

## Special Issue

# Device Modeling for TCAD and Circuit Simulation

### Message from the Guest Editor

Because CMOS technology has been scaling according to Moore's law, it is approaching its basic physical limits. In order to replace and expand the current CMOS devices and circuits, various types of new device, such as neuromorphic devices, have been reported. It is necessary to analyze the characteristics of newly proposed devices, and their accurate and physics-based compact models are also needed to efficiently design and simulate the circuits comprising them or CMOSs. This Special Issue solicits original research papers and review articles with numerical or analytical models of various novel devices. Potential topics include, but are not limited to, the following:

- Compact modeling for circuit simulation;
- Device modeling for TCAD simulation;
- Steep-switching device modeling: TFET, NCFET, FBFET, and so on;
- FinFET modeling;
- Gate-all-around (GAA) nanowire (NW) FET modeling;
- Ultra-thin silicon-on-insulator (SOI) modeling;
- Two-dimensional material (e.g., MoS<sub>2</sub>, WSe<sub>2</sub>) transistors modeling;
- Graphene FET modeling;
- Nanowire and nanotube FET modeling;
- Neuromorphic device modeling;
- Volatile memory device modeling;
- Non-volatile memory device modeling;

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### Guest Editor

Prof. Dr. Yun Seop Yu

Department of Electrical, Electronic and Control Engineering, Hankyong National University, Anseong 17579, Republic of Korea

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### Deadline for manuscript submissions

closed (1 July 2023)



## Applied Sciences

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Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
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### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, Italy

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