

RHET 2023

- hosted by -



Monday's Agenda 6 November 2023

Time	Duration	Description
1:00 pm	4:00	Accelerate your Analog FinFet Rad Hard Design Using ADONIS™ Training
5:00 pm	3:00	Registration
6:00 pm	2:00	Welcome Reception

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RHET 2023 is Supported by NASA NEPP & Partners



Tuesday's Agenda 7 November 2023

Time	Duration	Description
7:00 AM	1:00	Breakfast & Registration
8:00 AM	0:05	Day 1 Welcoming Remarks - Jesse Mee (Air Force Research Laboratory)
8:05 AM	0:20	Apogee Semiconductor: Past, Present, and Beyond - Anton Quiroz (Apogee Semiconductor)
Chair: Windy Slater (AFRL)		
8:25 AM	0:15	ADONIS™: Accelerating SOTA RAD Hard Design - Thomas Wolf (Silicon Technologies)
8:40 AM	0:15	RAD Update on Transceiver Products in the Context of Good, Better, Best - Bob Campanini (Micropac)
8:55 AM	0:15	Update on Advancements in Power Management and Mixed Signal - Josh Broline (Renesas)
9:10 AM	0:20	T&AM Rad-Hard Technical Area Updates - Matthew Gadlage (OUSD R&E RH TEA)
9:30 AM	0:20	NRO Enterprise and Foundational Technologies Radiation Hardened Microelectronics - Robert Ciccariello (NRO)
9:50 AM	0:30	Break
Chair: Jim Kemerling (Triad Semiconductor)		
10:20 AM	0:20	Bridging the Gap: Hardness Level Data Sharing and Its Impacts on Survivability Analyses - Maj Robert Gilbreath (USSTRATCOM)
10:40 AM	0:15	Frontgrade Product and Technology Update - Armand Dilworth (Frontgrade)
10:55 AM	0:15	TTM Microelectronics Capabilities - Anup Singh (TTM Technologies)
11:10 AM	0:15	Texas Instruments Space Products Update - Kenny Matthews (Texas Instruments)
11:25 AM	0:15	Next Generation Radiation Hardened Switching Power Controllers - David Grant (Apogee Semiconductor)
11:40 AM	0:15	Implementing HARDSIL® Radiation Hardening in SkyWater's 90nm Bulk S90LN technology - Patrice Parris (VORAGO)
11:55 AM	0:15	Alphacore Microelectronics: High-speed, Low-power ADC's for Industry Applications - Ken Potts (Alphacore)
12:10 PM	1:10	Lunch
SRHEC - Chair: Jeff Johann (NSWC Crane)		
1:20 PM	0:45	Overview and Recent Accomplishments - April White (NSWC Crane), Jeff Johann (NSWC Crane), Col Matt Moakler (Army OSD)
2:05 PM	1:00	SCALE Radiation-Hardened Workforce Development Panel - Brian Sierawski (Vanderbilt University), Mairely Urias (Arizona State University), Cameron Moyers (Reliable Microsystems), Lloyd Massengill (Reliable Microsystems), Jenn Linvill (Purdue University)
3:05 PM	0:30	Break
Chair: Melanie Berg (SPACE R3)		
3:35 PM	0:15	Yellowstone TCV - Radiation Tracking Status - Lloyd Massengill (Reliable MicroSystems)
3:50 PM	0:15	Rad-Hard eFPGA IP from QuickLogic Enables New Applications in Space - Sunil Dixit (QuickLogic)
4:05 PM	1:55	End of Sessions
6:00 PM	2:00	Apogee Reception
8:00 PM		End of Day

