



Welcome to the Quick Reference guide for the Journal Archives service.

Journal Archives brings together over 600 journals from 8 major publishers with material spanning the 19th and 20th centuries, encompassing a wealth of subject areas. The journals can be searched or browsed and all articles can be downloaded as PDFs. The following publisher archives are included:

- Brill Journal Archive Online - Part 1 (Vol 1 to 1999) and Part 2 (2000 -2009)
- Cambridge Journals Digital Archive (1827 – 1996)
- Institution of Civil Engineers Virtual Library Archive (1836-2001)
- Institute of Physics (IOP) Journal Archive (1874-1998)
- Periodicals Archive Online - Jisc Collections Selection (1891 – 2000)
- Oxford Journals Archive and Archive Upgrade (Oxford University Press) (1849 - 1995)
- Royal Society of Chemistry (RSC) Journals Archive (1841-2004)
- Taylor & Francis Geography, Planning, Urban and Environment Online Archive (1885 to 1996)

The Quick Reference guide will help users to get going on the Journal Archives service as quickly as possible. It isn't intended to cover every feature or possible usage scenario. If you have any queries or require assistance please contact the Journal Archives helpdesk at journalarchives@mimas.ac.uk.



Search View, with results shown below

The screenshot shows the Journal Archives search results page for the query 'chaos theory'. The page displays a list of search results, with the first two results highlighted. Annotations are provided for various interactive elements:

- Toggle thumbnail images on and off here.** Points to the 'Thumbnail images: On Off' toggle.
- Shows how many results matched your search terms.** Points to the 'Matched 13865 hits' text.
- Click here to display the Advanced Search Options.** Points to the 'More Search Options' button.
- Click here to reorder your Search Results by Relevance, Author, Year of Publication or Title.** Points to the 'Relevance' dropdown menu.
- Change the number of results per page, and toggle between list and tile views of your search results.** Points to the 'Results per page' and view toggle buttons.
- Click on the thumbnail or the title to open a document in the Viewer.** Points to the first result's thumbnail and title.
- You can download an article directly from your results list by clicking the "Download PDF" button.** Points to the 'Download PDF' button.

The search results shown are:

- Review of Chaos. From Theory to Applications**
 Author: Main, Ian G.
 Press. TSONIS A. A. 1992. *Chaos. From Theory to Applications*, xii + 274 pp. New York, London, time series. The second part of the book is dedicated to the *theory of chaos*. Chapter 5 introduces, modern idea of '*chaos*' even in popular bookshops, with a plethora of volumes on the subject, apparently unpredictable phenomena. But does *chaos* have more than just a pretty face - does it really, a variety of scientific ills. The mathematical idea of deterministic *chaos* has its roots in the
 Journal: *Geological Magazine*
 Volume: 133 | Issue: 1 | Pages: 114 - 115
 Publication date: January 1996
 DOI: 10.1017/S0016756800007342
[Download PDF](#)
- The anharmonic route to chaos: kneading theory**
 Author: Glendinning, P
 Nonlinearity 6 (1993) 349-367. Printed in the UK The anharmonic route to *chaos*: kneading *theory*, give a topological description of maps on the The anharmonic route to *chaos*: kneading *theory*, 1, ..., AN-1 is odd. The anharmonic route to *chaos*: kneading *theory* 353 Similarly, A < B iff A. < Bo, - 1)* SC kk). (iii) If g(0) < 0 and g'(0) The anharmonic route to *chaos*: kneading *theory* 355,) class C The arkharmonic route to *chaos*: kneading *theory* 357 Definifiori 3.1. Let (f.), p E

Search View, expanded to show Advanced Options

Journal Archives

https://journalarchives.jisc.ac.uk/results?terms=chaos theory

Explore » Journals

Journal Archives

Home About Browse Support

All chaos theory Search Matched 13865 hits

Date ☒ All ☐ Single year or range e.g. 1900 or 1905-1906 or 1950, 1953-1956

Volume ☒ All ☐ Single volume or range e.g. 1 or 3-4 or 2, 6-9

Issue ☒ All ☐ Issue number or information e.g. 5 or May

Start page ☒ All ☐ Start page number e.g. 12 or 21-25 or 35, 40-49

DOI ☒ All ☐ DOI number e.g. 10.1039/b715576j

+ New row

Reset

Click here to add additional rows. These can be used to search on All Fields, Article Title, Journal Title, ISSN/EISSN and Author. Set whether the search term MUST, SHOULD or MUST NOT be included.

Click here to clear all the fields and run a new search.

Click here to hide the Advanced Search Options.

Hide Search Options

Thumbnail images: On Off

Articles Journals Year of Publication

Filter results by Relevance

Journal Title

Results from the current search are still shown below – just use the bar on the right hand side to scroll down.

