

**David Vallancourt**  
**Senior Lecturer in Circuits and Systems**

**Education**

Columbia University, New York, NY  
Electrical Engineering: B.S. (1981), M.S. (1984), Ph.D. (1987)

**Service at Columbia University**

Year of Service: 17  
July 2005 – present: Senior Lecturer in Circuits and Systems  
July 1987 – February 1992: Assistant Professor, Electrical Engineering

**Columbia Awards**

Presidential Teaching Award (2013)  
Engineering Alumni Association Distinguished Faculty Teaching Award (2007, 2013)

**Related Experience**

Industry employment

March 2005 – July 2005: Senior Member of the Technical Staff, PMC-Sierra  
December 2003 – January 2005: Senior Member of the Technical Staff Vitesse Semiconductors  
May 2000 – December 2003: Member of the Technical Staff, Texas Instruments  
February 1992 – May 2000: Member of the Technical Staff, Bell Laboratories

Internships/early career

summer 1988: Faculty intern, Analog Devices Inc  
summer 1984: Student intern, Motorola Inc  
June 1981 - January 1984 : Engineer, Hewlett-Packard Company

**Patents**

#7928309 “Scat” guitar signal processor  
#6263282 System and method for warning of dangerous driving conditions  
#6121836 Differential amplifier  
#6094098 Technique for designing an amplifier circuit in an integrated circuit device  
#6020769 Low voltage sample and hold circuits  
#5982205 Low voltage sample and hold circuits  
#5973518 Low voltage sample and hold circuits  
#5760616 Current copiers with improved accuracy  
#5689260 Analog-to-digital converter using scaled signal to initialize coarse conversion circuit  
#5675341 Current-mode parallel analog-to-digital converter  
#5661480 ADCs with reduced power and area using offset current compensation  
#5589832 Low noise non-sampled successive approximation  
#5572153 Low offset comparators based on current copiers

**Representative Publications**

D. Vallancourt and Y.P. Tsividis, "Analog CMOS filter with full digital programmability," Digest of Technical Papers, IEEE International Solid-State Circuits Conference, pp. 208-209, February 1987.

D. Vallancourt and Y.P. Tsividis, "Timing-controlled switched analog filters with full digital programmability," Proceedings of IEEE 1987 International Symposium on Circuits and Systems, vol. 2, pp. 329-333, May 1987.

D. Vallancourt and Y.P. Tsividis, "Recent results in analog integrated filters with timing-determined transfer functions," Proceedings of the 30th Midwest Symposium on Circuits and Systems, vol. 1, pp. 944-947, August 1987 (invited).

D. Vallancourt and Y.P. Tsividis, "A fully programmable sampled-data analog CMOS filter with transfer function coefficients determined by timing," IEEE Journal of Solid-State Circuits, vol. SC-22, no.6, pp. 1022-1030, December 1987.

D. Vallancourt and Y.P. Tsividis, "Timing-controlled fully programmable analog signal processors using switched continuous-time filters," IEEE Transactions on Circuits and Systems, vol. CAS-35, no. 8, pp. 947-954, August 1988.

S. Daubert, D. Vallancourt, and Y.P. Tsividis, "Current copier cells," Electronics Letters, vol. 24, no. 25, pp. 1560-1562, Dec. 8, 1988.

D. Vallancourt, Y.P. Tsividis, S. Daubert, "Sampled current circuits," Proceedings of IEEE 1989 International Symposium on Circuits and Systems, pp. 1592-1595, Portland, Oregon, May 1989 (invited).

S.J. Daubert and D. Vallancourt, "Operation and Analysis of Current Copier Circuits," IEE Proceedings part G, vol. 137, no. 2, pp. 109-115, April 1990.

S.J. Daubert and D. Vallancourt, "Noise in Current Copier Circuits," Proceedings of IEEE 1990 International Symposium on Circuits and Systems, pp. 307-310, New Orleans, LA, May 1990 (invited).

D. Vallancourt, S.J. Daubert, Chapter 14: Applications of Current-Copier Circuits, in Analog IC Design: The Current-Mode Approach, Toumazou, Lidgey, and Haigh (eds.), Peter Peregrinus Ltd., London, U.K., 1990.

S.J. Daubert and D. Vallancourt, "A Transistor-only current mode sigma delta modulator," IEEE Journal of Solid-State Circuits, vol 27, no. 5, pp. 821-830, May 1992.

P. Ju and D. Vallancourt, "Quantization noise reduction in multibit oversampling sigma delta A/D converters", Electronics Letters, vol. 28, no. 12, pp. 1162-1164, 4 June 1992.

D. Vallancourt, "Toward a Low Supply Voltage 10 bit ADC in 0.9u Digital CMOS", Proceedings, AT&T Bell Labs Mixed Signal IC Design Workshop, Bethlehem, PA, September 17,1993.

D. Vallancourt, "Current-Mode Techniques for the Realization of Low Supply Voltage A/D Converters", Proceedings, AT&T Bell Labs Mixed Signal IC Design Workshop, Murray Hill, NJ, September 28, 1994.

D. Vallancourt, "Study of Power Efficiency of Low-Voltage Cellular Electronics", Technical Memo, Lucent Technologies Bell Laboratories, April, 1997.

D. Vallancourt, "Yannis Tsividis, Educator", Solid-State Circuits Magazine, IEEE ,Volume: 6 , Issue: 4, December 2014

### **Professional Service**

Board of Advisors: High Technology High School (Lincroft NJ), numerous presentations and lab events for middle schools and high schools, IEEE reviewer

### **Other Honors and Awards:**

AT&T Bell Labs Outstanding Achievement Award, Lucent Technologies Worldwide Team Award, Tau Beta Pi, Eta Kappa Nu, American Electronics Association Fellowship