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AGENDA

12th International Workshop on Application of Field Programmable Gate Arrays in Nuclear Power Plants

October 11, 2019 Optional Tour to Paks Nuclear Power Plant

October 14-16, 2019 in Budapest, Hungary

Day 0 – Friday, 11 October 2019	
Technical tour of the Paks NPP	
08:00	Bus leaves from the hotel for Paks
10:00 – 10:20	Welcome and refreshments on arrival
10:20 – 11:10	Tour of the Visitors Centre
11:10 – 12:30	Tour of Unit 4
12:30 – 13:30	Lunch Break (self-service)
14:00 – 15:30	Tour of the Maintenance Training Centre
16:00	Bus leaves for Budapest

Day 1 – Monday, 14 October 2019		
Time	**Event**	**Speaker**
8:30 – 9:00	Registration	
Opening Session		
9:00 – 9:10	Welcome and Agenda	Mark Burzynski SunPort SA
9:10 – 9:20	Message from Host	Pal Toth Technical Director MVM Paks NPP
9:20 – 9:35	Introductory Remarks	Gyula Máté Mach MVM Paks NPP Ltd.
9:35 – 9:50	Message from the IAEA	Janos Eiler IAEA
9:50 – 10:20	Coffee Break	

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Day 1 – Monday, 14 October 2019

Time	Event	Speaker
Technical Session 1		
10:20 – 10:50	Invited Presentation 1: Critical Issues and Lesson Learned in the Deployment of FPGA Based System in Nuclear Power Plants	Dr. Steven Arndt U.S. Nuclear Regulatory Commission
10:50 - 11:20	Presentation 2: Using IEEE 1012 for V&V of FPGA-Based Equipment – Perspectives from the IEEE P1012 Working Group	David Hooten Imperia Engineering Partners
11:20 – 11:50	Presentation 3: Status of IEC 62566-2	Andreas Mölleken TÜV Rheinland
11:50 - 12:30	Presentation 4: Regulatory Requirements for Safety Classified FPGA-Based VDU Systems in Nuclear Power Plants	Gerard Lekhema National Nuclear Regulator of South Africa
12:30 – 14:00	Lunch Break	
Technical Session 2		
14:00 – 14:30	Presentation 5: Development of Criteria for the Diversity Assessment of FPGAs and CPLDs in Safety Related I&C Systems	Dr. Manuela Jopen GRS
14:30 – 15:00	Presentation 6: Cyber Security Considerations in FPGA Design	Dr. Andrew White United Kingdom - Office for Nuclear Regulation
15:00 – 15:30	Presentation 7: From Function Diagrams to Silicon: How Framatome Couples Cutting-Edge Engineering Software with FPGA Controllers for Safety Applications	Mathieu Allory and Hayder Haouaneb Framatome
15:30 – 16:00	Coffee Break	
Technical Session 3		
16:00 – 16:30	Presentation 8: Achieving Verifiable and High Integrity Instrumentation and Control Systems through Complexity Awareness and Constrained Design	Dr. Carl Elks Virginia Commonwealth University
16:30 – 17:00	Presentation 9: How Formal Analysis Proves the Security of Your FPGA Design	Rachid Laaris Cadlog
17:00 – 17:30	Presentation 10: Role & Development Methods of FPGAs in Rolls-Royce Safety Platforms	Arnaud Duthou Rolls-Royce
17:30 – 17:45	Open Discussion and Closing Statements	Mark Burzynski SunPort SA
	Individual Period for Local Attractions and Dinner	

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Day 2 – Tuesday, 15 October 2019

Time	Event	Speaker
9:00 – 9:15	Welcome and Agenda	Mark Burzynski SunPort SA
Technical Session 4		
9:15 - 9:45	Presentation 11: Trends for FPGA Technology in Safety Critical Applications	Mark Burzynski SunPort SA
9:45 – 10:15	Presentation 12: NuScale SMR Overview and FPGA Certification	Cyrus Afshar NuScale Power
10:15 – 10:45	Coffee Break	
Technical Session 5		
10:45 – 11:15	Presentation 13: Legal requirements for I&C system	Lenka Riganova Nuclear Regulatory Authority of the Slovak Republic
11:15 – 11:45	Presentation 14: Insights from NRC Reviews of FPGA Based Platforms	Sean Kelley SunPort S.A.
11:45 – 12:15	Presentation 15: I&C Architecture Design of FPGA-Based Reactor Protection System for New Argentine Reactors and other FPGA Development Experiences	Daniel Estryk Argentine National Commission for Atomic Energy
12:15 – 12:30	Group Photo	
12:30 – 14:00	Lunch Break	
Technical Session 6		
14:00 – 14:30	Presentation 16: RPCT: Integrated Development Environment for FPGA-based Applications	Anton Andrashov Radics LLC
14:30 – 15:00	Presentation 17: Intelligent RTL Simulation Platform for Nuclear Safety System Application based on FPGA	Zhikai Liu China Nuclear Control System Engineering Co., Ltd.
15:00 – 15:30	Presentation 18: Class 1 compliant design and verification process for FPGA-based I&C system	Satoshi Nishikawa Hitachi, Ltd.
15:30 – 16:00	Coffee Break	

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Day 2 – Tuesday, 15 October 2019		
Time	**Event**	**Speaker**
Technical Session 7		
16:00 – 16:30	Presentation 19: Development and Qualification of One-Step Logic Conversion Automation for FPGA Applications	Dr. Steve Yang Doosan HF Controls
16:30 – 17:00	Presentation 20: Implementing PID loop using FPGA-based platform: Case Study	Kostiantyn Leontiiev RPC Radiy
17:00 – 18:00	Demonstration of RadICS Platform and RPCT	Anton Andrashov Radics LLC Kostiantyn Leontiiev RPC Radiy
18:00 – 19:00	Break	
18:30 – 21:00	Group Dinner at Hotel	

Day 3 – Wednesday, 16 October 2019		
Time	**Event**	**Speaker**
9:00 – 9:15	Welcome and Agenda	Mark Burzynski SunPort SA
Technical Session 8		
9:15 - 9:45	Presentation 21: Regulatory Experience in Reviewing the FPGA-based Controller in Korea	Yongil Kwon Korea Institute of Nuclear Safety
9:45 - 10:15	Presentation 22: LM Application of FPGA and Digital Safety Platforms	Larry Erin Lockheed Martin
10:15 – 10:45	Coffee Break	
10:45 – 11:15	Presentation 23: Using Sequential Equivalence Checking to Verify Implementation of FPGAs for Nuclear Power Plant Applications	Hayder Haouaneb Framatome and Vlada Kalinic OneSpin Solutions
11:15 – 11:45	Presentation 24: Digital Design Decisions to Optimize Safety System Operation and Maintenance	Mark Burzynski SunPort SA
11:45 - 12:30	Final Discussion on Recommendations, Future Activities, and Closing the Meeting	Mark Burzynski SunPort SA
12:30 – 14:00	Lunch Break	

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