

Fake nodes

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In this work we propose a new method for univariate polynomial interpolation based on what we call mapped bases [1]. As theoretically shown, constructing the interpolating function via the mapped bases, i.e. in the mapped space, turns out to be equivalent to map the nodes and then construct the approximant in the *classical* form without the need of resampling. In view of this, we also refer to such mapped points as “fake” nodes. Numerical evidence confirms that such scheme can be applied to mitigate *Runge* and *Gibbs* phenomena [2, 3].

References

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