

Clara Schaertl Short

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🌐 <https://cshort.io>
they/them or she/her
Available: June 2019

*An electrical engineer with interdisciplinary experience
whose work earns difficult clients' trust and confidence.*

Education

- Aug. 2017–
May 2019 **M.S., Electrical and Computer Engineering** (Integrated Circuits and Systems),
University of Texas at Austin, Austin, TX, 3.86 (in progress).
- Selected coursework: Microarchitecture, High-Speed Computer Arithmetic, VLSI CAD and Optimization, Design for Low Power and Robustness, Embedded System Design and Modeling.
 - Selected projects: “Energy-efficient demodulation and decoding using configurable bit-width truncated arithmetic” (with M. Hennessy); “Comparison of high-level synthesis languages for bandwidth-intensive tasks” (with B. Boesch and Y. Karundia).
 - Technologies: Verilog, HSPICE, C, Tcl, Cadence (Virtuoso), Synopsys (DC/ICC/PT).
- June 2005–
May 2009 **B.S., Electrical Engineering**, *United States Naval Academy*, Annapolis, MD, 3.83.
- Publications: C. R. Anderson, G. Schaertl, and P. Balister, “A low-cost embedded SDR solution for prototyping and experimentation,” in *Software Defined Radio Technical and Product Exposition (SDR'09)*, Washington, DC, Dec. 2009.
 - Honors: Tau Beta Pi.

Experience

- May 2018–
Aug. 2018 **Intern, Silicon Validation (Debug and Regression)**, *Apple Inc.*, Austin, TX.
- Developed automatic collateral generation tools for a new SoC debug feature, saving 10-20 hours of engineering effort per stepping.
 - Refactored existing debug tools to support more streamlined collateral delivery.
 - Technologies: Python, C++, Tcl, Bash, SQLite.
- June 2014–
Dec. 2017 **Control Systems Engineer**, *Mangan Inc.*, Long Beach, CA.
- Instrumentation, control, and functional safety engineering in oil refineries.
 - Introduced a tool for semi-automatic PLC software validation and obtained client approval for its use with safety-critical systems, saving 80-100 hours of engineering effort per project.
 - Reverse engineered a complex legacy control system for six gasoline blender analyzers, developed the hardware and software architecture for its replacement, and implemented a new standard library for the client's analyzer PLC controls.
 - Technologies: Allen Bradley (PLC/SLC/CLX), Honeywell (TDC/Experion), Triconex (Tri-Station/Safety Validator), AutoCAD (2D), Excel.
- May 2009–
May 2014 **Submarine Officer**, *United States Navy*, Kings Bay, GA/Atlantic Ocean.
- Shift supervisor for day-to-day operations, maintenance, and testing of a \$2bn warship with a crew of 160. Line manager for 12 electricians and electronics technicians.

Memberships and Certifications

- Aug. 2017 Graduate Student Member, IEEE
Dec. 2015 Professional Engineer (EE, California)