

# Accepted Manuscript

Maximum number of periodic orbits in parallel dynamical systems

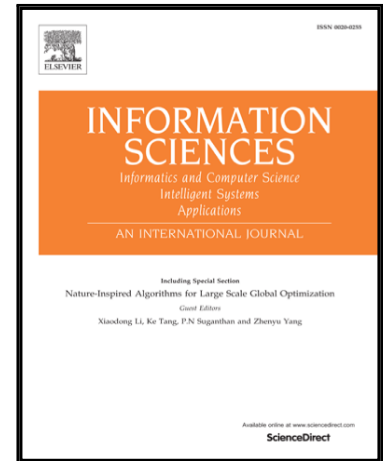
Juan A. Aledo, Luis G. Diaz, Silvia Martinez, Jose C. Valverde

PII: S0020-0255(18)30645-5  
DOI: <https://doi.org/10.1016/j.ins.2018.08.041>  
Reference: INS 13885

To appear in: *Information Sciences*

Received date: 12 February 2018  
Revised date: 3 August 2018  
Accepted date: 13 August 2018

Please cite this article as: Juan A. Aledo, Luis G. Diaz, Silvia Martinez, Jose C. Valverde, Maximum number of periodic orbits in parallel dynamical systems, *Information Sciences* (2018), doi: <https://doi.org/10.1016/j.ins.2018.08.041>



This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# Maximum number of periodic orbits in parallel dynamical systems

Juan A. Aledo [JuanAngel.Aledo@uclm.es](mailto:JuanAngel.Aledo@uclm.es)  
Luis G. Diaz

[LuisGabriel.Diaz@alu.uclm.es](mailto:LuisGabriel.Diaz@alu.uclm.es)  
Silvia Martinez

[Silvia.MSanahuja@uclm.es](mailto:Silvia.MSanahuja@uclm.es)  
Jose C. Valverde

[Jose.Valverde@uclm.es](mailto:Jose.Valverde@uclm.es)

*Department of Mathematics  
University of Castilla - La Mancha, Spain*

## 1 Introduction

In the last decades, *graph dynamical systems* (GDS) have become a very useful tool for modeling processes coming from information theory, automata theory, and qualitative behaviour theories. In particular, these systems constitute a generalization of other (mathematical) modeling tools such as cellular automata (CA) [29,31,38,42,44,50,51] and Boolean networks (BN) [32,33,45]. Thus, these systems have applications not only to computer science [3,21], but also to different branches of the sciences, such as mathematics [15,16,18,25], physics [17,20,30], chemistry [35,36,43], biology [32,22,24,46], ecology [28,23,27] psychology [2] or sociology [34] among others. \*

---

\* The abbreviations GDS, PDS, SDS, CA and BN will be written for the singular and plural forms of the corresponding terms, since it seems better from an aesthetic point of view.

Download English Version:

<https://daneshyari.com/en/article/8941781>

Download Persian Version:

<https://daneshyari.com/article/8941781>

[Daneshyari.com](https://daneshyari.com)