

Time (Begin)	Time (end)	Session Topic	Author	Affiliation	Title	
8:00	8:10	<b>Opening Remarks</b>	Gibbons & Polcawich	OSU & ARL/DARPA	Opening remarks	
		<i>Characterization/Reliability</i>			MEMS micro loudspeaker: characterization and optimization of PZT MEMS actuators for improved linearity and acoustic distortions (THD)	
8:10	8:35		Andrea Rusconi Clerici	Usound		
8:35	8:50		Gwenael Le Rhun	CEA-LETI		A review of key PZT integration process parameters and their effects on both performances and reliability of devices
8:50	9:15		Peter Mardilovich	Xaar		Tools and Techniques for the Characterization of PZT Thin Films: From Test Samples to Finished Devices
9:15	9:30		Agne Zukauskaite	Fraunhofer Institute		Thermal expansion coefficient and elastic modulus of reactive pulsed-DC magnetron co-sputtered piezoelectric AlScN thin films
9:30	9:45		Fazel Parsapour	EPFL		Materials constants extraction for AlScN thin film using a dual mode BAW resonator
9:45	10:30		<b>Break + Posters</b>			
10:30	10:55	<i>Device Technologies II (PZT)</i>	Yusuke Tabuchi	Silicon Sensing	Performance and reliability of PZT thin films	
10:55	11:10		Joe Evans	Radiant Technologies		Binary Resonant Wings
11:10	11:25		Matthijn Dekkers	SolMates		Heterogeneous integration of PZT films in microwave photonics platform for ultra-low-power stress-optics actuators
11:25	11:40		Shinya Yoshida	Tohoku University		Ultrasonic MEMS Rangefinder with 2 m Range at 1 V Drive Based on Large Figure-of-Merit PMnN-PZT Epitaxial Thin Film
11:40	11:55		Glen Fox	Fox Materials Consulting		Investigation of Non-Volatile Memory Behavior in PZT MEMS Cantilever Switches
11:55	12:10		Susan Trolier-McKinstry	Pennsylvania State University		PZT-Based Piezoelectric Energy Harvesters on Metal Foils
12:10	13:30		<b>Lunch</b>			
		<i>Deposition of Materials - AlN</i>			Doped AlN Thin Films for Enhanced BAW Filters in Mobile	
13:30	13:55		Jyothi Sadhu	Qorvo		Reactive Sputtering of AlN and ScAlN Films by AC Powered S-Gun Magnetron
13:55	14:10		Valeriy Felmetsger	OEM Group LLC		PVD Production Challenges for Scandium-doped Aluminum Nitride
14:10	14:25		Scott Haymore	SPTS		Improving crystallinity of high concentration Scandium Aluminum Nitride films deposited on 200mm wafers
14:25	14:40		Sergei Mishin	AMS		Al <sub>70</sub> Sc <sub>30</sub> N thin film deposition technology
14:40	14:55		Bernd Heinz	Evatec		Combinatorial studies of the aluminum-scandium-boron nitride system
14:55	15:20		Geoff Brenneka	Colorado School of Mines		
15:20	17:00	<b>Break + Posters</b>				
17:00	17:35	<b>Transit to Dinner</b>				
17:35	19:35	<b>Dinner</b>				
19:35	20:00	<b>Assemble for Blue Man Group</b>				
20:00	22:00	<b>Blue Man Show</b>				
22:00	22:30	<b>Return to Hotel</b>				

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8:00	8:05	<b>Opening Remarks</b>	Gibbons & Polcawich	OSU & ARL/DARPA	Opening remarks
		<i>Device Technologies I (AIN)</i>			
8:05	8:30		Karl Grosh	University of Michigan	Aluminum Nitride MEMS Electroacoustic Sensors
8:30	8:45		Vladimir Pashchenko	EPFL	Thin Film AlScN Hybrid BAW-SAW Resonator for RF Filter Application
8:45	9:00		David Henry	Sandia National Laboratories	ScAlN Contour Mode Resonators : Towards MultiFrequency RF Filters
					Fin Bulk Acoustic Resonator (FinBAR)
9:00	9:25		Roozbeh Tabrizian	University of Florida	Technology: Enabling Multi-Band Acoustic Signal Processing Beyond the UHF
9:25	9:40		Trevor Odelberg	Purdue University	An FBAR Circulator
9:40	10:20	<b>Break + Posters</b>			
		<i>Modeling and Simulation</i>			
10:20	10:45		Songbin Gong	University of Illinois - Urbana-Champagne	Towards 5G Bands Beyond 24 GHz: Lithium Niobate Asymmetrical Mode Piezoelectric MEMS Resonators
10:45	11:10		Jon Puder	ARL	New Simulation Applications Enabled by the Rapid Analytical-FEA Technique
11:10	11:25		Sarah Shahraimi	University of Central Florida	Cross-Sectional Quasi-Lame Modes in Thin-Film Piezoelectric-on-Silicon Resonators
11:25	11:50		Matteo Rinaldi	Northeastern	Single-Chip Multi-Frequency Radio Frequency Passive Components Based on Aluminum Nitride Cross-Sectional Lamé Mode MEMS Resonators
11:50	13:05	<b>Lunch (+ steering committee meeting)</b>			
13:05	14:15	<b>Posters</b>			
		<i>Integration challenges of ferroelectrics devices</i>			
14:15	14:30		Shintaro Yasui	Tokyo Institute of Technology	Novel Bi-based perovskite piezoelectric materials as an alternative to PZT
14:30	14:45		Frode Tyholdt	SINTEF Digital	Growth of epitaxial PZT and PMN-PT for IDT electrodes on full wafer area by PLD for fabrication of energy harvesters
14:45	15:00		Kenji Shibata	SCIOCS	Integrarion challenge of KNN films for MEMS devices
15:00	15:25		Nobuyuki Soyama	Mitsubishi Materials Corporation	Mass production technology of doped PZT films on 8 inch by Sol-Gel deposition
15:25	15:50		Yoshi Hishinuma	FUJIFILM	Benefits of Sputtered Nb-doped PZT film in MEMS Device Applications
15:50	16:15		Seung-Hyun Kim	Brown University	Enhancement of the Piezoelectric Properties and the Long-term Reliability of Thin Film Piezoelectric MEMS Devices
16:15	16:30	<b>Closing Remarks</b>			