

# An extended procedure for extrapolation to the limit

Claude Brezinski<sup>1</sup>, Michela Redivo-Zaglia<sup>2</sup>

<sup>1</sup>Laboratoire Paul Painlevé, UMR CNRS 8524, UFR de Mathématiques Pures et Appliquées, Université des Sciences et Technologies de Lille, 59655-Villeneuve d'Ascq cedex, France  
email: Claude.Brezinski@univ-lille1.fr

<sup>2</sup>Università degli Studi di Padova, Dipartimento di Matematica Pura ed Applicata, Via Trieste 63, 35121 Padova, Italy  
email: Michela.RedivoZaglia@unipd.it

## Abstract

In this talk, a new procedure for the extrapolation to the limit of slowly convergent sequences, and the summation of convergent and divergent series is proposed. It is a generalization of the  $E$ -algorithm which is the most general extrapolation algorithm known so far. Some properties of the kernel of this transformation are given. Particular cases, such as Drummond's transform and extensions are given. These transformations are related to Padé and Padé-type approximants.