

Citizenship

United States citizen.

Education

Michigan Technological University, Houghton, MI, USA
Bachelor of Science in Electrical Engineering (June 2006)
Minors in Mathematics and Physics

Relevant Coursework Including:

Wavelet Analysis	Digital Signal Processing
Nonlinear Dynamics	Partial Differential Equations
Numerical Methods for PDEs	Analog Electronics Design
Advanced Electromagnetics	

Employment

Electromagnetic GeoServices, Trondheim, Norway **Jan 2014 - Aug 2016**

Scientist - Signal Processing

- Manager of a project focusing on Digital Signal Processing (DSP) methods for deconvolution.
- Development of code for deployment on 6000+ core Linux cluster.
- Development of C++ code for spectral estimation techniques.
- Optimization of legacy C++ DSP codebase.

Electromagnetic GeoServices, Trondheim, Norway **Jan 2008 - Jan 2014**

Senior Development Engineer

- Digital hardware development of embedded mixed-signal data logger systems for sub-sea use.
- Development of a remote embedded real-time data processing system with satellite uplink.
- Design and implementation of DSP algorithms for embedded systems in C, Assembly, and VHDL.
- Oversight of prototype PCB layout and production.

Electromagnetic GeoServices, Trondheim, Norway **Aug 2006 - Dec 2007**

Field Geophysicist

- Initial processing & quality evaluation of Controlled Source Electromagnetic (CSEM) data.
- Development of software for quality control of CSEM data.
- Documentation of procedures and software.

Research (MTU), Houghton, MI, USA **Apr-Dec 2005**

Numerical Simulation of Electromagnetic Devices

- Use of COMSOL and Ansoft HFSS for finite-element simulation of proprietary devices.
- Use of empirical models to validate numerical solutions.

Additional Technical Experience

Personal Projects

- Development of an audio amplifier using the high power GU-81M tube.
- Development of an octal desk clock based on color addition.

Activities

- Helmsman on a 5 crew member sailing team.

Languages & Technologies

Devices: AVR8, AVR32, Xilinx Zynq, Xilinx FPGAs & CPLDs
Languages: Frequent use: C++, C, Python, Matlab
Experienced: Assembly (68k, AVR8, AVR32), VHDL, Java
Software: Linux, GDB, Valgrind, SVN, IAR studio, Xilinx ISE, SPICE, Schematic and PCB Design (Mentor Graphics, KiCad).
Lab Equipment: Oscilloscope, Logic Analyzer, Vector Analyzer, Dynamic Signal Analyzer, SMT soldering.