



Professor Sheng-Lyang Jang

Ph.D., University of Florida, U.S.A.

Field of study:

- 1) Radio-Frequency Integrated Circuits and Systems
- 2) Semiconductor Devices
- 3) Photonics

Key words: RF, MOS

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我們研究群的研究內容整合了不同領域知識

Interdisciplinary knowledge includes:

Semiconductor process-Device-Integrated circuits-Photonics-Communication systems

畢業後容易在產業界找到好工作 繼續升學

不景氣時不容易被裁員

實驗室的研究成果比美美國一流大學研究所

畢業生有自信心 能獨立開發產品 與台大學生平起平坐

1. The Subject of Research

(1) Design and implement analog front-end circuits using the CMOS & other

technologies.

1GHz-200GHz circuits for RF, analog system or mixed-signal integrated system application.

The circuits include power amplifier, low noise amplifier, mixer, voltage controlled oscillators, and injection locked frequency dividers.

Design and implementation of passive on-chip components: microstrip line, inductor, filter and antenna.

RF system design

(2) Nanometer semiconductor devices: modeling and characterization.

Spin-electronics, Nanometer silicon-based semiconductor devices: process and design, quantum tunneling current, hot-carrier stress. Design of polysilicon thin film transistor and its circuit for the LCD application

3) Photonics

OptoElectronic Integrated Circuits (OEIC). Optical and RF Electronic system design. Photodetector, solar cell, laser diode, LCD.

Integrated solar cell with IC.

2. Publications:

Journals:

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