Luis Enrique Amaya

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Professional and Technical Skills

Design and modeling of power electronic circuits.

Design and modeling of VLSI circuits.

Familiar with digital, analog, and mixed-mode simulation issues, structured programming, and UNIX system operation.

Excellent communication, teamwork and leadership skills.

Knowledge of C, Pascal, Fortran, Algol, Perl; 8086, M6800 and MC68HC11 assembly languages.

Knowledge of UNIX, Linux and Macintosh operating systems. SPICE, PSPICE, LaTeX, and basics of Mathematica. Basics of UNIX shell programming.

Fluent in english and spanish; proficient in german.

Education

Ph.D., Electrical Engineering, University of Illinois at Urbana-Champaign, May 1998.

M.S., Electrical Engineering, University of Illinois at Urbana-Champaign, October 1994.

B.S., Electrical Engineering, Universidad de Los Andes, Bogotá, Colombia, May 1986.

Professional Experience

Research Assistant, Coordinated Science Laboratory and Department of Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, Oct. 1994–May 1998. Automatic synthesis of power electronics converters.

- ▷ Proposed a design methodology for arbitrary switching power converters.
- ▷ Produced detailed specification of methodology for DC to DC converters and implemented it in a group of C-coded computer programs.
- ▷ Designed an IC DC to DC power converter to test the proposed methodology.
- ▷ Financed 100% of college expenses.

UNIX system operator, Coordinated Science Laboratory, University of Illinois at Urbana-Champaign, Sept. 1996–Dec. 1997.

- ▷ One of three system operators for the Analog and Digital Circuits Group. System consists of 50+ UNIX SUN Sparc workstations running SunOS and Solaris.

Research Assistant, Coordinated Science Laboratory, University of Illinois at Urbana-Champaign, May 1992–Oct. 1994.

- ▷ Pattern recognition for mixed-mode simulation. Improved algorithms for arbitrary path recognition and integrated them into the iSPLIT mixed-mode simulation preprocessor program, coded in C.

Publications

Computer Synthesis of Switching Power Converters, Ph.D. Thesis, University of Illinois at Urbana-Champaign, May 1998.

A Design Methodology for Power Electronics - Presented at the 5th IEEE Workshop on Computers in Power Electronics, August 1996.

Automatic Partitioning for Mixed-Mode Simulation, Master's Thesis, University of Illinois at Urbana-Champaign, October 1994.

Professional Affiliations

The Institute of Electrical and Electronics Engineers.

The Association of Computing Machinery.

The Phi Kappa Phi Honor Society.