

Seattle, USA

Mobile: +1 (847) 961-0243

kschoedl@gmail.com

ORCID: 0009-0005-1689-7945

[linkedin.com/in/kmschoedl/](https://www.linkedin.com/in/kmschoedl/)

katelynschoedl.github.io

# Katelyn M. Schoedl

Electrical Engineer | Research Coordinator

**Electrical engineer and research coordinator with experience in hardware design for high-speed digital communication, photonic systems, and academic research processes for geophysical science applications.**

My background includes avionics sensor design at Amazon, signal integrity engineering at Microsoft, and academic research coordination for geophysics and environmental sensing groups at the University of Washington. I am interested in experimental design workflows, precision measurement systems, and field operations for high-quality scientific data collection. I am actively seeking roles in applied research and instrumentation alongside future graduate study at the intersection of hardware engineering, experimental physics, and geophysical sciences.

## EDUCATION

### Bachelor of Science in Electrical Engineering

*University of Illinois at Urbana-Champaign*

August 2015 – May 2019

*Champaign-Urbana, IL*

- Relevant coursework: Electromagnetics, Signal Processing, Semiconductor Physics, Analog and Digital Circuits, IC Theory & Fabrication.
- Internships: GE Global Research (Summer 2016 & 2017), Amazon (Summer 2018).
- Exchange Semester: Technical University of Denmark (Autumn 2017).

## TECHNICAL EXPERIENCE

### Research Coordinator (Photonics)

*University of Washington, College of the Environment, Department of Earth & Space Sciences*

May 2024 – May 2025

*Seattle, WA*

- Supported deployment, operation, testing, and maintenance of photonics-based Distributed Acoustic Sensing (DAS) data acquisition systems for seismic, oceanic, and cryospheric research.
- Coordinated technical activities with external research partners and funding agencies; acted as operational liaison between research groups and departmental administration by managing procurement, inventory, shipping, and customs documentation.
- Developed and maintained experimental system workflows for large-volume data management, metadata documentation, and technical reporting across multi-institution collaborations; maintained project websites and supported data dissemination platforms.
- Supported safety and logistical planning and permitting for remote field deployments and instrumentation campaigns.

### Hardware Engineer II (Signal Integrity)

*Microsoft, Cloud AI Hardware and Advanced Signal Engineering*

September 2021 – September 2023

*Seattle, WA*

- Modeled and analyzed end-to-end signal integrity performance across FPGA die, packages, connectors, and board-level interconnects.
- Conducted high-speed hardware validation and SI characterization for enterprise AI and cloud infrastructure platforms.
- Performed electromagnetic and circuit-level simulations using tools such as ANSYS HFSS and Keysight ADS.
- Supported board-level stackup design, routing constraints, and interference mitigation strategies to resolve system integration issues.
- Executed laboratory measurements, including S-parameters and eye-diagram analysis, using VNA and time-domain methods.
- Supported contract PCB design reviews and monitored progress through manufacturing readiness.

### Hardware Design Engineer (Satellite Avionics)

*Amazon, Project Kuiper*

April 2020 – September 2021

*Seattle, WA*

- Supported early-phase (pre-PDR) satellite avionics sensor subsystem design and development.
- Authored design review documents and test validation for electrical, thermal, and mechanical performance.
- Defined early avionics sensor requirements from component to system level.
- Designed and reviewed schematics, PCB layouts, and housings for sensor prototypes.
- Performed board bring-up, debugging, and validation.
- Supported hardware radiation test campaigns.

### Technical Program Manager (Robotic Automation Prototypes)

*Amazon, Worldwide Technical Engineering Services*

June 2019 – March 2020

*Seattle, WA*

- Supported nationwide deployment of PLC-based robotic automation prototypes across fulfillment centers.
- Managed schedules, logistics, and readiness planning for pilot programs.
- Coordinated on-site installations, commissioning, and documentation with engineering and operations teams.
- Tracked development milestones through production and operational handoff.
- Supported standardization of risk reviews and vendor evaluations.

## SKILLS

### Communication

English (native), Spanish (A2), French (beginner)

### Programming

Python, C/C++, MATLAB, JavaScript, LaTeX, Markdown

### Development

Git, Jupyter, Linux (Bash/Shell), Microcontrollers, ArcGIS, Docker, HW/SW RAID storage, HPC remote systems

### Instrumentation

Distributed Acoustic Sensing (DAS), Data Acquisition Systems (DAQ), Noise Characterization, Sensor Calibration, Signal Integrity Analysis, Channel Simulation, Schematic Design, PCB Layout, Cyclotron Hardware Radiation Effects Testing

### Field Operations

Hands-on system deployment, field logistics coordination, remote system monitoring, experimental setup and testing, test planning, data management, technical documentation, American Mountain Guides Association (AMGA) Professional Member

## ACTIVITIES

### Field & Alpine Activities

- Glacier travel, alpine climbing, skiing, and cross-training; prospective AMGA Alpine Guide.
- Experience planning safety, navigation, logistics, and remote system management for field exploration in diverse environments.

**Certifications**

- Wilderness First Responder (WFR) with AED and CPR Certification, Yosemite, CA (November 2025)
- AIARE 1 Avalanche Training Certification, Skyward Mountaineering, Silverton, CO (December 2025)
- Avalanche Companion Rescue Training, Alpine Ascents International x SheJumps, Snoqualmie, WA (January 2026)

**Professional Affiliations**

- American Mountain Guides Association (AMGA) Professional Member
- American Alpine Club (AAC) Member
- Boeing Alpine Society (BOEALPS) Member
- SnowGoat Skimo Volunteer
- Washington State Rare Plant Monitor

**Conferences & Workshops**

- BOAT Ocean Acoustics Workshop, University of Washington (2025) Two-day intensive workshop on experimental signal processing theory.
- DesignCon, Santa Clara, CA (2022) Industry conference on high-speed signal integrity measurement and PCB manufacturing.