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TEXAS A&M UNIVERSITY

S E M I N A R

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Flash OCT: The Next Realm of Optical Coherence Tomography

by

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Abstract: Every new iteration of Optical Coherence Tomography (OCT) has always come with better but limited signal processing and data acquisition speed that use conventional mixed-signal architectures, calibration, and signal processing techniques. The ideas presented in this presentation make the imaging scan an order of magnitude faster at the highest resolution setting which in turn increases the quality of the clinical trial and the accuracy of diagnosis. The proposed ideas will result in an all integrated data acquisition and processing unit (OCT engine) and will be used as an ad-on device in full OCT systems.

Amir Tofighi Zavareh received his B.S. degree in Electrical Engineering from Sharif University of Technology, Tehran, Iran, in 2013. He was with Qualcomm as an interim engineering intern from August 2015 to December 2015 where he worked on system design algorithms used in audio codecs. He was a recipient of the Graduate Teaching Fellowship with Dwight Look College of Engineering at Texas A\&M University in 2017 where he was the instructor on record for two junior-level college classes. He also was a recipient of the Student Success Faculty Fellowship with the Center for Teaching Excellence at Texas A\&M University. He received the NSF I-corps award as a Technical Lead in fall of 2017 where he investigated the commercial ability of his Ph.D. thesis. He is currently a Ph.D. candidate at Texas A&M University. His research interests include RF and Analog/ Mixed-signal circuit and system design for all applications including biomedical imaging.