2018 IEEE Rebooting Computing Week

IRDS **Confluence** **International Conference on Rebooting Computing** **Industry Summit**

Time	Tuesday, November 06, 2018 (IRDS)	Confluence	Wednesday, November 07, 2018		Thursday, November 08, 2018		Friday, November 09, 2018	
8:00 AM	IRDS Outbrief, Greetings	Confluence Breakfast	ICRC Breakfast on your own		ICRC Breakfast on your own		ICRC + Industry summit breakfast	
8:15 AM	IRDS Outbrief, Overview							
8:30 AM	IRDS Outbrief, App. BchMking	Confluence	Kickoff & Snider Fellow					
8:45 AM			Plenary 1 : Bill Chappell / Paolo Faraboschi		Plenary 2 : Paolo Faraboschi / Bill Chappell			
9:00 AM	IRDS Outbrief, SysArch						NC 9 Resistive coupled VO2 oscillators for image recognition	Welcome
9:15 AM								Introduction HPE
9:30 AM	IRDS Outbrief, More Moore						26 An Efficient Adder Architecture with Three-Independent-Gate Field-Effect Transistors	
9:45 AM			Break		Break			Q&A HPE
10:00 AM	Q&A		53 The largest cognitive systems will be optoelectronic		3 Neuromorphic Computing with Signal-Mixing Cavities		7 Parallelized Linear Classification with Volumetric Chemical Perceptrons	Introduction AMD
10:15 AM	Break (TBD)							
10:30 AM	IRDS Outbrief, OSC		46 Thermodynamic Intelligence, A Heretical Theory		31 Neural Network Activation Functions with Electro-optic Absorption Modulators		MC 29 RNSnet: In-Memory Neural Network Acceleration Using Residue Number System	Q&A AMD
10:45 AM								Break
11:00 AM	IRDS Outbrief, CE/QI		38 SC-SD: Towards Low Power Stochastic Computing using Sigma Delta Streams		CD 13 SNRA: A Spintronic Neuromorphic Reconfigurable Array for In-Circuit Training and Evaluation of Deep Belief Networks		44 Merge Network for a Non-von Neumann Accumulate Accelerator in a 3D Chip	Introducion Intel
11:15 AM								
11:30 AM	IRDS Outbrief, Factory		50 Towards Self-Healing Circuit Design Paradigm with Crosstalk Computing		39 An Oscillatory Neural Network with Programmable Resistive Synapses in 28 nm CMOS		10 Regular Expression Matching with memristor TCAMs	Q&A Intel
11:45 AM								Connections
12:00 PM	Lunch		Lunch		Lunch		Lunch	
12:15 PM								
12:30 PM								
12:45 PM								
1:00 PM	IRDS Outbrief, Lithography		Government roundtable		48 Overcoming Technical Challenges in Realizing Molecular Quantum-dot Cellular Automata			Introduction Dwave
1:15 PM								
1:30 PM	IRDS Outbrief, Pkging Int.				22 Hardware Trojan Detection in Implantable Medical Devices Using Adiabatic Computing			Dwave
1:45 PM								Q&A Dwave
2:00 PM	IRDS Metrology				Invited talk			Break
2:15 PM								Introduction IBM
2:30 PM	IRDS Outbrief, ESH/S		Break		Break			
2:45 PM								Q&A IBM
3:00 PM	Q&A		OP 2 Design of superconducting optoelectronic networks for neuromorphic computing	QA 20 Constraints embedding for quantum annealers	SW 8 Hardware-Software Co-Design for an Analog-Digital Accelerator for Machine Learning			
3:15 PM	Break (TBD)							
3:30 PM	IRDS Outbrief, Yield		30 Multi-Level Optimization for Large Fan-In Optical Logic Circuits using Integrated Nanophotonics	33 Exploring More-Coherent Quantum Annealing	54 Hybrid Programming for Near-term Quantum Computing Systems			
3:45 PM								
4:00 PM	IRDS Outbrief, ERM		32 Multiplication with Fourier Optics: Simulating 16-bit Modular Multiplication	35 Image classification using quantum inference on the D-Wave 2X	59 High-level Synthesis of Non-Rectangular Multi-Dimensional Nested Loops using Reshaping and Vectorization			
4:15 PM								
4:30 PM	IRDS Outbrief, Bynd CMOS		28 An Integrated Optical Parallel Multiplier Exploiting Approximate Binary Logarithms towards Light Speed Data Processing	60 Radiographic Inference Based on a Model of V1 Simple Cells Implemented on the D-Wave 2X Quantum Annealing Computer	QE 12 Towards Higher Scalability of Quantum Hardware Emulation using Efficient Resource Sharing			
4:45 PM								
5:00 PM	Q&A		Poster session		24 Parallel Quantum Computing Emulation			
5:15 PM	Perspectives							
5:30 PM								
5:45 PM	Adjourn							
6:00 PM					ICRC Banquet + Industry Summit			
6:15 PM								
6:30 PM	Reception IRDS, ICRC,		Dinner on your own					
6:45 PM								
7:00 PM								
7:15 PM								
7:30 PM								
7:45 PM			WACI session					
8:00 PM								
8:15 PM								
8:30 PM								
8:45 PM								
9:00 PM								

CD Circuits and devices

MC Memory centric

CP Computing paradigms
NC Non CMOS (Computing with Non-CMOS)

QE Quantum Emulation
SW Software Aspects
OP Optical Computing
QA Quantum Annealing