Mathematics > Numerical Analysis

# Pade'-type rational and barycentric interpolation

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*(Submitted on 25 Jul 2011 (v1), last revised 29 Oct 2011 (this version, v2))*

In this paper, we consider the particular case of the general rational Hermite interpolation problem where only the value of the function is interpolated at some points, and where the function and its first derivatives agree at the origin. Thus, the interpolants constructed in this way possess a Pade'-type property at 0. Numerical examples show the interest of the procedure. The interpolation procedure can be easily modified to introduce a partial knowledge on the poles and the zeros of the function to approximated. A strategy for removing the spurious poles is explained. Applications are given.

Subjects: **Numerical Analysis (math.NA)**
Cite as: **arXiv:1107.4854v2 [math.NA]**

## Submission history

From: Michela Redivo-Zaglia [view email]
**[v1]** Mon, 25 Jul 2011 07:35:12 GMT (46kb)
**[v2]** Sat, 29 Oct 2011 09:12:58 GMT (48kb)

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