



# Designer's Guide Consulting

## Analog Verification

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### Experience

**Designer's Guide Consulting, Inc.**, Los Altos, CA, President, 2005-present. Develop and sell automated model and testbench generation products for the verification of analog and mixed signal circuits.

**Cadence Design Systems**, San Jose, CA, 1989 - 2005. Fellow in the Office of the CTO. Guided the development of mixed-signal simulation products. Developed, and led the development, of advanced technology in the areas of circuit simulation. Created the Spectre and SpectreRF circuit simulators and the Verilog-A hardware description language. Participated in the development of Verilog-A, Verilog-AMS, and VHDL-AMS languages and language standards.

**Hewlett-Packard**, Santa Rosa, CA, 1983 - 1989. Research Fellow for the Network Measurements Division. Developed core algorithms and code base for HP85150b (MNS) microwave harmonic balance circuit simulator while on site at U. C. Berkeley. MNS is simulator that powers Agilent's ADS microwave and RF design environment.

**Hewlett-Packard**, Santa Rosa, CA, 1979 - 1983. Design engineer for the Network Measurements Division. Designed portions of the HP8510 microwave network analyzer. Design work involved high performance RF and analog circuitry.

**Tektronix**, Beaverton, OR, 1978. System engineer intern at the Service Instruments Division for the 233x family of portable 100 MHz oscilloscopes.

**Tektronix**, Beaverton, OR, 1977. Design engineer intern for the Service Instruments Division. Developed portions of the 233x family of portable 100 MHz oscilloscopes.

### Education

- Ph.D. in Electrical Engineering and Computer Science, UC Berkeley, 1989.  
Dissertation: Steady-State Methods for Simulating Analog Circuits.  
Advisor: Alberto Sangiovanni-Vincentelli  
Also created the Sparse linear equation solver and the Spectre circuit simulator.
- M. Eng. in Electrical Engineering and Computer Science, UC Berkeley, 1983.  
Thesis: A Switched-Capacitor Synchronous Detector  
Advisor: Robert G. Meyer
- B. S. in Electrical Engineering and Computer Science, UC Berkeley, 1979.

### Patents and Publications

- Awarded 11 U.S. patents
- Authored 3 books and 35 refereed technical papers
- Created [www.designers-guide.org](http://www.designers-guide.org) website and community for circuit designers

### Basic Skills

- Deep understanding of circuit simulation, including its capabilities and limitations
- Knowledge of the operating principles of common analog, RF, and mixed-signal circuits
- Ability to model and an understanding of modeling fundamentals
- Facility with mathematics, statistics and stochastic processes
- Accomplished Python programmer for scientific and engineering software

References and complete C.V. available on request.