

Chua, Leon O.**CNN: a paradigm for complexity.** (English) Zbl 0916.68132**World Scientific Series on Nonlinear Science. Series A** 31. Singapore: World Scientific (ISBN 981-02-3483-X/hbk; 978-981-279-858-9/ebook). x, 320 p. (1998).

The book provides an in-depth study of cellular neural (or nonlinear) network (CNN) paradigm, related concepts and applications. The book consists of four main parts. In Part I, standard CNNs are discussed. Also, some new concepts such as generalized cellulax automaton and new results such as implementation of an analog input analog output CNN universal machine on a single silicon chip are discussed there, too. An important subclass of autonomous CNNs is studied in Part II. Part III consists of mostly new results shedding light on the relation between complexity and local activity.

Reviewer: [M.Truszczyński \(Lexington\)](#)**MSC:**

- [68T05](#) Learning and adaptive systems in artificial intelligence
- [68-01](#) Introductory exposition (textbooks, tutorial papers, etc.) pertaining to computer science
- [68-00](#) General reference works (handbooks, dictionaries, bibliographies, etc.) pertaining to computer science

Cited in **2** Reviews
Cited in **76** Documents**Keywords:**[CNN universal machine](#); [complexity](#); [local activity](#)**Full Text:** [Link](#)