Research Opportunities

Advisor: Prof. Samuel Palermo, Department of Electrical and Computer Engineering
Contact: spalermo@tamu.edu

Prof. Palermo currently has postdoc and research assistantship (RA) positions available in the areas of RF photonics, high-speed optical data communication transceivers (SERDES), high-speed electrical SERDES, and high-speed ADCs.

RF Photonics: Current projects include a mm-wave silicon photonic front-end consisting of optical modulators and tunable filters, photonics beamforming networks, and photonic remote antenna units for radio over fiber applications. All the mention projects involve both photonic integrated circuit (PIC) design and electrical IC design for the mm-Wave and RF CMOS interface circuits. Thus, positions are available both for photonic and electronic IC design.

Photonic IC Designer Requirements: a) applicants with photonic devices/systems and/or electromagnetics research background are preferred. b) familiarity with photonic, device, and/or electromagnetic CAD tools (Lumerical, Sentaurus, HFSS, ADS, Cadence), c) integrated circuit layout experience, d) strong motivation to do research and work in teams, e) good communication skills, f) applicants with a previous publication record and/or industry experience will be given priority.

Electronic IC Designer Requirements: a) applicants with CMOS IC design research background are preferred. b) familiarity with IC design CAD tools (Cadence, Mentor, Synopsys) and MATLAB, c) integrated circuit layout experience, d) strong motivation to do research and work in teams, e) good communication skills, f) applicants with a previous publication record and/or industry experience will be given priority.

High-Speed Optical and Electrical SERDES/ADC Projects: Multiple high-speed optical transceiver projects targeted at data rates ranging from 25Gb/s-112Gb/s that utilize different optical devices. Multiple high-speed electrical transceiver projects ranging from low-power DRAM interfaces to 112Gb/s ADC-based serial links. ADC design for >64GS/s rates.

Requirements: a) applicants with CMOS IC design research background are preferred. b) familiarity with IC design CAD tools (Cadence, Mentor, Synopsys) and MATLAB, c) integrated circuit layout experience, d) strong motivation to do research and work in teams, e) good communication skills, f) applicants with a previous publication record and/or industry experience will be given priority.

Interested candidates should email their resumes to Prof. Palermo at spalermo@tamu.edu. Please also check out Prof. Palermo's website http://www.ece.tamu.edu/~spalermo/