

Tuesday, October 6			
PDT	EDT	Paris	Session / Presentation / Speaker
6:30 AM	9:30 AM	3:30 PM	Exhibitor Breakfast - EPC SPACE
6:45 AM	9:45 AM	3:45 PM	
7:00 AM	10:00 AM	4:00 PM	Opening Remarks - David Hansen, Single Event Effects (SEE) General Chair SEE Track Introduction - Megan Casey, SEE Technical Chair
7:15 AM	10:15 AM	4:15 PM	Facilities
7:30 AM	10:30 AM	4:30 PM	
7:45 AM	10:45 AM	4:45 PM	
8:00 AM	11:00 AM	5:00 PM	
8:15 AM	11:15 AM	5:15 PM	
8:30 AM	11:30 AM	5:30 PM	
8:45 AM	11:45 AM	5:45 PM	SEEMS - A New Facility for Single Event Effects Testing and Muon Spectroscopy <i>Bernard Riemer, Oak Ridge National Laboratory</i>
8:45 AM	11:45 AM	5:45 PM	The LANSCE Facility for Measurement of Neutron-induced Failure in Semiconductor Devices <i>Stephen Wender, Los Alamos National Laboratory</i>
9:00 AM	12:00 PM	6:00 PM	Radiation Effects Facility at Crocker Nuclear Laboratory <i>Eric Prebys, University of CA Davis, Crocker Nuclear Laboratory</i>
9:00 AM	12:00 PM	6:00 PM	Domestic Heavy Ion Single-Event Effects Test Facilities: Needs, Current Status, and Future <i>Jonathan Pellish, NASA Goddard Space Flight Center</i>
9:15 AM	12:15 PM	6:15 PM	Heavy Ion Beams from the K150 Cyclotron at TAMU <i>Henry Clark, Cyclotron Institute at Texas A&M University</i>
9:15 AM	12:15 PM	6:15 PM	Live Q&A for Facilities Session Speakers <i>Moderated by: Megan Casey</i>
9:30 AM	12:30 PM	6:30 PM	Exhibitor Break - STAR DUNDEE
9:45 AM	12:45 PM	6:45 PM	Artificial Intelligence (AI) Journeys to Space <i>Paul Armijo and George Williams, GSI Technology</i> <i>(40 Minute Duration, 5 Minute Q&A Moderated by Megan Casey)</i>
10:00 AM	1:00 PM	7:00 PM	Exhibitor Break - MENTOR, A SIEMENS BUSINESS
10:15 AM	1:15 PM	7:15 PM	
10:30 AM	1:30 PM	7:30 PM	Military and Aerospace Programmable Logic Devices (MAPLD) Opening Remarks - Gregory Allen, MAPLD General Chair MAPLD Track Introduction - Nadia Rezzak / Pierre Maillard, MAPLD Technical Chairs
10:45 AM	1:45 PM	7:45 PM	FPGAs / SoCs, PLDs, and New Devices
11:00 AM	2:00 PM	8:00 PM	
11:15 AM	2:15 PM	8:15 PM	
11:30 AM	2:30 PM	8:30 PM	
11:45 AM	2:45 PM	8:45 PM	Heavy Ion and Proton Induced Single Event Effects on Microchip RT PolarFire FPGA <i>Nadia Rezzak, Microchip Technology, Inc.</i>
12:00 PM	3:00 PM	9:00 PM	Architecture and Radiation Advantage of Advanced FD-SOI FPGAs <i>Melanie Berg, Space R2, LLC / Lattice Semiconductor</i>
12:00 PM	3:00 PM	9:00 PM	Still Latched-up After All These Years: More Clues in the 7-Series FPGA Micro-Latchup Mystery <i>Gary Swift, Swift Engineering & Radiation Services, LLC.</i>
12:15 AM	3:15 PM	9:15 PM	Live Q&A for FPGAs / SoCs, PLDs, and New Devices Session Speakers <i>Moderated by: Nadia Rezzak, Pierre Maillard</i>
12:15 PM	3:15 PM	9:15 PM	Exhibitor Break - INTEGRA TECH
