
Application of Artificial Neural Networks in Simulating Transistors for Nanometer-Sized

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In the current study, carbon nanotube transistors were simulated using neural network and fuzzy neural network. We entered the output of the simulated flow using the quantum methods to the neural network and produced a transistor network simulator. The Fettoy emulation software was used for CNTFET and was obtained the output voltage. Based on these data, instruction was conducted in the ANN and ANFIS software's and the result networks were the device simulator. The results demonstrated that the ANFIS has a high accuracy and also is much faster than Fettoy software regarding simulation speed.

Keywords : Field Effect Transistor, Carbon Nanotubes, Flows Drain to Source, Neural Network, Fuzzy Neural Network, Fettoy Software

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