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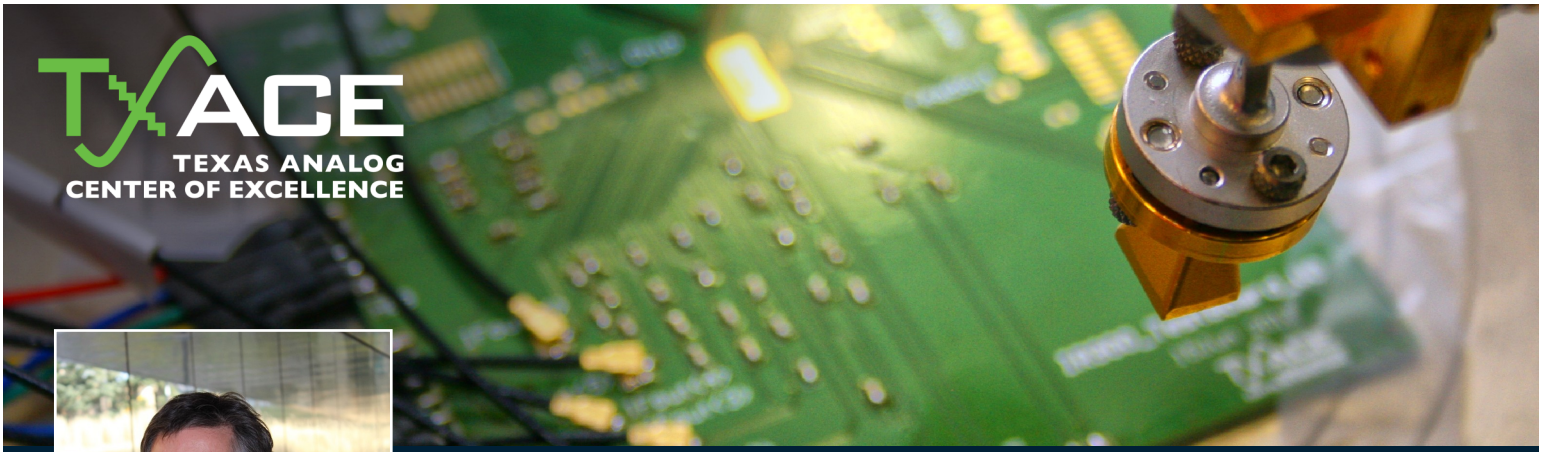

# Interleaved Noise-Shaping SAR ADCs


## Michael Flynn

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## BIO

Michael P. Flynn received the Ph.D. degree from Carnegie Mellon University in 1995. From 1988 to 1991, he was with the National Microelectronics Research Centre in Cork, Ireland. He was with National Semiconductor in Santa Clara, CA, from 1993 to 1995. From 1995 to 1997, he was a Member of Technical Staff with Texas Instruments, Dallas, TX. During the four-year period from 1997 to 2001, he was with Parthus Technologies, Cork, Ireland. Dr. Flynn joined the University of Michigan in 2001, and is currently Professor and the Fawwaz T Ulaby Collegiate Professor of Electrical and Computer Engineering and Professor of Electrical Engineering and Computer Science.

Michael Flynn is a 2008 Guggenheim Fellow. He received 2020 Rackham Distinguished Graduate Mentoring Award and the 2016 University of Michigan Faculty Achievement Award. He is a recipient of the 2020 Intel Outstanding Researcher Award. Flynn received the 2011 Education Excellence Award and the 2010 College of Engineering Ted Kennedy Family Team Excellence Award from the College from Engineering at the University of Michigan. He received the 2005-2006 Outstanding Achievement Award from the Department of Electrical Engineering and Computer Science at the University of Michigan. He received the NSF Early Career Award in 2004.

Dr. Flynn was Editor-in-Chief of the IEEE Journal of Solid State Circuits from 2013 to 2016. He is a former Distinguished Lecturer of the IEEE Solid-State Circuits Society. He served as Associate Editor of the IEEE Journal of Solid State Circuits (JSSC) and of the IEEE Transactions on Circuits and Systems. He served on Technical Program Committees of the International Solid State Circuits (ISSSC), the Symposium on VLSI Circuits, the European Solid State Circuits Conference (ESSCIRC) and the Asian Solid-State Circuits Conference (ASSCC). He was sub-committee chair for data conversion at ISSCC from 2018 to 2022.


## ABSTRACT

The Noise-Shaping (NS) SAR ADC revolutionized analog to digital conversion by extending the efficiency of the SAR architecture to high resolution. However, oversampling reduces the effective bandwidth compared to a conventional SAR. Interleaving potentially broadens the bandwidth of NS SAR, but interleaving NS SAR is more complicated than interleaving traditional SAR converters. This presentation discusses the evolution of noise-shaping SAR from the first interleaved NS to more recent examples.


Friday, April 21, 2023 at 1:00 – 2:00 p.m.
John von Neumann Conference Rm (ECSS 3.910)

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