

Corey Hahn

PERMANENT ADDRESS

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University of Nebraska – Lincoln (1998-2003)
Bachelor of Science Degree in Electrical Engineering
GPA – 3.64/4.0 **Graduated with Honors**

Pennsylvania State University (2003–2005)
Masters of Science Degree in Electrical Engineering
GPA – 3.71/4.0

WORK EXPERIENCE

Lockheed Martin Coherent Technologies– Louisville, CO April 2007 – Present

- Designed and tested low SWaP FPGA implementations for control of 25Mp FPAs including timing and data processing
- Translated several coherent digital holography algorithms from Matlab into VHDL and GPU (CUDA)
- Designed and implemented > 1 Gbps free space optical communication transmitter/receiver including packet and FEC
- Designed and implemented low latency, low SWaP (~85 Gflops) image processing algorithm for surveillance application
- Implemented real-time atmospheric turbulence correction on a low power, mobile platform
- Held lead Electrical Engineering role in low SWaP and high data rate LIDAR utilizing IR FPAs controlled by FPGAs
- Produced multiple FPGA prototyping and rapid turnaround algorithm developments for ground, air, and space platforms
- Developed and tested compact 5 channel coherent radiation tolerant LADAR receiver board and algorithms
- Led successful R&D effort for realizing signal processing algorithms on FPGA for compact LIDAR system
- Wrote, tested, and implemented DSP algorithms in Virtex FPGAs for 1.5 Gbps ADCs data streams for aerosol detection
- Debugged and troubleshooted various RF/Analog signal processing systems and boards
- Designed and tested optical coherent receiver and electrical control systems for several LIDARs

Lockheed Martin – Eagan, MN June 2006 – March 2007

- Developed Labview and Matlab software to automate testing of Deepwater HFTS system (HF Radio)
- Developed Matlab simulation software system for VH-71 cosite analysis of navigation systems on US-101

Lockheed Martin – Syracuse, NY July 2005 – May 2006

- Analyzed back end processing on Socrates data, a turbulence detection LIDAR
- Led effort to develop a novel disruptive Litz wire for radar applications
- Assisted in developing the testing software (Labview) used on production sonar systems
- Conducted testing of production and developmental acoustic sonar sensors

Penn State, University Park, PA - *Graduate Research Assistant/Tunable Filter Project* August 2003 – May 2005

- Completed thesis entitled “Fabrication of Long Period Gratings for Ultra Fast Tunable Filter”
- Developed ultra thin long period gratings and an electro-optic polymer cladding for tunable filter design
- Fabricated gratings by depositing thin films using sputtering and high power UV lasers
- Wrote and awarded proposal for development of optical filters using new photonic crystal fiber

UNDERGRADUATE EXPERIENCE

Cooperative Student – Boeing St Louis January – May 2001 & January – August 2002

- Assisted in antenna range testing of F-18 radar and antennas; wrote testing programs for RF test equipment in LabView
- Worked on Electro-Optic (IR) programs that included F-18 ATFLIR, modeling of commercial FLIRs for Coast Guard, and advanced FLIR designs

PUBLICATIONS

- “An athermal design for a all-fiber, ultra fast, widely tunable wavelength filter,” AVFOP 2004, St. Louis, MO
- “An athermal design on LPG based tunable filter,” Photonics West 2004, Denver, CO
- “Highly Sensitive Harsh-Environment Sensor Based on Innovative Long-Period Gratings,” Photonics East 2004, Philadelphia

Other Experience

- Extensive experience with LabView, Matlab, Linux, Verilog, VHDL, Java, Xilinx ISE, Modelsim
- Participated in Cornhusker Marching and Pep Bands 1998-2003
- Optical Society of America – Student Branch Chapter President 2004-2005
- Worked on family farm in rural Nebraska