# Alex Anderson

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## Academics

**Texas A&M University, *Electrical Engineering*** ..... M.S. Expected 05/2024
*Analog & Mixed-Signal Specialization*
Relevant Coursework: Analog VLSI Design, Digital IC Design, Broadband Circuit Design

**Texas A&M University, *Electrical Engineering*** ..... B.S. 05/2023
*Analog & Mixed-Signal Specialization (GPA 3.9)*
Undergraduate Thesis: Design of a Radiation-Hardened Optical Transceiver
Minor in Computer Science

## Experience

**Analog Design Intern, *Texas Instruments*** ..... 06/2023 - 08/2023
High-Speed Signal Conditioning Group: Dallas, TX
- Designed transmit architecture for 12 Gb/s retimer including 3-tap FFE in 65nm CMOS.
- Verified design over PVT corners, mismatch, and industry compliance requirements.
- Floorplanned layout and extracted parasitics to observe impact on specifications.
- Performed system-level simulations with S-parameter channel and connector models.

**Undergraduate Research Assistant, *Texas A&M University*** ..... 08/2022 - 05/2023
Analog and Mixed Signal Center: S. Palermo
- Verification and measurement of a radiation-hardened optical transceiver in 180nm CMOS.
- Designed 6.25 Gb/s optical receiver architecture for second generation test chip.
- Completed undergraduate thesis under University Research Scholars (URS) program.

**Applications Engineering Intern, *Texas Instruments*** ..... 06/2022 - 08/2022
High-Speed Signal Conditioning Group: Dallas, TX
- Created internally and externally published documentation over TI family of USB 2.0 redrivers.
- Provided support, review, and debugging for customer designs and layouts.
- Obtained lab measurements, compliance reports, and eye diagrams for redrivers, retimers, muxes.

## Projects

- 10 Gb/s clock and data recovery circuit with a half-rate binary PD in 90nm CMOS
- 12 Gb/s voltage-mode transmitter with 3-tap FFE in 65nm CMOS
- 6.25 Gb/s radiation-hardened optical transceiver in 180nm CMOS
- Fully differential op-amp with common-mode feedback in 180nm CMOS

## Publications

**A. Anderson**, "Design of a Radiation-Hardened Optical Transceiver," *Undergraduate Thesis*, Texas A&M University, Department of Electrical Engineering, Apr. 2023.

Y.-L. Luo, C. Hong, **A. Anderson**, D. Dolt, and S. Palermo, "A Radiation-Hardened Optical Transceiver in 180nm CMOS Technology," *2023 IEEE Nuclear & Space Radiation Effects Conference.*

## Skills

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| **Analog Design** | Wireline transceiver, op-amp, bandgap reference, LDO |
| **Software** | Cadence Virtuoso, Maestro, OrCAD, Allegro, LabVIEW, Linux, LaTeX |
| **Programming** | MATLAB, Python, C++ , Java, HTML/CSS/Javascript |