## 1056-65-1185 **Jean-Paul Berrut\*** (jean-paul.berrut@unifr.ch), Department of Mathematics, University of Fribourg, Chemin du Musee 23, CH-1700 Fribourg, Switzerland. *Fighting Gibbs' phenomenon* through quotienting. Preliminary report.

Gibbs' phenomenon, the overshooting at jumps, is a very annoying drawback of infinitely smooth approximants. Many methods for its alleviation have been suggested, in the past as well as and in recent years, see, e.g., the book by Jerri and the articles by Gottlieb, Gelb, Brezinski, Beckermann and their coauthors. Many of these methods do not act in physical space, but rather in a transformed space.

A very simple method working in physical space seems to have been overlooked so far. It is based on the following observation: for a given approximation operator, the quotient of the approximant and the approximated function f is very similar for various f. In this talk I shall present some conjectures precizing this observation and demonstrate how it may be used to alleviate, and in many cases even eliminate, the phenomenon. (Received September 21, 2009)