Ahmed Ali, Ph.D.
Fellow
Analog Devices

Ahmed M. A. Ali received the B.Sc. and M.Sc. degrees, with distinction and highest honor in electrical engineering from Ain Shams University, Cairo, Egypt, and the Ph.D. degree in electrical engineering from the University of Pennsylvania, Philadelphia.

He is currently a Fellow at Analog Devices, where he has led the design and development of several industry and world firsts in the high-speed data converter field.

Before joining Analog Devices, he was with Texas Instruments’ Mixed-Signal R&D Labs and Wireless Infrastructure Business Unit. His past industrial experience also includes Anacad/Mentor Graphics and Siemens AG. He was an Adjunct Assistant Professor at the University of Pennsylvania from 2001 to 2007 and is currently serving as an Associate Editor of the IEEE Transactions on Circuits and Systems I: Regular Papers.

He is the author of the book: “High Speed Data Converters“, published by the Institution of Engineering & Technology (IET) in 2016. He is also the principal author of more than 30 papers and holds 50 patents. His research interests include analog IC design, high linearity sampling, digitally assisted converters, and signal processing.

Data converters and their performance metrics

Data converters are the interface between the real analog world and the digital realm. They are so ubiquitous that on any given day every person in the developed world will likely utilize a data converter in one form or another. Their applications include sensors, communications, medical imaging, instrumentation, automotive and video imaging.

For a data converter designer, or a system designer who uses data converters, it is imperative to understand their behavior and performance metrics. Since there are multiple dimensions of performance, the characterization of a data converter can be a complicated and confusing process. In this talk, we discuss the basics of data converters and the metrics used to characterize their performance. The manifestations of the various converter non-idealities, their impact on the system’s performance, and the relation between the metrics will also be covered.

Friday, May 4th, 2018
Halligan Hall | 1:45pm - 2:45pm