

Biographical Sketch Randall Geiger

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a. Professional Preparation

University of Nebraska	B.S.	Electrical Engineering	1972
University of Nebraska	M.S.	Mathematics	1973
Colorado State University	Ph.D.	Electrical Engineering	1977

a. Appointments

7/95 - Present	Professor, Electrical & Computer Engineering Department Iowa State University, Ames, IA (2002- present Willard and Leitha Richardson Professor)
1/91 - 7/95	Professor and Chairman, Electrical Engineering & Computer Engineering Department Iowa State University, Ames, IA
9/77 - 12/90	Assistant Professor, Associate Professor and Professor Texas A&M University, College Station, Texas 77843
1/82 - 12/85	President, World Instruments, Inc.

b. Publications (R. Geiger is author or co-author on approximately 240 journal and conference publications)

5-selected recent publications

1. Y. Cong and R. L. Geiger, "A 1.5-v 14-bit 100-MS/s self-calibrated DAC", IEEE Journal of Solid State Circuits, pp. 2051-2060, vol. 38, no. 12, December 2003 and IEEE International Solid State Circuits Conferences, pp. 128-129, Feb. 2003.
2. K. Parthasarathy, T. Kuyel, D. Price, L. Jin, D. Chen, and R. L. Geiger, "BIST and Production Testing of ADCs Using Imprecise Stimulus," ACM Trans. Design Automation of Electronic Systems, Vol. 8, No. 4, pp. 522 - 545, Oct 2003.
3. Y L. Jin, K. Parthasarathy, T. Kuyel, D. Chen and R.L. Geiger "Accurate Testing of Analog-to-Digital Converters Using Low Linearity Signals with Stimulus Error Identification and Removal", IEEE Trans on Instr. and Measurement, Vol 54, pp. 1188-1199, June 2005.
4. Oletta, B., Jiang, H. Chen, D.J. and Geiger, R.L. "A Deterministic Dynamic Element Matching Approach for Testing High Resolution ADCs with Low Accuracy Excitations", IEEE Trans on Instr. and Measurement (to appear).
5. Y. Lin, D. Chen and R.L. Geiger "Yield Enhancement With Optimal Area Allocation for Ratio-Critical Analog Circuits", IEEE Trans. on Circuits and Systems I, Vol 53, pp. 534-553, March 2006.

5-other publications

1. L. Jin, K. Parthasarathy, T. Kuyel, D. Chen and R. L. Geiger, "Linearity Testing of Precision Analog-to-Digital Converters Using Stationary Nonlinear Inputs," Proceedings of the 2003 International Test Conference, pp. 218-227, Oct 2003.
2. M. M. Amourah, H. Bilhan, F. Ying, L. Fang, G. Xu, R. Chandrasekaran, and R. L. Geiger, "A 9b 165MS/s 1.8V pipelined ADC with all digital transistors amplifier," IEEE Custom Integrated Circuits Conference, pp. 421-424, Sep. 2003.

3. Y. Tang and R. L. Geiger, "A high-frequency 750mV Operational Amplifier in a Standard Bulk CMOS process," IEEE Custom Integrated Circuits Conference, pp. 689-692, Sep. 2003.
4. Y. Cong and R. L. Geiger, "Switching Sequence Optimization for Gradient Error Compensation in Thermometer Decoded DAC Arrays", IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing, , Vol. CAS-47, pp. 585-595, July, 2000
5. Soenen, E. and Geiger, R. L., "An Architecture and an Algorithm for Fully Digital Correction of Monolithic Pipelined ADC's," IEEE Trans. on Circuits and Systems II, pp. 143-153, March 1995

Synergistic Activities

Geiger, R.L., "Analog and Digital Integrated Circuit Design – An Intense Short Course", Allied Signal, Nov. 1999-January 2000

Geiger, R.L., "Analog and Mixed-Signal Design for SOC in Emerging Digital Processes", Tamkang University, Taiwan, 2002, Tatung University and NTUST, Taiwan, 2003 .

Collaborators & Other Affiliations

There are likely well over 20 individuals in this category. Primary interactions have been with colleague Degang Chen of Iowa State University.

Thesis Advisor (served as thesis advisor in the past 5 years)

Y. Lin	Ph.D	2005	X. Dai	Ph.D.	2007E	S. Gondi	M.S.	2002
J. Yu	Ph.D	2005E	A. Ismail	M.S.	2001	P. Dagle	M.S.	2001
H. Chen	Ph.D	2004	B. Olleta	M.S.	2003	Y. Gai	Ph.D.	2008E
M. Schlarmann	Ph.D	2004	H. Fei	Ph..D	2006E	L. Juffer	M.S.	2006E
S. Q. Malik	Ph.D	2005	A. Hashim	Ph.D.	2006E	C. Su	Ph.D	2006E
K. Parthasarathy	M.S.	2002	L. Boylston	M.S.	2006E	J. Yan	Ph.D	2002
S. Thoka	M.S.	2006E	K.C. Tiew	M.S.	2002	Y. Tang	Ph.D	2002
M. Lan	Ph.D	2002	K. Kyaw	M.S.	2005E	Y. Cong	Ph.D	2002
						M. Amourah	Ph.D	2002

Thesis Advisor Prior to Past 5 years for 26 MS students and 11 PhD students

c. Selected Honors, Awards and Activities

Willard and Leitha Richardson Endowed Professorship, September 2002 to present.

IEEE Millenium Medal, 2000 and IEEE Circuits and Systems Society Golden Jubilee Medal, 2000

Meritorious Service Award, IEEE Circuits and Systems Society, 1996

Elected IEEE Fellow for "Contributions to Discrete and Integrated Analog Circuit Design" (1990)

Member, Comission Dictaminadora Externa (External Evaluating Committee) Instituto Nacional de Astrofisica, Optica y Electronica (INAOE), Puebla, Mexico (1997,1998,1999,2000,2001)

President, IEEE Circuits and Systems Society (Elected) 1992

CAS Society Editor, IEEE Circuits and Devices Magazine, (1986 to 1989,).

IEEE Periodicals Council, (Member, 1993 - 1997, Chairman Transactions Committee, 1993 - 1997)

Associate Editor, *IEEE Trans. on Circuits and Systems*, (1983 to 1985, 2000-2001).

IEEE Fellow Committee (2005,2006)