

# NICK CHANG

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## OBJECTIVE:

Mixed-signal IC in Communication Devices

## EDUCATION:

University of California, Davis, ECE,	Ph.D.	9/99 – pres.
Columbia University, Electrical Engineering,	M.S.E.E.	9/98 – 5/99
Columbia University, Electrical Engineering,	B.S.E.E.	9/94 – 5/98

## PUBLICATION:

Co-author of the *Solution Manual* to an undergraduate Microelectronics textbook (due in Fall, 2001) 12/00 – 4/01

## RESEARCH PROJECTS:

*DSP programming* for a Real-time background calibration pipeline ADC for gain, offset correction. 3/01 – pres.

## WORKING EXPERIENCE:

<i>Toshiba Engineering Corp., Tokyo, Japan</i>	<i>(Product Engineer)</i>	6/96 – 8/96
• To tailor PLA (programmable logic array) for customer needs using Ladder Language.		
<i>Toshiba America Electronic Components Inc., San Jose</i>	<i>(Testing Engineer)</i>	7/97 – 9/97
• To verify the compliance of a digital set-top box system and a satellite broadcast decoder.		
<i>Lucent Technologies, Inc, Allentown, Pennsylvania</i>	<i>(Member of Technical Staff)</i>	6/99 – 8/99
• To design 1.0/1.25 Volts, 1 GHz, 5-bits Frequency Divider (custom cells) used in PLL.		

## RELEVANT COURSE WORKS/PROJECTS:

Solid-state Devices & Materials (semi-conductor, PN Junction device, Junction Transistors)  
Digital Image Processing (thresholding, halftoning, filtering, MPEG) - **Project:** JAVA image filter  
Design Laboratory - **Project:** IF amplifier 10.7 MHz of a FM receiver  
Analog IC Design in VLSI (ADC, DAC, switch capacitor circuit) - **Project:** a DAC and a 4<sup>th</sup> pulse-shaping filter  
Communication Electronics (AM, FM transceivers, PLL) - **Project:** Low-power IF amplifier, 10 MHz  
VLSI (CMOS, BiCMOS, fabrication process) - **Project:** 16 bit booth-encoded, array multiplier  
Analog IC Design (Opamps) **Project:** Audio signal CMOS operational amplifier  
MOSFET Device Modeling - **Project:** Modified EKV model for a long-channel MOSFET device  
Discrete-time Signal Processing - **Project:** 6<sup>th</sup> order Butterworth low-pass digital filter  
Visual System Information - **Project:** Motion Video Summary Model  
Linear Systems Theory (Fourier Transform, Mix-signal, A/D, D/A)  
Control Theory (Stability, Root-locus, Margins, Nyquist Stability)  
Analog MOS IC Design for signal processing (sampled-data, continuous-time filters)  
Advance Analog Circuit Design (Noise, Distortion analysis in MOSFET)  
Adaptive Systems (Adaptive filters designs)

## ADDITIONAL SKILLS:

- Programming languages & scripts: C, Pascal, HTML, JAVA, JAVA scripts
- Simulators & CAD tools: HSPICE, IRSIM, Switcap, MAGIC, MathCAD, Celerity, Cadence
- Languages spoken: Mandarin, Taiwanese, English, Japanese

## ACTIVITIES

- Show host in the original WKCR 89.9 FM radio station, Mandarin/Taiwanese Show, New York 1995 - 1999

## ACADEMIC HONORS:

- Dean's list 1994 - 1996