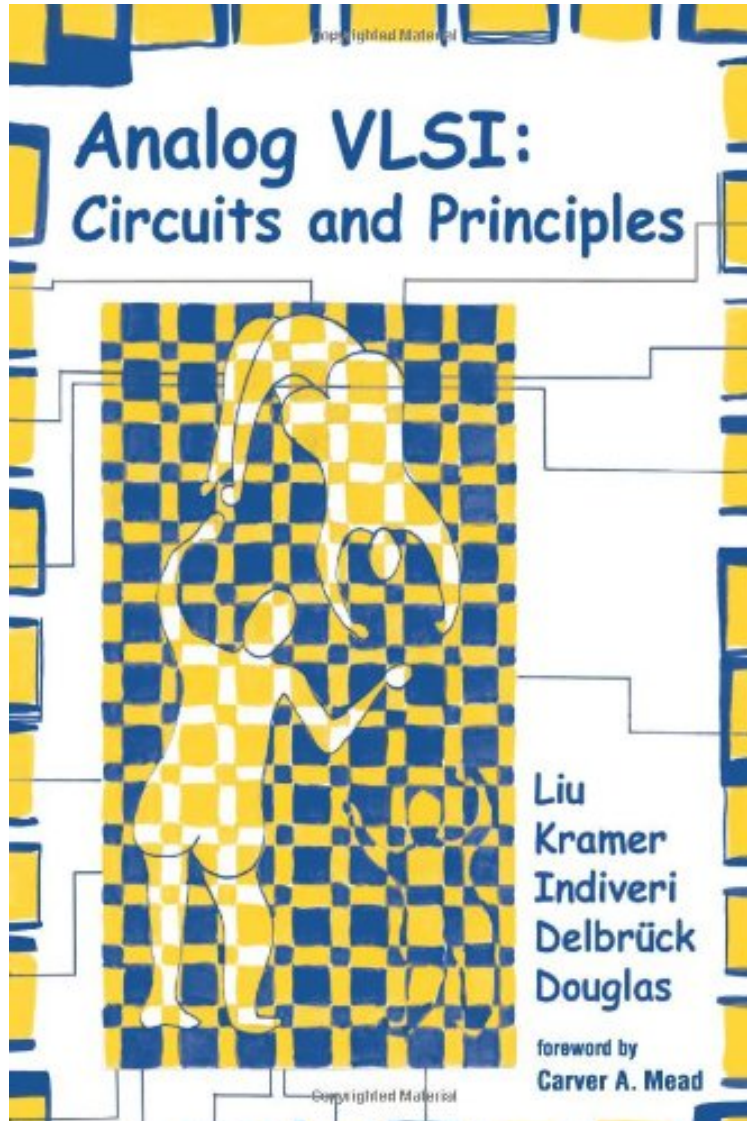


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Shih-Chii Liu, Jorg Kramer, Giacomo Indiveri, Tobias Delbruck, Rodney Douglas
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4 of 4 people found the following review helpful. a great work on synthetic neurons and analog computation By Jonathan The title of this book is somewhat misleading - it's actually geared more towards silicon neurons than general analog VLSI (say, RF design, or op-amps, or filters). But as a work on analog neurons, there is pretty much nothing

else that comes close. It's sort of a companion / extension to Carver Mead's (much) earlier work, and contains quite a bit more information, in an easy to understand format. If you're interested in analog computing / neurons on a chip, this book is for you.

An introduction to the design of analog VLSI circuits. Neuromorphic engineers work to improve the performance of artificial systems through the development of chips and systems that process information collectively using primarily analog circuits. This book presents the central concepts required for the creative and successful design of analog VLSI circuits. The discussion is weighted toward novel circuits that emulate natural signal processing. Unlike most circuits in commercial or industrial applications, these circuits operate mainly in the subthreshold or weak inversion region. Moreover, their functionality is not limited to linear operations, but also encompasses many interesting nonlinear operations similar to those occurring in natural systems. Topics include device physics, linear and nonlinear circuit forms, translinear circuits, photodetectors, floating-gate devices, noise analysis, and process technology.

About the Author Rodney Douglas is Director of the Institute of Neuroinformatics and Professor of Neuroinformatics at the University of Zurich. Giacomo Indiveri is Assistant Professor at the Institute of Neuroinformatics, Zurich. Tobias Delbrück is Assistant Professor at the Institute of Neuroinformatics, Zurich.