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Dissecting Design Choices in Continuous-time Delta-Sigma Converters

Presenter: Shanthi Pavan, Indian Institute of Technology Madras, India
Tuesday, March 31st, 2020
9:00 AM ET (New York)

Abstract: Continuous-time Delta-Sigma Modulators (CTDSMs) are a compelling choice for the design of high resolution analog-to-digital converters. Many

delta-sigma architectures have been published (and continue to be invented). This leaves the designer with a bewildering array of choices, many of which seem to pull in opposite directions. Further, it is often difficult to make a clear comparison of various architectures, as they have been designed for dissimilar specifications, by different design groups, and in different technology nodes. This talk examines various alternatives for the design of power efficient single-loop continuous-time delta sigma converters.

Speaker bio: Shanthi Pavan received the B.Tech from IIT Madras in 1995 and the doctoral degree from Columbia University, New York City, in 1999. He is currently a Professor of Electrical Engineering at IIT Madras. His research interests are in the areas of high speed analog circuit design and signal processing. He is a recipient of many awards, including the IEEE Circuits and Systems Society Darlington Best Paper Award (2009), the Swarna Jayanthi Fellowship (2009) and the Shanti Swarup Bhatnagar Award (2012). He has served as the Editor-in-Chief of the IEEE Transactions on Circuits and Systems:Regular Papers. He has served on the Technical Program Committee at the International Solid State Circuits Conference (ISSCC), and as a Distinguished Lecturer of the Solid-State Circuits Society. He is currently a distinguished lecturer of the IEEE Circuits and Systems Society. He is a fellow of the Indian National Academy of Engineering (INAE) and the Institute of Electrical and Electronic Engineers (IEEE). He is the coauthor (with Richard Schreier and Gabor Temes) of "Understanding Delta Sigma Converters", published by the Wiley-IEEE Press.

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NEWS



Remembering Barrie Gilbert

The IEEE Solid-State Circuits Society mourns the death of Barrie Gilbert, the iconic IC designer known for discovering the Translinear Principle and inventing the Gilbert cell mixer.

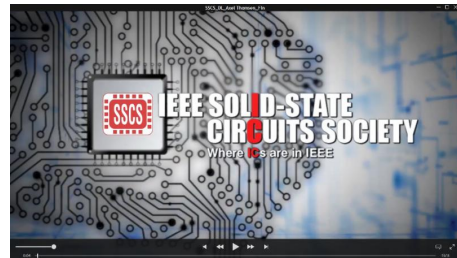
Barrie Gilbert's long-time colleague and friend, John Cowles, wrote a touching tribute about Barrie in the [Microwave Journal](#).

[Journal](#). Click [here](#) to read the article.

Thank you to John Cowles and the Microwave Journal for granting SSCS to share and reprint the article.

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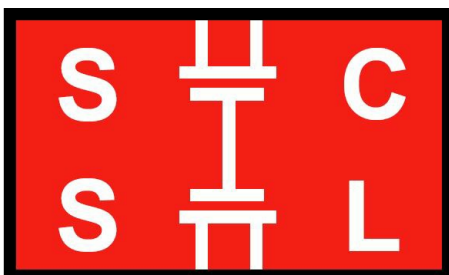
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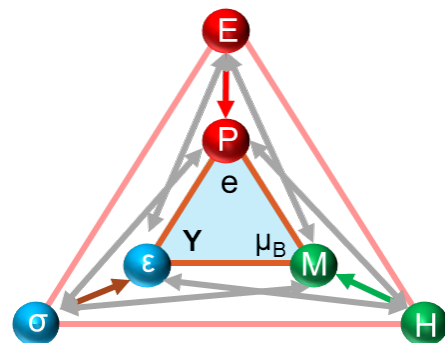
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- FPGA-based accelerators
- Internet of Things
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- Memory circuits, architectures, and interfaces
- Biomedical circuits
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- Power conversion circuits
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- CMOS Technology for Microprocessors and SoCs
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<u>2020 IEEE Symposia on VLSI Technology and Circuits</u> Honolulu, Hawaii	Jun 16 - 19, 2020
<u>2020 IEEE Radio Frequency Integrated Circuits Symposium (RFIC)</u> Los Angeles, California	Jun 21 - 23, 2020
<u>2020 IEEE Biomedical Circuits and Systems Conference (BioCAS)</u> Berlin, Germany	Oct 15 - 17, 2020

<u>2020 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium (BCICTS)</u> Monterey, California	Nov 8 - 11, 2020
<u>2020 IEEE Asian Solid-State Circuits Conference (A-SSCC)</u> Hiroshima, Japan	Nov. 9 - 11, 2020

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