12:30 PM	3:30 PM	9:30 PM	Panel Discussion: Panelist 1: <i>Paul Quintana, Microchip Technology, Inc.</i>
12:30 PM	3:30 PM	9:30 PM	Supply Chain Risk Management Panelist 2 (Live): <i>John Latimer, Xilinx, Inc.</i>
12:45 PM	3:45 PM	9:45 PM	Live Q&A <i>Moderated by: Nadia Rezzak, Pierre Maillard</i>
1:00 PM	4:00 PM	10:00 PM	Mitigation of Single Event Effects in FPGAs/SoCs, PLDs and Commercial Electronics
1:15 PM	4:15 PM	10:15 PM	
1:30 PM	4:30 PM	10:30 PM	
1:45 PM	4:45 PM	10:45 PM	
2:00 PM	5:00 PM	11:00 PM	
1:00 PM	4:00 PM	10:00 PM	Fault Injection to Verify Functional Safety Logic <i>Joe Mallett, Synopsis</i>
1:15 PM	4:15 PM	10:15 PM	Rethinking Your Approach to Radiation Mitigation <i>Jacob Willgen, Mentor - A Siemens Business</i>
1:30 PM	4:30 PM	10:30 PM	Implementing Temporal Mitigation Solutions in FPGAs <i>Kamlesh Ramani, Mentor - A Siemens Business</i>
1:45 PM	4:45 PM	10:45 PM	SpaceFibre for FPGA: IPs and RTG4 Radiation Test Results <i>Alberto Gonzalez, STAR-Dundee, Ltd.</i>
2:00 PM	5:00 PM	11:00 PM	Live Q&A for Mitigation of Single Event Effects in FPGAs/SoCs, PLDs and Commercial Electronics Session <i>Moderated by: Nadia Rezzak, Pierre Maillard</i>
2:15 PM	5:15 PM	11:15 PM	Exhibitor Reception All attendees are invited to join us and welcome all of our 2020 Supporters and Exhibitors! Also available: Technical / Social Meeting Rooms: <i>Collaboration Corner</i> <i>SEE Beam-Off</i> <i>Design This / Verify That</i> <i>Students and Young Professionals Lounge</i> <i>Combo Special</i>
2:30 PM	5:30 PM	11:30 PM	
2:45 PM	5:45 PM	11:45 PM	
3:00 PM	6:00 PM	12:00 AM	
3:15 PM	6:15 PM	12:15 AM	
3:30 PM	6:30 PM	12:30 AM	
3:45 PM	6:45 PM	12:45 AM	
3:45 PM	6:45 PM	12:45 AM	End of Tuesday Workshop Events

Wednesday, October 7						
PDT	EDT	Paris	Session	Presentation / Speaker		
6:30 AM	9:30 AM	3:30 PM	Exhibitor Breakfast - ASAP-1 ULTRA TEC			
6:45 AM	9:45 AM	3:45 PM				
7:00 AM	10:00 AM	4:00 PM				
7:15 AM	10:15 AM	4:15 PM	Systems and Error Rate Computation	Discrete Binning Analysis of Single Event Transient Pulse Width for Rate Calculations <i>Michael Campola, NASA Goddard Space Flight Center</i>		
7:30 AM	10:30 AM	4:30 PM		The Radiation Assessment Matrix (RAM): A Systematic Approach to SEE Circuit Analysis in Support of Single-Event Effects Criticality Assessment (SEECA) <i>Razvan Gaza, NASA Johnson Space Center</i>		
7:45 AM	10:45 AM	4:45 PM		Low and Medium Earth-Orbit Rates Using Design-of-Experiments and Monte-Carlo Methods <i>David Hansen, Data Device Corporation</i>		
8:00 AM	11:00 AM	5:00 PM		A Track-Structure Based Approach to Upset-Rate Calculations <i>David Hansen, Data Device Corporation</i>		
8:15 AM	11:15 AM	5:15 PM		Single-Event Effects Criticality Assessment (SEECA) Guidance for Implementation <i>Michael Campola, NASA Goddard Space Flight Center</i>		
