**CMOS Microwave & Millimeter Wave IC’s: the Historical Background**

Asad Abidi

Electrical Engineering Department

University of California, Los Angeles, CA

ABSTRACT

Behind much of the activity today in CMOS microwave and millimeter-wave IC’s to realize high data rate wireless links at 60 GHz and automobile radar at 77 GHz, there lies a rich history dating back to the early 1960’s when 60 GHz silicon IMPATT diodes were developed for possible use in waveguides for long-haul telephone links, and silicon bipolar IC’s for phased-array radar. Much of this history is lost to the mainstream, often leading a new generation of MMIC designers to rediscover what was sometimes known 50 years ago.

In this talk I will trace this history in a lightly technical but nevertheless useful way to bring to light some of the bold initiatives and rather extraordinary accomplishments of MMIC’s from the past. I will conclude with a very short survey of the state-of-the-art in today’s CMOS MMIC’s.

About the speaker

**Asad A. Abidi** received the B.Sc. degree from Imperial College, London, U.K. in 1976, and the M.S. and Ph.D. degrees from the University of California, Berkeley, in 1978 and 1981, all in electrical engineering. He was at Bell Laboratories, Murray Hill, NJ, from 1981 to 1984 as a Member of Technical Staff in the Advanced LSI Development Laboratory. Since 1985, he has been with the Electrical Engineering Department of the University of California, Los Angeles, where he is Professor. His research is closely associated with the development of RF-CMOS from its infancy. He is a member of the US National Academy of Engineering and he has received the 2008 IEEE Donald O. Pederson Award in Solid-State Circuits. He is Fellow of the IEEE, and a Distinguished Lecturer of the IEEE Solid-State Circuits Society.