

A CHRONOLOGICAL LIST OF REFERENCES ON SWITCHED CAPACITOR CIRCUITS[†]

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A chronological list of 440 references on switched capacitor circuits is compiled. Such circuits have cut the cost of filters and signal processing devices for telecommunications, speech and consumer products because they can be easily integrated on a chip. The bibliography shows the explosion of interest since 1977 by IC designers, CAD developers and circuit and filter theorists and practitioners alike.

Very specialized publications as well as elementary papers and books have been included.

1. INTRODUCTION

The ability to combine analog (capacitors and op amps) and digital (switches) components on one chip first made it possible around 1977 to make a filter on a chip. Many design procedures have been developed, some based on LC structures, wave concepts and active filter techniques. Moreover many approximate or computer aided analysis techniques have been developed in order to analyze the frequency, noise and sensitivity characteristics and to simulate several peculiar effects, such as aliasing, parasitic stray capacitances, offset, drift, op amp poles, switch resistances and nonlinearities. Most importantly, because of the low cost these circuits have already been implemented in a wide variety of signal processing applications such as telecommunications, speech analysis and synthesis and consumer products; and many more applications are expected to come. Hence this whole area has received much attention from IC designers, CAD developers, and circuits and filter-theorists and practitioners alike.

This has motivated us to organize in our laboratory a summer course on this subject for which we compiled the bibliography. It is based on the references of the speakers, many references in papers, and the historical survey of Fettweis (1981) and the survey of Japanese contributions (Suzuki e.a. 1981). Included are all the conference and journal papers and books which we were able to receive and which deal with general background results and specific topics of IC implementation, design, analysis, simulation or applications. This list ends on May 1981. The explosion of interest is quite evident by looking

at the plot of the number of publications in each year (Figure 1).

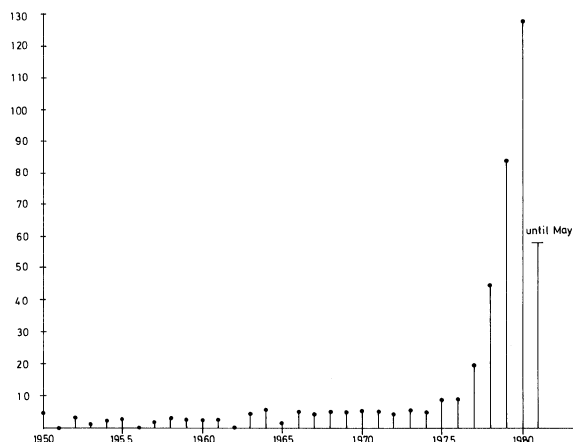


FIGURE 1 Number of publications on switched capacitor circuits from 1950 to 1981.

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