8:30 AM	11:30 AM	5:30 PM		Recent Results and Current Status of the Quasi-Bessel Beam Approach for Pulsed-Laser SEE Studies <i>Joel Hales, U.S. Naval Research Laboratory</i>		
8:45 AM	11:45 AM	5:45 PM		Error Rate Calculation of Functional Failures Induced by Single-Event Transients in Clock Distribution Networks <i>Thomas Lange, iRoC Technologies / Politecnica di Torino</i>		
9:00 AM	12:00 PM	6:00 PM		Live Q&A for Systems and Error Rate Computation Session Speakers <i>Moderated by: Megan Casey</i>		
9:15 AM	12:15 PM	6:15 PM		Exhibitor Break - EMPC		
9:30 AM	12:30 PM	6:30 PM				
9:45 AM	12:45 PM	6:45 PM	Data Analysis	Analysis of Single Event Transients (SETs) using Machine Learning and Ionizing Radiation Effects Spectroscopy (IRES) <i>Daniel Loveless, University of Tennessee - Chattanooga</i>		
10:00 AM	1:00 PM	7:00 PM		Novel Approach to Modeling and Prediction of Single Event Upsets at Component Level <i>Ashok Alagappan, ANSYS</i>		
10:15 AM	1:15 PM	7:15 PM		Data: What Are They Good For? (Absolutely...) <i>Ray Ladbury, NASA Goddard Space Flight Center</i>		
10:30 AM	1:30 PM	7:30 PM		Live Q&A for Data Analysis Session Speakers <i>Moderated by: Megan Casey</i>		
10:45 AM	1:45 PM	7:45 PM	Exhibitor Break - RADIATION TEST SOLUTIONS			
11:00 AM	2:00 PM	8:00 PM				
11:15 AM	2:15 PM	8:15 PM	Invited Tutorial #2	Better FPGA Verification with Open Source VHDL Verification Methodology (OSVVM)		
11:30 AM	2:30 PM	8:30 PM		<i>Jim Lewis, SynthWorks</i>		
11:45 AM	2:45 PM	8:45 PM		<i>(40 Minute Duration, 5 Minute Q&A Moderated by Nadia Rezzak and Pierre Maillard)</i>		
12:00 PM	3:00 PM	9:00 PM	Exhibitor Break - COBHAM SEMICONDUCTOR AND SPACE SOLUTIONS			
12:15 PM	3:15 PM	9:15 PM				
12:30 PM	3:30 PM	9:30 PM	Validation and Verification of FPGAs / SoCs and PLDs	Using Fault Injection to Predict the Error Rate of a Large Complex Design in a Non-Hardened SRAM-Based Xilinx 7-Series FPGA <i>Patrick Fleming, Raytheon Space and Airborne Systems</i>		
12:45 PM	3:45 PM	9:45 PM		Fault Tracking and Modeling in Advanced Node Processors of Single Event Effects <i>Matthew Cannon, Sandia National Laboratories</i>		
1:00 PM	4:00 PM	10:00 PM		PMPedia (Parts, Materials, and Processes) Encyclopedia: A Crowd-Sourced Space Radiation Electronics Knowledge Repository <i>Allyson Yarbrough, The Aerospace Corporation</i>		
1:15 PM	4:15 PM	10:15 PM		Accelerating and Improving Design Reviews with Analysis Tools <i>Jason Riddley, NASA Jet Propulsion Laboratory</i>		
1:30 PM	4:30 PM	10:30 PM		Executable Specifications for Hardware Assurance of SoCs and FPGAs <i>Alric Althoff, Tortuga Logic</i>		
1:45 PM	4:45 PM	10:45 PM		Using Static RTL Analysis to Accelerate Satellite FPGA Verification (Live) <i>Scott Calkins, Blue Pearl Software</i>		
