Title: Common expansions in noninteger bases
Author(s): Vilmos Komornik and Attila Pethő
In this paper we study the existence of simultaneous representations of real numbers in bases $p>q>1$ with the digit set $A=\{-m, \ldots, 0, \ldots, m\}$. We prove among others that if $q<(1+\sqrt{8 m+1}) / 2$, then there is a continuum of sequences $\left(c_{i}\right) \in A^{\infty}$ satisfying $\sum_{i=1}^{\infty} c_{i} q^{-i}=\sum_{i=1}^{\infty} c_{i} p^{-i}$. On the other hand, if $q \geq m+1+\sqrt{m(m+1)}$, then only the trivial sequence $\left(c_{i}\right)=0^{\infty}$ satisfies the former equality.

## Address:

Vilmos Komornik
Département de mathématique
Université de Strasbourg
7 rue René Descartes
67084 Strasbourg Cedex
France

## Address:

Attila Pethő
University of Debrecen
Department of Computer Science
University of Debrecen
H-4010 Debrecen P.O. Box 12
Hungary

