Ramy Rady

LinkedIn:	RamyRady	email:	ramyrady@tamu.edu
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Apple Silicon Team | Analog-Mixed Signal Electrical Engineer

A passionate and driven electrical engineer works at Apple on the Silicon Engineering team. Previously an award-winning Ph.D. candidate and IEEE-MTT Student Ambassador.

Work Experience

May 2025 – Present	Apple Inc., Silicon Engineering Group **SerDes Transceiver Analog-Mixed Signal Design Engineer** Working on next-generation high-speed SerDes IPs for Apple Silicon SoCs Responsible for design, simulation, and validation of analog front-end (AFE) and digital circuits at the transistor levels Collaborating across PHY, packaging, and system teams to optimize performance and power Contributed to silicon chips currently in products, lab characterization, and correlation to simulations
Jan. 2019 – April 2024	Texas A&M University, Texas, USA **RF Silicon Designer and automatic control for Photonic systems** System Modeling, Design, Tape-out & characterization Automatic bias control and stabilization loop for system (TIA, ADC, DAC, Microcontroller) running machine learning (ML) algorithms Developed a ML algorithm to dynamically adjust pole locations Wrote five research proposals to various funding agencies
May 2023 – Aug. 2023	Meta Reality Labs, Washington, USA **Research Scientist Intern in CMOS Drivers and Stabilization Loops** Developed electronics driver/TIA in 130nm for zonal illumination photonic chip control and stabilization Improved AR/VR display efficiency and reduced power consumption Submitted three patents (Laser-Driver, MEMS Driver, Auto-Stabilizer)
May 2020 – Aug. 2020	Qualcomm Inc., Dallas, Texas, USA **Engineer Design Intern in mm-wave IC R&D** Designed mm-Wave Power Amplifiers Built a calculator to estimate PA lifetime (reliability)
May 2017 – Nov. 2018	Fraunhofer Institute for Integrated Circuits, Bavaria, Germany **R&D of CMOS IC for AR Technology in Vehicles** Tape-out of a 10-GHz TRX & PLL chip Sold to Bosch for BMW product

Education

Jan. 2019 May 2024	Ph.D. Student in Electronics and Computer Engineering. **Texas A & M, USA**, GPA: 3.714/4 Advisor: Kamran Entesari
Feb. 2015 June 2017	Master of Science in Electronics and Computer Engineering. **Istanbul Sehir University, Turkey**, GPA: 4/4 Thesis: "Ultra-Low Power, Low-Voltage Transmitter at ISM Band for Short Range Transceivers"
Sep. 2008 Jun. 2013	Bachelor of Science in Electronics and Communications Engineering **Ain Shams university, Cairo, Egypt**. Graduated with Honors, Graduation Project's Grade: Excellent.

List of Publications

Ramy Rady: Google Scholar

Conferences

1. **R. Rady**, C. K. Madsen, S. Palermo and K. Entesari, "Automatic Tuning of Microwave Silicon Photonic Ring Resonators," 2023 IEEE 23rd Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems
2. **R. Rady**, G. Choo, C. Madsen, S. Palermo, and K. Entesari, "External Modulator-Based Automatic Tuning of Reconfigurable Silicon Photonic 4th-Order APF-based Pole/Zero Filters," in OFC 2021.
3. **R. Rady**, C. Madsen, S. Palermo and K. Entesari, "A Silicon Photonics Automatically-Tunable mm-wave Remote Antenna Unit," 2022 IEEE MWP
4. **R. Rady**, Y. -L. Luo, C. Madsen, S. Palermo and K. Entesari, "A mm-wave CMOS/Si-Photonics Hybrid-Integrated Software-Defined Radio Receiver Achieving$> 80-dB$ Blocker Rejection of $< \quad 10-dBm$ In-Band Blockers," 2023 IEEE Radio Frequency Integrated Circuits Symposium (RFIC)
5. P. Yan, Chaerin Hong, Po-Hsuan Chang, Hyungryul Kang, Dedeepya Annabattuni, Ankur Kumar, Yang-Hang Fan, Ruida Liu,**Ramy Rady**, Samuel Palermo, "A 12.5 Gb/s 1.38 mW Inverter-Based Optical Receiver in 28 nm CMOS," 2022 IEEE 65th MWSCAS
6. K. Entesari, S. Palermo, C. Madsen, G. Choo, **R. Rady**, S. Cai, and B. Wang, "Automated Tuning for Silicon Photonic Filters," in OFC 2022
7. Y. -L. Luo, A. Ershadi, **R. Rady**, K. Entesari and S. Palermo, "A Power-Efficient 20–35 GHz MZM Driver with Programmable Linearizer in 28nm CMOS," 2021 OFC

Journals

8. **R. Rady**, C. Madsen, S. Palermo and K. Entesari, "A 20–43.5-GHz Wideband Tunable Silicon Photonic Receiver Front-End for mm-wave Channel Selection/Jammer Rejection," in Journal of Lightwave Technology 2023.
9. **R. Rady**, et.al., "An Ultra Low Power Integrated Radio TX Link Supplied From a Switched Capacitor DC–DC Converter in 65-nm CMOS Achieving 2 Mbps," in IEEE Transactions on Circuits and Systems II 2020.
10. Y. -L. Luo, **R. Rady**, K. Entesari and S. Palermo, "A Power-Efficient 20–35-GHz MZM Driver With Programmable Linearizer for Analog Photonic Links in 28-nm CMOS," in IEEE TMTT 2023.

Media Attention, Awards and Honors

RWW 2023	Best Student Paper Award Finalist
RFIC 2023	Best three-minute thesis finalist
ISSCC 2024	Student Travel Grant
TAMU 2019-2024	Graduate Research Scholarship, Quality Graduate Student Award and Graduate Assistant Lecturer (GAL): a Teaching Fellowship
Article and News	Doctoral student bridges gap between electronics and optics
	Texas A&M student designs chip capable of revolutionizing data rates

Graduation Project and Master Thesis

Master	Ultra-Low Power, Low-Voltage Transmitter at ISM Band for Short Range communication supplied with SC-DC-DC converter
Bachelor	Smart Dust low-power PLL and receiver at ISM band (902 MHz)

Technical Tool Skills

EDA Tools	Cadence (Virtuoso Schematic/Layout Editor, ADE, VerilogA/AMS)
RF Simulators	Sonnet,Ansys HFSS, Anasoft, ADS, Microwave office
Programming Lang.	C/C++, MATLAB, Python w./ ML algorithms, and Arduino
Scripting Lang.	TCL/TK and Perl