2:00 PM	5:00 PM	11:00 PM		Live Q&A for Validation and Verification of FPGAs / SoCs and PLDs Session Speakers <i>Moderated by: Nadia Rezzak, Pierre Maillard</i>		
2:15 PM	5:15 PM	11:15 PM	Poster Session	All Posters Visible & Interactive Throughout Entire Session		
2:30 PM	5:30 PM	11:30 PM		SEE Testing of Renesas Intersil Current Sense Amplifier <i>Kiran Bernard, Renesas Electronics America Inc.</i>		
2:45 PM	5:45 PM	11:45 PM		Protons, Protons Everywhere - But Where Do We Test in the U.S.? <i>Kenneth LaBel, Science Systems and Applications, Inc. / GSFC</i>		
3:00 PM	6:00 PM	12:00 AM		Single Event Effects Characterization of Microchip Programmable Current Limiting Power Switch LX712 <i>Marco Leuenberger, Microchip Technology</i>		
3:15 PM	6:15 PM	12:15 AM		Technology Evaluation for High Voltage Space Applications <i>Matt Von Thun, Cobham Advanced Electronic Solutions</i>		
3:30 PM	6:30 PM	12:30 AM		Reconfigurable Image Processing Applications on FPGAs <i>Mohamed El-Hadedy, California Polytechnic University</i>		
3:45 PM	6:45 PM	12:45 AM		Scrubbing and In-Orbit Re-Configuration Options for Ultra Deep Sub-Micron Space-Grade FPGAs <i>Rajan Bedi, Space Chips, LLC.</i>		
3:45 PM	6:45 PM	12:45 AM	End of Wednesday Workshop Events			

Thursday, October 8						
PDT	EDT	Paris	Session	Presentation / Speaker		
6:30 AM	9:30 AM	3:30 PM	Exhibitor Breakfast - EPC SPACE			
6:45 AM	9:45 AM	3:45 PM				
7:00 AM	10:00 AM	4:00 PM				
7:15 AM	10:15 AM	4:15 PM	Invited Tutorial #3	Fault-tolerance Concepts, Single Event Effects Characterization, FPGA Scrubbing, and Other Use Cases Using Industry Product Examples <i>Lucas Tambara, Cobham Gaisler</i>		
7:30 AM	10:30 AM	4:30 PM		<i>(40 Minute Duration, 5 Minute Q&A Moderated by Nadia Rezzak and Pierre Maillard)</i>		
7:45 AM	10:45 AM	4:45 PM				
8:00 AM	11:00 AM	5:00 PM	Exhibitor Break - NORTHWESTERN MEDICINE PROTON CENTER			
8:15 AM	11:15 AM	5:15 PM				
8:30 AM	11:30 AM	5:30 PM	Devices	NVIDIA Jetson TX2i Radiation Report <i>Christopher Heistand, Johns Hopkins Applied Physics Laboratory</i>		
8:45 AM	11:45 AM	5:45 PM		Electrical Measurement of Cell-to-Cell Variation of Critical Charge in SRAM and Sensitivity to Single-Event Upsets by Low-Energy Protons <i>James Cannon, University of Tennessee - Chattanooga</i>		
9:00 AM	12:00 PM	6:00 PM		Stuck Bits from Co-60, Electrons, Protons, and Heavy Ions <i>Steven Guertin, NASA Jet Propulsion Laboratory</i>		
9:15 AM	12:15 PM	6:15 PM		Live Q&A for Devices Session Speakers <i>Moderated by: Megan Casey</i>		
9:30 AM	12:30 PM	6:30 PM	Exhibitor Break - NASA ELECTRONIC PARTS AND PACKAGING (NEPP) PROGRAM			
9:45 AM	12:45 PM	6:45 PM				
10:00 AM	1:00 PM	7:00 PM	Designing with FPGAs / SoCs and PLDs	Performance Evaluation of Wide-range of AI Applications on Raspberry Pi <i>Mohamed El-Hadeby, California Polytechnic University</i>		
