $(\Theta^{(l)} : l = 0, \dots, n + 1)$ of the Euclidean spaces $(\mathbb{R}^{l+1} : l = 0, \dots, n + 1)$ adapted to the prediction of t_{n+1} . We analyse how the parametrization affects the prediction and also propose confidence interval prediction without using any probabilistic model. We illustrate our results for the annual mean temperature of France and Morocco.

References

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