2009-12-01

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

URL: http://homepage.ntust.edu.tw/SLJJJ/

Email: sljjj@mail.ntust.edu.tw

Phone: 886-2-27376383(voice), 886-2-27376424(Fax)

我們研究群(光半組 系統組 光電所)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
III-V Compound Semiconductors. OptoElectronic Integrated Circuits (OEIC).
Optical and RF Electronic system design. Photodetector, solar cell, laser diode, LCD.
Integrated solar cell with IC.

4) MEMS and sensor.

2. Publications:

Journals:

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