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Neuromorphic Circuits for Nanoscale Devices

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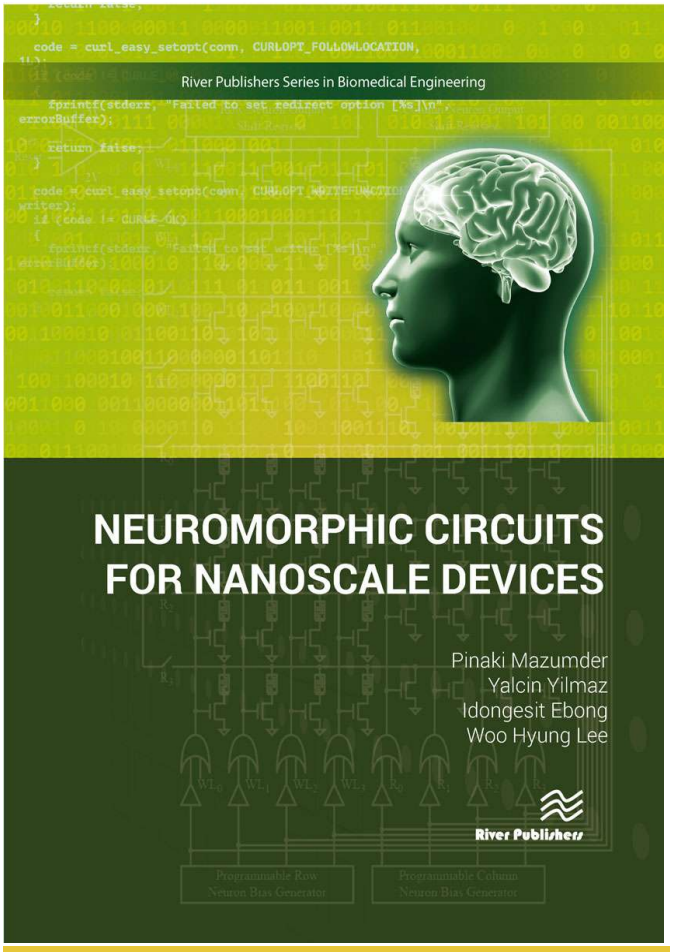
Nanoscale devices attracted significant research effort from the industry and academia due to their operation principals being based on different physical properties which provide advantages in the design of certain classes of circuits over conventional CMOS transistors.

Neuromorphic Circuits for Nanoscale Devices contains recent research papers presented in various international conferences and journals to provide insight into how the operational principles of the nanoscale devices can be utilized for the design of neuromorphic circuits for various applications of non-volatile memory, neural network training/learning, and image processing.

The topics discussed in the book include:

- Nanoscale Crossbar Memory Design
- Q-Learning and Value Iteration using Nanoscale Devices
- Image Processing and Computer Vision Applications for Nanoscale Devices
- Nanoscale Devices based Cellular Nonlinear/Neural Networks



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