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Universal ADC for sensor applications

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<Abstract>

With the advent of the IoT era, more and more sensors are expected to be used in the future. The sensor needs an ADC that converts signals to digital values, but the sensor has different specifications such as signal bandwidth and dynamic range depending on the application. So far, ADCs of various conversion methods and performance have been developed according to the required specifications, but development efficiency is low, and development will be difficult if this is left as it is. Therefore, in this talk, we will discuss the possibility of ADC that can address many applications and required specifications with one ADC, while incorporating the latest technology trends.

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Akira Matsuzawa received B.S., M.S., and Ph. D. degrees in electronics engineering from Tohoku University, Sendai, Japan, in 1976, 1978, and 1997 respectively. In 1978, he joined Matsushita Electric Industrial Co., Ltd (Panasonic). Since then, he has been working on research and development of analog and Mixed Signal LSI technologies. On April 2003, he joined Tokyo Institute of Technology and has been a professor on physical electronics. He retired from Tokyo Institute of Technology on March 2018 and becomes an honorary professor. Now he is a president of Tech Idea Co., Ltd., founded by himself. He received the IR100 award in 1983, the R&D100 award and the remarkable invention award in 1994, the ISSCC evening panel award in 2003, 2005, 2015, MEXT science and technology award in 2017 and IEICE Achievement Award in 2019. He is an IEEE Fellow since 2002, and an IEICE Fellow since 2010.