Wednesday's Agenda 8 November 2023

Time	Duration	Description
7:00 AM	1:00	Breakfast & Registration
8:00 AM	0:05	Day 2 Welcoming Remarks - Jon Ahlbin (Missile Defense Agency)
Chair: Jon Ahlbin (MDA)		
8:05 AM	0:20	Rad-Hard Test Infrastructure Modernization - Ashton Burke (TRMC)
8:25 AM	0:20	MDA Radiation Hardness Assurance: Technical Focus & Testing Results for FY23-24 - Jon Ahlbin (MDA)
8:45 AM	0:20	Rad-hard Qualification Programs in DARPA/MTO - David Abe (DARPA/MTO)
9:05 AM	0:20	Heavy Ion Single Event Effects Test Observation - John Allgair (Defense Microelectronics Activity)
9:25 AM	0:15	Lessons Learned in SEE Proton Characterization and Product Testing - Vivek Hazari (Aitech)
9:40 AM	0:15	FLARE: New High Fluence 14 MeV Neutron Test Service - Ross Radel (SHINE Technologies)
9:55 AM	0:30	Break
Chair: Josh Babe (MDA)		
10:25 AM	0:15	Ongoing Upgrades for Improved Cocktail Delivery at the LBNL 88-Inch Cyclotron - Janilee Benitez (Lawrence Berkeley National Lab)
10:40 AM	0:15	K150 Cyclotron Upgrade Project at Texas A&M University - Henry Clark (Texas A&M University)
10:55 AM	0:15	Heavy Ion Radiation Effects Facility Developments at Michigan State University - Steve Lidia (Michigan State University)
11:10 AM	0:15	SEE Testing at Brookhaven National Laboratory - Dannie Steski (Brookhaven National Lab)
11:25 AM	0:15	Radiation Test Modernization Efforts at NSWC Crane - Matt Bedel (NSWC Crane)
11:40 AM	0:15	Radiation Test Solutions Update - Todd Mears (Radiation Test Solutions)
11:55 AM	0:15	Radiation Test Capabilities at White Sands Missile Range - John Anderson (White Sands Missile Range)
12:10 PM	1:10	Lunch
SRHEC - Chair: Jeff Johann (NSWC Crane)		
1:20 PM	1:00	Test and Evaluation Topics - Matthew Bedel (NSWC Crane), Tom Turflinger (Aerospace Corp), Robert Cooper (NSWC Crane), Dale McMorrow (NRL), Jacob Calkins (DTRA)
2:20 PM	0:30	Break
Chair: Michael Stapleton (TRMC)		
2:50 PM	0:15	Test Methodology and Radiation Test Data Trends for Recent DRAM and Non-volatile Memory Devices - Ian Troxel (Troxel Aerospace)
3:05 PM	0:15	RHA Modernization: Methods of applying SEE Cross-sections for SoC/FPGA Error Rate Calculations - Melanie Berg (Space R3)
3:20 PM	0:15	M&A Inc. Strategic Rad Hard Update - Randall Milanowski (Milanowski and Associates)
3:35 PM	0:15	Overview of Scientic's Capabilities and Services - Bryan Hughes (Scientic)
3:50 PM	0:15	Rad Hard Semiconductor IP for SoC Designs - Stephanie Pusch (Trusted Semiconductor Solutions)
4:05 PM	0:15	Pre-silicon Reliability Verification for RHBD Design Teams - Karen Henderson (Siemens EDA)
4:20 PM	1:25	End of Sessions

Thursday's Agenda

9 November 2023

Time Duration Description

7:00 AM 1:00 **Breakfast & Registration**

8:00 AM 0:05 Day 3 Welcoming Remarks - Windy Slater (Air Force Research Laboratory)

8:05 AM 0:10 RHET 2024/2025 - (Scientific / Global Foundries)

Chair: Cody Dinkins (Blue Origin)

8:15 AM 0:15 Mission Adaptability with Highly Reliable FOTA (Firmware Over The Air) Updates for Advanced Processors & FPGAs with High Density MRAMs - Paul Chopelas (Avalanche Technology)

8:30 AM 0:15 3D Plus USA Product Update and Roadmaps - Timothee Dargnies (3D Plus USA)

8:45 AM 0:15 Update on Radiation Hardened SONOS Platform Products - Helmut Puchner (Infineon)

9:00 AM 0:15 Rad-Hard Opportunities for Emerging Memory Technology - Thomas Boone (Western Digital)

9:15 AM 0:20 Space Electronics Investments at AFRL - Jesse Mee (AFRL)

9:35 AM 0:20 NASA's Future Avionics Vision - Wes Powell (NASA GSFC)

9:55 AM 0:30 **Break**

Chair: Paul Armijo (Sensitron Semiconductor)

10:25 AM 0:15 SRH Processors and 90nm Memory-ASIC-FPGA Product Development - Jim Hobbs (Honeywell)

10:40 AM 0:15 Overview of BAE Systems Space Computers and Product Developments - Andrew Kelly (BAE)

10:55 AM 0:15 Streamlining Radiation Hardening Prior to Tape Out with IROC's TFIT: The Trusted EDA Solution - JC Bouziques (IROC Technologies)

11:10 AM 0:15 HPSC: Radically Advancing the Capabilities of Space-based Computing - Update - Jim Butler (NASA JPL)

11:25 AM 0:15 Tower Semiconductor 5.0 - Michael Scott (Tower Semiconductor NPB)

11:40 AM 0:15 Robust Chip update on Standard Cell Libraries and Tools Update - Klas Lilja (Robust Chip)

11:55 AM 0:15 Advanced Microelectronics Radiation Effects Research at Sandia - Nathan Nowlin (Sandia National Laboratories)

12:10 PM 1:10 **Lunch**

SRHEC - Chair: Jeff Johann (NSWC Crane)

1:20 PM 1:00 SCG and Export Control - Penny Johnson (AFNWC), Norm LaCroix (NSA)

2:20 PM 0:45 Parts Library and RH Data Analytics - Ken Bole (AFRL), Scott Lenart (NSWC Crane)

3:05 PM 0:30 **Break**

Chair: Courtney Matzkind (MDA)

3:35 PM 0:20 CHIPS for America: Update on Implementation - Alex Liddle (CHIPS R&D Office)

3:55 PM 0:20 Microelectronics Commons - Alison Smith (OUSD(R&E) OASD(CT))

4:15 PM 1:15 Microelectronics Foundry Panel - Deniz Civay (Global Foundries), Jim Hobbs (Honeywell), Mike Ward (LA Semiconductor), Jim Will (Skywater), Mike Scott (Tower Semi)

5:30 PM 0:55 **End of Sessions**

9:00 AM - 3:00 PM TRMC Discussion of Nuclear Modernization Gaps (1-on-1 side meetings)