

Christopher Haller

(971) 404-9783 ◦ chris@christopherhaller.com

Work Experience:

Hydro Electrical Engineer (Career) – Full Time – PacifiCorp Energy, Hydro Resources Group
January 2011 to Present Portland, OR

- PLC control design and implementation including electrical design, programming, field commissioning, and integration with hydro SCADA network using Modicon family of PLCs.
- Electrical power and equipment design for hydroelectric facilities including switchgear & MCC sizing / control, protective relays, generator & plant automation, and protective systems.
- Accounting & budgeting of projects in SAP (appropriation, accruals, forecasting, requisitioning).
- Project specification authoring for contract work. Acquisition/management of contract services.

Research & Teaching Assistantships – Half Time – Wallace Energy Systems and Renewables Facility
September 2008 to June 2010 Corvallis, OR

- Control design and implementation with dSPACE (DSP/PLC), Simulink, MATLAB, and ControlDesk (HMI) for a 52kW linear generator testing machine.
- Electro-mechanical system characterization (frequency domain) of 52kW linear gen. testing machine.
- Generator design of a 400kW ocean drive PMAC with genetic algorithm and finite element analysis.
- Development and instruction of course materials for engineering labs: Power Electronics (variable frequency drive design), Electromechanical Energy Conversion (motor characterization) [using dSPACE (DSP/PLC) and ControlDesk (HMI)], and Power Systems Analysis.

Engineering Intern – Full Time – Tekbots
June 2007 to September 2007 Corvallis, OR

- Design of wireless interface (Bluetooth) for embedded system robotic platform.
- Embedded system programming (ANSI-C) wireless prototype design, and testing.
- Led engineering team of 3 in development of electronics design laboratory manual.

Engineering Intern – Full Time – Flextronics International
April 2006 to December 2006 Corvallis, OR

- PCB design of optical laser receiver board, and optical laser transmitter board.
- Statistical performance analysis, troubleshooting, and repair, of robotic disk testing equipment.
- Test equipment assembly including panel and structured wiring. Precision hardware used for testing HP's \$6 Billion ink cartridge lines, and robotic slim-line optical disk testing.

Test Technician / Engineering Assistant – Full Time – North West Rail Electric Inc.
June 2001 to September 2005 Portland, OR

- Electrical Panel Design in AutoCAD to meet customer electrical and mechanical specs.
- Testing and troubleshooting of ladder logic control, motor drives (VFD), generator controls, pump controls, HVAC controls, DC control and charging, contactors, telephony, and switch gear.
- Design of Testing Equipment including logic, harnesses / physical layouts, and system safety.
- Engineering work in schematic layout, 3 phase load balancing, and schematic customization.
- Initiated circuit board program by designing PCBs now incorporated into N.W. Rail products.

Tech Support / Assistant – Part Time / Contract – Taylor's Portable Welding
June 1997 to April 2010. Milwaukie, OR

- Structured electrical wiring of welding equipment (Lincoln Diesel 250 and fleet vehicles).
- Developed company website, AutoCAD work, computer support, network support, and tax prep.
- Field work for commercial / industrial customers including preparation, finishing, light welding.

Christopher Haller

(971) 404-9783 ◦ chris@christopherhaller.com

Activities / Certifications:

- Engineer in Training (FE exam), April 2009: #82720EI.
- IEEE Member, 2004 – present: #80063520.
 - IEEE Oregon State University Chapter President '06–'08, Webmaster '05–'06.
- Rescue Diver, certified: #09110L3966.
- Emergency Responder, certified: #10060M5143.
- Smith System Safe Driving Certified 2011.
- National Electric Code 2011 AVO Institute Certified.

Programming / Software Experience:

- **Design / Simulation:** AutoCAD, AVR Studio 4, Cadence (IC Design, System Design & Verification), Concept IEC 2.6 (Quantum, Momentum), CodeWarrior, ControlDesk (HMI for dSPACE), Eclipse, EWB(Multisim & Ultiboard 10), HSPICE, iFIX, MATLAB, MPLAB IDE, Mastercam, PowerWorld, PSPICE, SAP, and Simulink (dSPACE DSP).
- **Office:** MS Office (Excel, Outlook, PowerPoint, Publisher, Visio, Word), MS Project, LaTeX.
- **Operating Systems:** Windows (3.11 to 7), MS DOS, Linux (Red Hat & Ubuntu), and UNIX.
- **Programming Languages:** Assembly (Atmel & Microchip), C, Concept IEC (FBD Ladder, ST, IL, DFB, SFC), Java, MATLAB, Simulink, and Visual Basic.

Tool Experience:

- **Electrical:** Ammeter, analog and digital oscilloscopes, function generator, multimeter, power supply (linear & switching) soldering iron, strain & force gauges, stroboscope, temperature probes, variety of wire interconnect crimping systems, and a variety of wire stripping systems.
- **Other Tools:** Basic knowledge of welding (MIG, stick, TIG), break, drill press, jump shear, lathe (CNC & manual), mill (CNC & manual), horizontal/vertical band saw, and a variety of powered and manual metal and wood working tools.

Education:

Master of Science Electrical Engineering – Oregon State University – Graduation: June 2010

- **Thesis:** *Calibration, Characterization, and Linear Quadratic Gaussian Estimation of Sensor Feedback Signals for Novel Ocean Wave Energy Linear Test Bed.*
- **Coursework:** Systems Dynamics & Control, Embedded Systems Design and Programming (ANSI-C), Contemporary/Renewable Energy, Dynamic Motor Control [PID design with dSPACE (DSP/PLC), Simulink, MATLAB, and ControlDesk (HMI)].

Bachelor of Science Electrical Engineering – Oregon State University – Graduation: August 2008

- **Senior Design Project:** Fully Electric Motorcycle. Project lead for group of 7 engineers, designed power management, control, SCADA, and mechanical systems design. Designed multi-layer analog/digital PCB for control of motorcycle. Projection and management of project budget.
- **Coursework:** Power Electronics [240/480 V Adjustable Speed Drive design], Motor Design, Motor Control, Industrial Power Systems Analysis, Digital Design, Computer Architecture.