10:15 AM	1:15 PM	7:15 PM		Development and FPGA Roadmap for LEONSF and NOEL-V Processor Models <i>Jan Andersson, Cobham Gaisler</i>		
10:30 AM	1:30 PM	7:30 PM		The Power of Dense Silicon: Trending Features and Support at Chip-Level Enabling New Levels of Integration and Dependability for Avionics Systems <i>Jyotika Athavale, Intel Corporation</i>		
10:45 AM	1:45 PM	7:45 PM		Towards the Use of Machine Learning to Estimate the Functional Failure Rate of Complex Circuits <i>Thomas Lange, iRoC Technologies / Politecnico di Torino</i>		
11:00 AM	2:00 PM	8:00 PM		Live Q&A for Designing with FPGAs / SoCs and PLDs Session Speakers <i>Moderated by: Nadia Rezzak, Pierre Maillard</i>		
11:15 AM	2:15 PM	8:15 PM	Exhibitor Webinars / Demos All Exhibits to open at 11:15 AM PDT. Exhibitor Webinars and Demos will begin at 11:30 AM PDT <i>Visit Exhibitor Booths for details and access information</i>			
11:30 AM	2:30 PM	8:30 PM	Exhibits Open	Demo of GRSCRUB Scrubber with UltraScale FPGA and Space-Grade Processor Overview/Roadmap <i>Cobham Gaisler</i>		Proton Testing at the Northwestern Medicine Proton Center: Everything You Need to Know <i>Northwestern Medicine Proton Center</i>
11:45 AM	2:45 PM	8:45 PM		Very High Speed SpaceFibre Interfacing and Analysis with the STAR-Ultra PCIe <i>STAR-Dundee</i>		Rad Hard Power Solution for the XQRKU060 <i>Renesas</i>
12:00 PM	3:00 PM	9:00 PM		3D-PLUS New Product Overview <i>3D-PLUS</i>		Radiation Transport and Effects Using NOVICE <i>EMPC</i>
12:15 PM	3:15 PM	9:15 PM		Single Event Effect Testing using a near-IR Laser System <i>Allied Scientific Pro</i>		SEEMS - Neutrons and Protons for Electronics SEE Testing <i>Oak Ridge National Laboratory</i>
12:30 PM	3:30 PM	9:30 PM		Radiation Hard Standard Cell Libraries in Advanced FinFET Technology <i>Robust Chip</i>		AI's Journey To Space <i>GSI Technology</i>
12:45 PM	3:45 PM	9:45 PM		RadHard Precision and Digital Timescale <i>Silicon Technologies</i>		Tales From the Trenches: A Security Engineer's Perspective on SoC Weaknesses <i>Tortuga Logic</i>
1:00 PM	4:00 PM	10:00 PM		Demo of Open Source VHDL Verification Methodology <i>SynthWorks</i>		An Alternative Approach to SEE Testing of GaN HEMTs <i>EPC Space</i>
1:15 PM	4:15 PM	10:15 PM		eFPGA, What's Available Now, What's Coming and What's Possible! <i>FlexLogix</i>		Is Your 'Safe' FPGA Design Safe Enough? <i>Mentor, A Siemens Business</i>
1:30 PM	4:30 PM	10:30 PM				
1:45 PM	4:45 PM	10:45 PM				
2:00 PM	5:00 PM	11:00 PM				
2:15 PM	5:15 PM	11:15 PM				
2:30 PM	5:30 PM	11:30 PM				
2:45 PM	5:45 PM	11:45 PM				
3:00 PM	6:00 PM	12:00 AM				
3:15 PM	6:15 PM	12:15 AM				
3:30 PM	6:30 PM	12:30 AM	End of Thursday Workshop Events			