Results per page: 30 100 500 1000 2000

Using the Viewer to look at a document

The screenshot shows the Journal Archives viewer interface. The browser address bar displays the URL: <https://data.journalarchives.jisc.ac.uk/view?pubId=iop1874-19980951-771563001no930301pdf&terms=chaos theory&pageId=1>. The page title is "The anharmonic route to chaos...". The Journal Archives logo is on the left, and navigation links (Home, About, Browse, Support) are on the right. The main content area displays the article "The anharmonic route to chaos: kneading theory" by Paul Glendinning. The left sidebar contains a search panel and a list of numbered buttons (1-10). The right sidebar contains a details panel. Callouts explain the following controls:

- Click here to expand the Search Panel.
- Click here to return to your list of Search Results.
- Click the icons here to zoom in or out, or reset the view back to the default.
- Click the numbered buttons to jump to the page of that number, or use the arrow buttons to move a page at a time.
- Click here to download the whole article as a PDF, or the citation data in the RIS format.
- The first page of one of our results in the Viewer.
- Click here to expand the Details panel.

The article text includes the following sections:

Nonlinearity 6 (1993) 349-367. Printed in the UK

The anharmonic route to chaos: kneading theory

Paul Glendinning
Department of Applied Mathematics and Theoretical Physics, University of Cambridge, Silver Street, Cambridge CB3 9EW, UK

Received 6 January 1992, in final form 2 October 1992
Accepted by R S MacKay

Abstract. The kneading theory for maps which model the anharmonic route to chaos is developed. We show that the transition to chaos in a range of problems is via a sequence of period-doubling and homoclinic bifurcations, and that this route to chaos is robust in the sense that if a family of differential equations undergoes this transition to chaos, then so do sufficiently close families. The sequence of bifurcations generates orbits of period (p_n) , $n \geq 1$, related by $p_{n+1} = 2p_n + (-1)^n k$ which exist for maps on the boundary of chaos.

AMS classification scheme numbers 58F13, 58F14

1. Introduction

In [9] a new route to chaos (in the sense of having a topological horseshoe or, equivalently, positive topological entropy) was described, where maps on the boundary of chaos have orbits of period (p_n) , $n \geq 0$, where

$$p_{n+1} = 2p_n + (-1)^n k \quad (1.1)$$

(for any non-zero integer k), together with an orbit of period $|k|$ and, possibly, an orbit of period $2|k|$. The aim of this paper is to give topological proofs for this new route to chaos, showing that this transition is stable to small perturbations of the defining equations.

To date several robust routes to chaos have been described in maps of the interval and diffeomorphisms of the disc (which can be thought of as return maps for families of differential equations). The most well-known is probably period-doubling [6, 7], where maps on the boundary of chaos have orbits of period (p_n) , $n \geq 1$, with

$$p_{n+1} = 2p_n \quad (1.2)$$

for some choice of $p_1 \geq 1$ ($p_1 = 1$ for continuous maps of the interval). Most other transitions are abrupt, and maps on the boundary of chaos have only a finite number of periods as, for example, in circle intermittency [14], a mechanism related to circle intermittency on the Lorenz surface [8, 21-23] and the homoclinic explosions of Lorenz maps [1, 19]. Thus the new sequence of periods (1.1) can be seen as a second

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The Viewer, with the Search and Details panels open

The screenshot shows the Journal Archives viewer interface. The browser address bar displays the URL: <https://data.journalarchives.jisc.ac.uk/view?pubId=iop1874-19980951-771563001no930301pdf&terms=chaos theory&pagel=1>. The page header includes the Journal Archives logo and navigation links: Results, Home, About, Browse, Support. A search bar is located in the top right.

The main content area is divided into three panels:

- Pages:** A grid of 12 thumbnails, numbered 1 to 12. A red box highlights thumbnail 1 with the text: "Click any thumbnail to jump to that page in the viewer."
- Publications:** A vertical scroll bar on the right side of the thumbnails. A red box highlights it with the text: "You can also use this scroll bar to move through the article."
- Details:** A panel on the right side of the main content area. It contains the following information:
 - Journal: Nonlinearity
 - Volume: 6 | Issue: 3 | Pages: 349 - 367
 - Publication date: May 1993
 - DOI: 10.1088/0951-7715/6/3/001
 A red box highlights the "Details" tab with the text: "Click here for the direct permanent link to this article." Below the details panel, a red box highlights the text: "Toggle between bibliographic data and full text here."

The main content area displays the article titled "The anharmonic route to chaos: kneading theory" by Paul Glendinning. The article text includes the following sections:

- Abstract:** The kneading theory for maps which model the anharmonic route to chaos is developed. We show that the transition to chaos in a range of problems is via a sequence of period-doubling and homoclinic bifurcations, and that this route to chaos is robust in the sense that if a family of differential equations undergoes this transition to chaos, then so do sufficiently close families. The sequence of bifurcations generates orbits of period (p_n) , $n \geq 1$, related by $p_{n+1} = 2p_n + (-1)^n k$ which exist for maps on the boundary of chaos.
- AMS classification scheme numbers:** 58F13, 58F14
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$$p_{n+1} = 2p_n + (-1)^n k \quad (1.1)$$
 (for any non-zero integer k), together with an orbit of period $|k|$ and, possibly, an orbit of period $2|k|$. The aim of this paper is to give topological proofs for this new route to chaos, showing that this transition is stable to small perturbations of the defining equations. To date several robust routes to chaos have been described in maps of the interval and diffeomorphisms of the disc (which can be thought of as return maps for families of differential equations). The most well-known is probably period-doubling [6, 7], where maps on the boundary of chaos have orbits of period (p_n) , $n \geq 1$, with

$$p_{n+1} = 2p_n \quad (1.2)$$
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The page number 349 is displayed at the bottom right of the article text.