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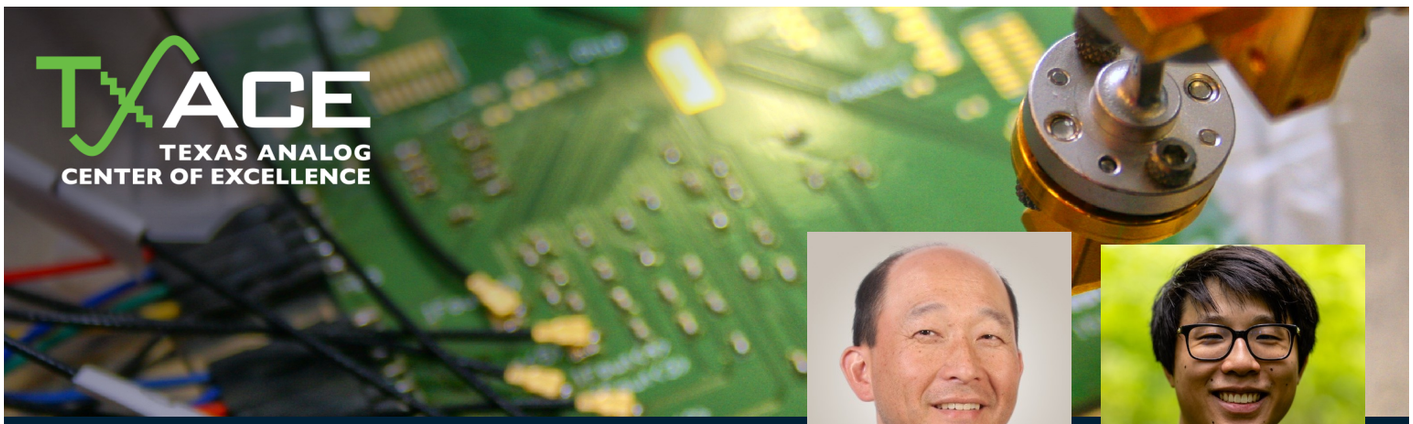

Ring Amplifier (R)evolution

Un-Ku Moon

Calvin Yoji Lee

ABSTRACT

IC designers are a creative bunch. We will continue to see new/interesting circuit architectures into the future. Regarding amplifiers, there is a growing trend in the direction of dynamic amplifiers. One can categorize ring amplifier as one such type which maintains a closed loop dynamics/accuracy. Ringamp was first introduced at ISSCC in 2012. Significant advancements have been made since that time. A number of implementations have demonstrated unprecedented efficiency in residue amplification of cascaded ADCs. Publications are now appearing from different authors from around the world. This presentation will start with ringamp basics/ review, and build from there to various implementation examples, including the latest developments on this topic.

Un-Ku Moon

Professor
Oregon State University

BIO

Un-Ku Moon received degrees from the University of Washington, Cornell University, and the University of Illinois at Urbana-Champaign. He has been with Oregon State University since 1998. Before joining Oregon State, he was with Bell Labs. He has served in various roles in the integrated circuits community, including being the Editor-in-Chief of JSSC and TCAS-II. His research summary is available at http://eecs.oregonstate.edu/~moon/research/

Calvin Yoji Lee

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BIO

Calvin Yoji Lee received the B.S. degree in electrical engineering from The University of Texas at Austin in 2015. He has been with Oregon State University since 2016 where he is currently just about to defend his Ph.D. degree in electrical engineering. His research interests include data converters, clocking circuits, and analog mixed-signal circuit design.

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Virtual

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