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ELECTRICAL & COMPUTER ENGINEERING
TEXAS A&M UNIVERSITY

S E M I N A R

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A 40 Gb/s PAM4 Silicon Microring Resonator Modulator Transmitter in 65nm CMOS

by

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Abstract: A silicon photonic microring resonator modulator transmitter utilizes a segmented pulsed -cascode output stage for voltage level control to achieve PAM4 modulation on a single microring device. The 65nm CMOS transmitter achieves 40Gb/s operation at 3.04mW/Gb/s when driving depletion-mode microring modulators with 4.4Vppd swing.

Ashkan Roshan Zamir (S'13) received the B.Sc. degree and M.Sc degree in electrical engineering from University of Tehran, Tehran, Iran, in 2010 and 2013 respectively. He is currently working toward the Ph.D. degree in electrical and electronics engineering at Texas A&M University, College Station, TX, USA. Since September 2013, he has been working as a Research Assistant at the Analog and Mixed Signal Center, Texas A&M University, College Station, TX. His research interests include high speed serial links, Optical interconnects and data converters.