Drew Steedly

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Education

August 2004 — **Ph.D. Computer Science**
Georgia Institute of Technology
Advisor: Irfan A. Essa
My research focuses on developing efficient techniques for reconstructing scenes and camera trajectories from video sequences for use in image-based rendering and ego-motion estimation applications.

December 1995 — **M.S. Electrical Engineering**
Georgia Institute of Technology
I designed high-speed, bipolar analog VLSI circuitry for A/D and D/A converters. I also helped with the post-fabrication test setup, including evaluating packaging and probe card options.

August 1994 — **B.S. Electrical Engineering**
University of Florida
In order to compensate for process and environmental variations, I developed adaptive calibration techniques for analog VLSI sensors such as the silicon retina.

Academic and Teaching Experience

1999-Present — Research Assistant, Computational Perception Lab
I worked on techniques for reconstructing scenes and camera locations from imagery. In addition to my thesis work, I also helped design and calibrate the "creature capture" rig for markerless motion capture. I advised students in the Digital Special Effects class with the match-move portions of their projects.

Fall 1998 — Teaching Assistant, Real World Lab
I evaluated and advised students on their semester long software engineering projects.

1995-1996 — Research Assistant, Electronic Design and Applications Group
I worked with a team on a prototype BJT based, 500MHz A/D and D/A.

1993-1994 — Student Assistant, Industrial Assessment Center
I conducted energy audits at different industrial sites. The results and methods of saving on energy related costs were compiled into a report as a service to the state of Florida manufacturing plants.

Industrial Experience

1998-Present	Integrated Device Technology Design Automation Engineer - I developed software to accelerate device-level placement and routing of full-custom chip layout. I was also responsible for developing a design CAD flow, including support for Cadence design entry, Synopsis verification tools and circuit simulation tools. As part of this work, I set up a methodology for company-wide updates and releases of our design kit.
1996-1998	Integrated Device Technology Design Engineer - My responsibilities included all phases of CMOS-based clock driver design, including schematic design, spice simulations, functional verification, physical layout and verification, and mask tapeout.
Summer 1992	Pratt & Whitney Intern - I wrote an AutoCAD interface to link inventory databases to floor plans.

Professional Awards and Activities

Intel Foundation Graduate Fellowship 2001-2002
Reviewer, International Conference on Computer Vision (ICCV 2001, 2003)
Reviewer, Conference on Computer Vision and Pattern Recognition (CVPR 2001, 2003)
Reviewer, Symposium Computer Animation (SCA 2003)
Reviewer, SIGGRAPH 2003
Member, IEEE

Publications

D. Steedly and I. A. Essa. Dimensionality Reduction for Sensor Trajectory Estimation. (submitted to CVPR 2004).

G. J. Brostow, I. A. Essa, D. Steedly, and V. Kwatra, Novel Skeletal Representation for Articulated Creatures. to appear in *Proceedings of European Conference on Computer Vision 2004*, Prague, Czech Republic, May 11-14, 2004.

D. Steedly, I. A. Essa and F. Dellaert. Spectral Partitioning for Structure from Motion. *Proceedings of the Ninth International Conference on Computer Vision (ICCV 2003)*

D. Steedly and I. A. Essa. Propagation of Innovative Information in Non-Linear Least-Squares Structure from Motion. *Proceedings of the Eighth International Conference On Computer Vision (ICCV 2001)*

D. Steedly, Optimum Scale Factor and Device Sizing for Power Consumption and Delay, *Integrated Device Technology Technical Report*, April 8, 1996

J. G. Harris and D. Steedly. Continuous-time Calibration of Analog VLSI Sensors. *Proc. of 1st International Conference on Electronics, Circuits and Systems*, Cairo, Egypt, December 19-22 1994.