



TUESDAY 14TH JANUARY 2020

3εFERRO – Phase Change Workshop on Functional Oxides for Advanced Electronic Functions

Time	Topic	Presenter
8:30	Welcome	A. Ionescu & N. Barrett
8:35	Project overview: 3εFERRO	N. Barrett
8:45	Project overview: Phase-Change Switch	A. Ionescu
8:55	Keynote #1: Polarization switching kinetics in ferroelectric HfO₂	A. Toriumi
9:30	Keynote #2: Using Ferroelectrics for Architectural Support of Machine Learning Models and Homomorphic Encryption Algorithms	M. Niemier
10:05-10:20	<i>Coffee break</i>	
10:20	Keynote #3: Ferroelectric rhombohedral phase in zirconia-hafnia thin films	P. Nukala
10:55	3εFERRO Invited #1: Some emerging memory technologies and applications	P. Boivin
11:15	3εFERRO Invited #2: Impact of non-polar regions on the performance of ferroelectric HfO ₂ based devices	U. Schroeder
11:35	3εFERRO Invited #3: Granularity exploration for logic in memory	I. O'Connor
12:00-13:25	<i>Lunch</i>	
13:30	Keynote 4: VO₂ electronic structure and alloys	J. Robertson
14:05	Phase-Change Switch Invited #1: Coupled VO ₂ oscillators for neuromorphic applications: challenges and opportunities	S. Karg
14:25	Phase-Change Switch Invited #2: RF functions with VO ₂ on GaN substrates: towards reconfigurable high frequency electronics	O. Bezencenet
14:45	Phase-Change Switch Invited #3: Ge-doped VO ₂ material processing and DC/RF characterization	I. Stolichnov
15:05	Panel Discussion and Q & A with all Keynotes: Role and Horizon of Functional Oxides in Future Electronics	N. Barrett, A. Ionescu
15:30	<i>Closure, farewell</i>	A. Ionescu

Keynotes talks: 30 min + 5 min of questions and discussion // Invited talks: 17 min + 3 min of questions and discussion