

# **BSIMSOI4.0 MOSFET MODEL**

## **Users' Manual**

**BSIM GROUP**

**November 2005**

**Department of Electrical Engineering and Computer Sciences**  
**University of California, Berkeley, CA 94720**

**Copyright © 2005**  
**The Regents of the University of California**  
**All Rights Reserved**

---

**B4SOI Developers:**

- Mr. Hui Wan
- Dr. Xuemei Xi
- Prof. Ali Niknejad
- Prof. Chenming Hu

**Previous BSIMSOI/BSIMPD Developers:**

- Dr. Samuel Fung
- Dr. Dennis Sinitsky
- Dr. Stephen Tang
- Dr. Pin Su
- Dr. Weidong Liu
- Dr. Robert Tu
- Prof. Mansun Chan
- Prof. Ping K. Ko
- Prof. Chenming Hu

BSIMSOI4 web site with BSIM source code and documents:

**<http://www-device.eecs.berkeley.edu/~bsimsoi/>**

---

## **Acknowledgement:**

BSIMSOI4.0 model is fully backward compatible with its previous versions (BSIMSOI3.2 or below). The development of BSIMSOI4.0 benefited from the input of many BSIMSOI users, especially the Compact Model Council (CMC) member companies. The developers would like to thank Joe Watts, Richard Q Williams, Myung-hee Na at IBM, Samuel Fung , Sally Liu, Ke-Wei Su, Chung-Kai Lin, and Y-M Sheu at TSMC, Andre Juge, Herve Jaoven, and Gilles Gouget at STmicroelectronics, Judy An, Jung-Suk Goo at AMD, Peter Watts at MIT Lincoln Lab, Gediminas Paulavicius at Zenasis technologies, Weidong Liu at Synopsys, Pin Su at National Chiao Tung University, Min-Chie Jeng, and Zhihong Liu at Cadence, Ivan Pesic at Silvaco, Keith Green, Tom Vrotsos, David Zweidinger and Britt Brooks at TI for their valuable assistance in identifying the desirable modifications and testing of the new model.

The BSIM project is partially supported by SRC, and CMC.