

**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: 15

July 2005 – present: Senior Lecturer in Circuits and Systems

July 1987 – February 1992: Assistant Professor, Electrical Engineering

**Related Experiences:**

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

### **Honors and Awards:**

Tau Beta Pi, Eta Kappa Nu, American Electronics Assn. Fellowship, various AT&T and T.I. awards, Columbia FFSEAS Distinguished Faculty Teaching Award (2007, 2013), Columbia Presidential Teaching Award (2013)

### **Institutional Service:**

Undergraduate Task Force on Curriculum, Gateway Steering Committee (Chair), ABET Committee, Student Activities Committee, IEEE Student Branch Liaison, Speaker at numerous Admissions Office and student events (e.g. "Days on Campus"), High School Bridge Program, Summer High School Program, Siemens Science Day, SWE Engineering Exploration Experience, and so on.